The Dissertation Committee for Prerna Arora certifies that this is the approved version of the following dissertation:

Mechanisms of Change in Cognitive Behavioral Therapy for Depressed Early Adolescent Females: Mediating Effects of the Cognitive Triad on Cognitive, Behavioral, Problem Solving, and Relational Components of the ACTION Treatment for Depression

Committee:

_____
Kevin Stark, Supervisor

_____
Cindy Carlson, Co-Supervisor

_____
Deborah Tharinger

_____
Keenan Pituch

_____
Alexandra Loukas

_____
Nadine Kaslow

Mechanisms of Change in Cognitive Behavioral Therapy for Depressed Early Adolescent Females: Mediating effects of the Cognitive Triad on Cognitive, Behavioral, Problem Solving, and Relational Components of the ACTION Treatment for Depression

by

Prerna Arora, B.S; M.A.; M.Ed.

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DEDICATION

This dissertation is dedicated to my family, whose encouragement, patience, and zeal for both love and learning made this achievement possible.

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Mechanisms of Change in Cognitive Behavioral Therapy for Depressed Early Adolescent Females: Mediating effects of the Cognitive Triad on Cognitive, Behavioral, Problem Solving, and Relational Components of the ACTION Treatment for Depression

Prerna Arora, Ph.D.

The University of Texas at Austin, 2011

Supervisors: Kevin Stark and Cindy Carlson

Childhood depression is a widespread, stable disorder, and recurring disorder (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984). Cognitive-Behavioral therapy is an empirically supported intervention for the treatment of depression (Weersing & Weisz, 2002; Weisz, McCarty, & Valeri, 2006). CBT for depression is often comprised of cognitive, behavioral, problem-solving, and relational interventions (McCarty & Weisz, 2007). While it is evident that CBT as a whole is efficacious, there exists a dearth of knowledge concerning the specific components within CBT, which contribute to symptom reduction in youth (Kazdin & Weisz, 1998; Kennard et al., 2009). Therefore, the manner in which CBT accomplishes change is not well understood (Shirk & Karver, 2006). Specifically, while cognitive theories assert that interventions targeted at modifying negative cognitions reduce depression (Beck, 1967), few studies, particularly with regards to depressed youth, have addressed this (Stice,

Rohde, Seeley, & Gau, 2010). As such, this hypothesis concerning the role of depressogenic cognitions as mediators between certain CBT interventions and symptom reduction remains unsubstantiated (Weersing, Rozenman, & Gonzales, 2009).

The current study assessed whether higher levels of cognitive, behavioral, problem solving, and relational components were associated with lower levels of post-treatment depression, as well as whether they were mediated through changes in the cognitive triad, a measure of depressogenic thinking. No studies have assessed the effectiveness of discrete interventions incorporated in CBT treatments for depression in youth, further examining whether noted changes in depression are mediated through cognitions, specifically the cognitive triad. Participants included 40 depressed females, aged 9 to 14, assessed using self-report measures and a diagnostic interview for depression, who engaged in treatment using a manualized group CBT treatment protocol.

Results from hierarchical linear models indicated that higher participant cognitive triad scores and higher relational interventions were associated with lower post-treatment depression scores. However, subsequent analyses revealed that higher aggregated behavioral-problem-solving interventions scores were associated with lower post-treatment depression scores, while higher aggregated cognitive-relational intervention scores were associated with higher post-treatment depression scores. Implications, limitations, and recommendations for further areas of research are discussed.

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CHAPTER ONE

Introduction

Depression is approximated to affect 28% of children and adolescents (Lewinsohn & Clarke, 1999) and often presents with comorbidities, complicating its conceptualization and treatment (Agnold & Rutter, 1992; Rhode, Lewinsohn, & Seeley, 1991). The disorder significantly impacts numerous areas of young persons' functioning, including their academic achievement, social performance, and family relations (Puig-Antich et al., 1993; Puig-Antich et al., 1985; Stark, 1990). Early-onset depression, especially precarious in its presentation, is usually protracted and apt to recurrences (Birmaher et al., 1996; Lewinsohn et al., 1994b). It has, moreover, been linked to substantial negative outcomes in adulthood, including interpersonal challenges, marital discord, smoking and substance abuse, and general displeasure with life, among others (Hammen & Rudolph, 2003; Kandel & Davies, 1986; Lewinsohn, Clarke, Seeley, & Rohde, 1994a; Rao, Ryan, Birmaher, Williamson, & Kaufman, 1995; Weisz, McCarthy, & Valeri, 2006). Childhood depression is thus a fairly widespread, lasting, and recurring disorder (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984).

Prior to adolescence, rates of depression are approximately equivalent in both boys and girls (Angold & Rutter, 1992; Costello et al., 2002). Once this developmental stage is attained, however, the incidence of depression escalates significantly for females (Angold & Rutter, 1992; Costello et al., 2002), with girls being twice as likely as boys to suffer from depression when they reach 16 years of age (Culbertson, 1997; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Lewinsohn et al., 1994a). Females'

presentation of depression is distinct, with adolescent girls experiencing a discrete symptom profile to a more severe degree than males (Kandel & Davies, 1986; Ostrov, Offer, & Howard, 1989; Stark, Sander, Yancy, Bronik, Hoke, 2000). As such, adolescence, for females, represents a crucial period with regards to the assessment and treatment of depression.

Beck's Cognitive Theory of Depression (1967) purports that the development and maintenance of depression occurs as a consequence of depressed individuals' biases toward the negative interpretation of events. Such proclivities, influenced by underlying maladaptive cognitive structures, or schemata, are heightened, often leading to depression when exposed to negative life events. Depressive thinking permeates cognitions in various domains and produces negative thoughts of the self, world, and future, which when taken together are termed the cognitive triad. Therapy is thus actively charged with altering depressogenic dysfunctional patterns of thinking in an effort to alleviate emotional suffering (Beck et al., 1979). Otherwise stated, dysfunctional thinking, as exhibited via the cognitive triad, is the mediating mechanism of this theory of depression.

Beck's cognitive therapy has formed the basis of numerous treatments for youth depression. Cognitive behavioral therapy (CBT) is an empirically supported intervention for the treatment for depression in both children and adolescents (Asarnow, Jaycox, & Tompson, 2001; Birmaher et al., 1996; David-Ferdon & Kaslow, 2008; Kaslow & Thompson, 1998; Kazdin & Weisz, 1998; Lewinsohn & Clark, 1999; Weersing & Weisz, 2002). CBT has, for the most part, been shown to be more effective than no-treatment for reducing symptoms in depressive youth, in both the short-term and long-term outlook,

and particularly in combination with psychopharmaceuticals (Brent et al. 2008; TADS Team, 2007); in regards to its effectiveness of treating depression in youth, it is generally on par with or just marginally superior to other psychological treatments (Curry, 2001; Weisz et al., 2006).

Cognitive behavioral therapy treatment protocols established on principles put forth by Beck's cognitive therapy rarely employ related cognitive interventions (e.g., eliciting automatic thoughts, recognizing cognitive errors, searching for alternative explanations) in isolation (McCarty & Weisz, 2007). Instead, they are characteristically combined with other strategies within Cognitive-Behavioral Therapy (CBT) protocols. Such strategies include behavioral (e.g., coping skills instruction, interpersonal skills training, behavioral activation) and problem solving (e.g., problem definition and conceptualization, generation of alternate solutions, solution selection, implementation, and appraisal) interventions; ubiquitous common relationship factors concerning the therapist and child (e.g., therapeutic alliance) and, when a group format is employed, individual members (i.e., group cohesion) also comprise such treatments.

While a case has been made for the efficacy of group CBT for the treatment of childhood and adolescent depression, and though the former components have all been purported to exert an effect on treatment, it is less clear which treatment-specific effects are responsible for positive clinical outcomes. An understanding of the preceding would inform the development of increasingly effective, efficient, and transportable treatments. CBT, as a treatment deemed efficacious with depressed youth and comprised of a variety

of theoretically-coherent components, is primed and especially appropriate as the subject of such inquiries (McCarty & Weisz, 2007).

As the aforementioned interventions are frequently used in conjunction with related interventions in the context of CBT treatments, discrete effects of each are difficult to ascertain (Shirk & Karver, 2006). Extant research with cognitive interventions has provided mixed results, with some studies indicating a positive association with decreased experience of depressive symptoms with some (Kendall & Braswell, 1982), while no such association is indicated by others (Hays, Castonguay, & Goldfried, 1996), resulting in questions about the role these techniques play in the treatment of depressed youth (Weisz et al., 2006). Behavioral interventions, on the other hand, are more consistently demonstrated to be equally as effective, or more so, in reducing symptoms of depression, though only with adults (Coffman, Martell, Dimidjian, Gallop, & Hollon, 2007; Dimidjian et al., 2006; Jacobson et al., 1996). The few existing studies assessing the impact of problem-solving interventions used in isolation have indicated some support for the use of treatment of depression in both adult and youth samples (Bell & D'Zurilla, 2009; Cuijpers, van Straten, & Warmerdam, 2007). Research points to a moderate, though reliable, impact of therapeutic alliance on outcome in the context of treatment for depression (Keijsers, Schaap, & Hoogduin, 2000); the role of group cohesion with regard to treatment outcome, specifically with youth populations, is more mixed (Kivlighan & Tarrant, 2001; Oei & Browne, 2006). Currently there exists a paucity of knowledge with regards to all areas, particularly with youth populations, and additional research is warranted in order to clarify existing ambiguities.

In order to more accurately establish a treatment's effectiveness, in addition to ascertaining the distinct impact of incorporated interventions, the mechanisms through which the techniques exert their effects, as well as their impact on the symptom outcome, is necessary (Shirk & Karver 2006). In other words, more definite claims regarding a treatment's effectiveness should be accompanied by evidence supporting the relationship between the distinct interventions and treatment outcome, the intervention and the pathway of change, and the pathway of change and treatment outcome. Cognitive therapy asserts that changes in depressogenic cognitions are subsequently responsible for symptom reduction (Beck, 1967). While studies demonstrating the role of CBT in altering pathogenic cognitions exist (Kaufman, Rohde, Seeley, Clarke, & Stice, 2005; Kolko, Brent, Baugher, Bridge, Birmaher, 2000; Stice, Rohde, Seeley, & Gau, 2010), they are few in number and, moreover, neglect to parse the effect based on treatment component. At present, few have undertaken this imperative charge, particularly with youth populations (Weersing, Rozenman, & Gonzales, 2009).

The current study sought to build upon current research on CBT as a treatment for depressed youth by investigating the effects of the above-mentioned components on changes in depressive symptoms in preadolescent females. Specifically, the current study sought to explore the effects of (a) cognitive; (b) behavioral; (c) problem-solving; and (d) relational components of a CBT treatment for depressed youth on changes in depression scores. Examining 40 early adolescent females with depression completing a manualized group CBT treatment protocol, the study investigated whether higher levels of cognitive, behavioral, problem solving, and relational components were associated with lower levels

of post-treatment depression. Following this, the study explored whether such changes were mediated through changes in the cognitive triad. While several studies have noted the association between cognitions and depression, and, though fewer in number, examined cognitions as a mediator between CBT treatments and depression, no studies have assessed the effectiveness of discrete interventions incorporated in CBT treatments for depression in youth, further examining whether noted changes in depression are mediated through cognitions. Further awareness of discrete contributions of interventions as well as mechanisms of change will enhance treatment implementation and effectiveness in the treatment of depression in youth (Kazdin & Weisz, 1998).

CHAPTER TWO

Review of the Literature

Depression in Youth

Currently, three types of child and adolescent depressive diagnoses are recognized by the American Psychiatric Association's (APA) (2000) *Diagnostic and Statistical Manual of Mental Disorders (4th ed.) Text Revision* (DSM IV-TR; see Appendix A): Major Depressive Disorder, Dysthymic Disorder, and Depressive Disorder Not Otherwise Specified. Major Depressive Disorder (MDD) is characterized by a severely depressed mood or loss of interest or pleasure in most activities (anhedonia) for most of the day, every day, during a two-week period; for children, an irritable rather than sad mood may be observed. At least four supplementary symptoms of depression are required to be present before the diagnosis can be made; these include significant disturbances in appetite resulting in weight gain or loss, sleep difficulties, activity disturbances, fatigue, feelings of worthlessness or guilt, poor concentration or indecisiveness, and thoughts of death or suicide. The depressive episode must occur in the absence of any history of Manic, Mixed, or Hypomanic Episodes, and may not be due to psychosis, physical illness, drugs, or bereavement. Dysthymic Disorder is diagnosed when the depressed mood persists over a period of at least two years, with persistence defined as more days than not, and is accompanied by two of the previously described depressive symptoms. For children and adolescents, the requisite duration is shortened to one year and, again, an irritable rather than depressed mood may be noted. A diagnosis of Depressive Disorder Not Otherwise Specified (DDNOS) is accorded when the individual's

debilitating symptoms do not meet criteria for MDD or Dysthymic Disorder (APA, 2000).

Epidemiology. According to the World Health Organization, depression in individuals aged 15 to 44 is the leading cause of disability worldwide (Costello et al., 2002). In a similar age group, as approximated by the National Comorbidity Survey, 30-day prevalence rates approached 5%, with the highest incidence, 6.9%, among the youngest age group (15- to 24-year olds) (Costello et al., 2002). Other estimates have placed childhood rates of depression at approximately 2.5%, increasingly dramatically to 8.3% for adolescents suffering from a depressive disorder at any given time (Birmaher et al., 1996). Cumulative incidence rates of depression by age 18 average around 28% (Lewinsohn & Clarke, 1999). Adolescent depression, moreover, is believed to be under-identified by both parents and educators due to its less onerous internalizing nature (Angold et al., 1987). Overall, it appears that childhood depression is a fairly widespread, stable, and recurring disorder (Kovaks et al., 1984), and that rates of depression are considerably higher during adolescence (Hankin & Abramson, 2001).

Depression is thought to be comorbid, or co-occurring, with numerous psychiatric disorders, particularly anxiety, conduct, somatic, and eating disorders (Agnold & Rutter, 1992; Rohde et al., 1991). A presence of a comorbid disorder has been linked to a more prolonged course, an increased probability of relapse, a greater propensity for suicide, and a poorer response to psychopharmaceuticals (Rohde et al., 1991). The average duration of a depressive episode in children is between 8 and 17 months (Birmaher et al., 1996; Kovacs et al., 1984; Goodyer, Herbert, Tamplin, Secher, & Pearson, 1997) and

approximately 70% of children suffering from Dysthymic Disorder continue on to develop MDD (Birmaher et al., 1996).

Course. While the number of children experiencing depression has increased, the age of onset has decreased (Klerman & Weissman; 1989). This is of great concern as depression has a significant impact on the lives of children and adolescents who experience it at a young age (Klerman & Weissman, 1989). Childhood and adolescent depression affects various areas of the young person's life, including academic achievement, family functioning, and social functioning (Puig-Antich et al., 1993; Puig-Antich et al., 1985; Stark, 1990). Moreover, experiencing early-onset depression places children and adolescents at increased risk for experiencing recurring depressive episodes (Birmaher et al., 1996; Hammen & Rudolph, 2003; Kovacs et al., 1984; Lewinsohn, Rohde, Klein, & Seeley, 1999), and youth with previous histories of depression are more likely to have future depressive episodes that are more protracted (Birmaher et al., 1996; Lewinsohn et al., 1994b). Furthermore, early-onset depression is associated with numerous other deficits in adaptive functioning throughout the lifespan, specifically a greater likelihood of substance abuse, increased probability of smoking, deficiencies in interpersonal relationships, marital distress, and a greater chance of experiencing general dissatisfaction with life (Hammen & Rudolph, 2003; Kandel & Davies, 1986; Lewinsohn et al., 1994a; Rao et al., 1995; Weisz et al., 2006). Young adults (aged 18 to 24) who suffered from adolescent depression are also less likely to complete college, are liable to earn smaller salaries, become an unmarried parent, involve themselves in criminal activity, and, generally, experience stressful life events (Lewinsohn et al., 1999). They

are, additionally, increasingly likely to attempt and successfully commit suicide (Gould et al., 1998; Shaffer et al., 1996).

Gender and depression. During childhood, prevalence of depression is equivalent in boys and girls (Angold & Rutter, 1992; Costello et al., 2002). This trend continues until adolescence, at which time the incidence of depression increases for females (Angold & Rutter, 1992; Costello et al., 2002), who then, compared to males, suffer at a rate of 2:1 (Culbertson, 1997; Fleming & Offord, 1990; Fergusson, Horwood, & Lynskey, 1993; Klerman & Weissman, 1989; Lewinsohn et al., 1993). The age at which the difference between male and female rates of depression becomes apparent ranges from 13 to 15 (Hammen & Rudolph, 2003) and this disparity continues to exist, and even rise, in adulthood (Hankin & Abramson, 2001). Females' presentation of depression is, furthermore, distinct, in that a different constellation of symptoms experienced to a more severe degree has been observed (Kandel & Davies, 1982; Ostrov et al., 1989; Stark et al., 2000). As such, adolescence may signify an essential time for increased susceptibility to depression for girls (Hankin & Abramson, 2001); gender is, thus, an important consideration in the conceptualizing, assessing, and treatment of depression (Culbertson, 1997).

Research has sought to address this gender discrepancy, providing several compelling explanations for this ostensible phenomenon. These models are primarily integrative in nature, incorporating biological, cognitive, and interpersonal variables (Hankin, Wetter, & Cheely, 2008). Specifically, they posit that various predispositions present or more common in females prior to adolescence (e.g., gonadal hormones,

various cognitive vulnerabilities, strong relational orientation) interact with the increased challenges of this developmental stage (e.g., negative interpersonal events, which females are more apt to experience), leading to the gender discrepancy in depression (Hankin & Abramson, 2001; Nolen-Hoeksema, 1987; Nolen-Hoeksema & Girgus, 1994). Hankin & Abramson (2001), in elaborated vulnerability-transactional stress model, proposed that increased exposure to negative events, leading to negative depressed affect, interacts with preexisting cognitive vulnerabilities (e.g., ruminative coping and negative inferential style) and results in increased experiences of depression. Evidence for the preceding, specifically cognitive vulnerabilities, is plentiful, with studies demonstrating gender differences in self-perceptions of physical appearance (Allgood-Merten, Lewinsohn, & Hops, 1990), rumination style (Broderick, 1998), attributional style (Hankin & Abramson, 2002), and self-perceived competence (Cole, Jacquez, & Mascheman, 2001). These diathesis-stress models are thought to provide the best explanations for this observed trend, and also underscore a route, specifically that of addressing negative cognitions, to treating depression in adolescent females (Cyranowski, Frank, Young & Shear, 2000; Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994).

Assessment of depression. Numerous methods with which the symptoms, severity, and functional impairment of depression can be assessed, the most common of which include self-report measures, parent-teacher questionnaires, diagnostic interviews, observational methods, and projective techniques.

Self-report measures enjoy frequent use due to ease of administration (Kendall, Cantwell, & Kazdin, 1989) and are thought to be appropriate for use with children, who

are believed to be capable of accurately reporting their experience of depression by the age of 9 years (Kazdin, 1994). Examples of such measures include Children's Depression Inventory (CDI; Kovacs, 1992) and Beck Youth Inventory for Depression (BYI-D; Beck, Beck, & Jolly, 2001). These self-report measures, while well suited for depression screening and symptom monitoring during treatment, are not sufficient in themselves for confirming the diagnosis of depression (Klein, Dougherty, & Olino, 2005), as they may not accurately discriminate between depressed and nondepressed children (Stark, 1990) or distinguish between those suffering from depression from other internalizing disorders (Finch, Lipovsky, & Casat, 1989). Due to variable reliability across informants, as well as the differing abilities of individuals at noting and communicating certain symptoms, with children being better reporters of internalizing symptoms, for instance, (Kendall et al., 1989), the use of multiple informants in the assessment of childhood depression is also indicated (Achenbach, McConaughy, & Powell, 1987). In order to address these concerns, parent and teacher rating scales such as the Child Behavior Checklist can be utilized (CBCL; Achenbach & Edelbrok, 1983).

Semi-structured clinical interviews can provide for the opportunity to make a more accurate diagnosis by thoroughly assessing the presence and severity of depression (Stark, Brookman, & Frazier, 1990). The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present State (K-SADS-IVR; Ambrosini & Dixon, 2000), while requiring extensive training and considerable time to administer, offers a comprehensive assessment of symptoms involving multiple informants.

Combining varied methods of assessment has been proposed as a way to

accurately and effectively identify depressed youth. Described by Reynolds (1986) as a three-step multi-gate procedure, the process allows for large screening and is intended to produce a reduced number of false positives. Children are initially screened using a self-report measure (e.g., CDI). Those scoring above a predetermined threshold are rescreened using the same instrument a short time (e.g., one week) afterward. Finally, those who again score above the present cutoff are administered a diagnostic interview in order to confirm the presence of a depressive disorder.

Summary of depression in youth. Childhood depression is a commonly occurring disorder, with rates of depression increasing during adolescence. Comorbidities are frequent, their presence being correlated with a protracted course, greater likelihood of relapse, higher possibility of suicide, and poorer response to treatment. The average age of onset has lowered, with increasing numbers of younger children being diagnosed with depression; this occurrence is, unfortunately, associated with significant deleterious impacts, placing the child at increased risk of future depressive episodes. Both child and adolescent depression disturbs various areas of the youth's life, with academic achievement, family functioning, and social performance, among others, being influenced negatively. Youth depression also has lasting consequences, with individuals in later adult years being burdened with the lasting impact of their earlier experienced depressive symptoms.

During adolescence, a gender imbalance regarding the prevalence of depression becomes pronounced, with adolescent females, compared to males, suffering at a rate of 2

to 1. Numerous explanations have been proffered for this disparity, with diathesis-stress models believed to offer the best explanation.

Depression is assessed by numerous means, including self-report measures, parent-teacher questionnaires, diagnostic interviews, observational methods, and projective techniques. As all provide both benefits and difficulties, combining several methods of assessment are believed to be a preferred method of accurately and efficiently assessing depression in youth.

Theories of Depression

Several theories concerning the etiology of childhood and adolescent depression have been proposed. Genetic/biological, behavioral, interpersonal, and cognitive models are the major explicating mechanisms, and, within the cognitive perspective, Beck's (1967) cognitive theory, the Hopelessness theory (Abramson, Metalsky, & Alloy, 1989), and Response Styles Theory (Nolen-Hoeksema, 1991) are the most prevailing (Abela & Hankin, 2008). The various theories of depression will be discussed, though cognitive theories, as the main contributing influences on the development of CBT, will be the primary focus.

Depression is thought to have a genetic basis. Hereditary studies have reported that close relatives of those who suffer from various affective disorders are, in comparison to those without afflicted relatives, approximately ten times more likely to suffer from similar disorders (Gershon, Bunney, Leckman, Van Eergewegh, & DeBauche, 1976; Hamet & Tremblay, 2005). In a study of adolescent females, individuals possessing a genetic risk for depression (as measured by the presence of

parental depression), were more likely to develop depression following exposure to a negative life event (Silberg, Rutter, Neale, & Eaves, 2001). In another study, the presence of the short allele of the 5-HT transporter gene, implicated in the regulation of stress responses and the availability of serotonin in the brain, was associated with the presence of depressive symptoms in adults; the existence of two copies of the short form allele was, moreover, related to an increased effect of negative life events, as evidenced by worsening symptom severity following exposure to such a stressor (Caspi et al., 2003). Similar results were found in a study assessing the impact of the short allele of this gene and family stressors in adolescent females (Eley et al., 2004). Evidence has also been garnered to support a genetic basis to attributional style (Lau, Rijsdijk, & Eley, 2006).

Depression is also though to be caused by deficient activity of monoaminergic neurons, as outlined in the monoamine hypothesis; specifically the neurotransmitters norepinephrine and serotonin have been implicated as causal factors. Results of this in pediatric populations is mixed, with studies reporting increased, decreased, or no difference in neurochemicals (Ryan et al., 1992, Hardan et al., 1999; Ghaziuddin et al., 2000). The limbic-hypothalamic-pituitary-adrenal axis (LHPA axis), a set of feedback interactions between the hypothalamus, pituitary gland, and the adrenal glands, is also believed to contribute to depression, through harm inflicted to the hippocampus caused by elevated glucocorticoid levels (Davidson, Pizzagalli, Nitschke, & Putnam, 2002); studies examining this causal mechanism have also yielded mixed results (Steingard et al., 2000). Abnormalities in the areas of the prefrontal cortex, basal ganglia, hippocampus, thalamus, cerebellum, amygdala, putamen, and temporal lobe have also

been observed in the brains of depressed persons (Nantel-Vivier & Pihl, 2008; Soares & Mann, 1997). The impact of stressful life events (e.g., abuse, loss of parent, etc…) should be underscored, however, as they can alter neurobiology, causing hormonal, neurochemical, and brain structural changes, approaching that found to be associated with depression (Nantel-Vivier & Pihl, 2008).

The behavioral, or social learning model of depression maintains that environmental stressors lessen the amount of positive reinforcement or increase in negative reinforcement a person receives (Lewinsohn, 1974); individuals are hypothesized to become depressed when they are unable to suitably cope with this alteration in reinforcement. The situation is exacerbated when these individuals, markedly self-aware of their coping skills deficit, become increasingly self-critical and withdraw from social contact, further reinforcing their original predicament (Lewinsohn, 1974).

The interpersonal theory of depression asserts that, generally, negative early family problems, including insecure attachment and parent depression, preclude the development of prosocial interpersonal skills, and contribute to interpersonal dilemmas which, together, result in increased risk for depression (Rudolph, Flynn, & Abaied, 2008). Via direct modeling by parents, socialized responses to stress, and genetic heritability of emotional dysregulation, children are transmitted certain behavioral tendencies. For some, these result in depressed youth that are to be less socially competent than their nondepressed peers (Hammen, Shih, & Brennan, 2004). The excessive search for reassurance, especially with regards to one's self-worth, is an

essential characteristic of such depressed persons (Coyne, 1976). Specifically, these depressed individuals frequently seek reassurance from others; victims to their suspicious dispositions, they question the speakers' statements and request further assurance to allay their doubts (Joiner & Metalsky, 1995). Such youth have, moreover, been demonstrated to possess ineffectual interpersonal problem-solving skills, poor conflict resolution skills (Rudolph, Hammen, & Burge, 1994), higher levels of aggression (Rudolph & Clark, 2001), and respond poorly to stress (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000). As a consequence of these social deficits, depressed persons are rejected by these targets, who easily become disenchanted with them, leaving the depressed individual even more depressed (Coyne, 1990). Thus, individuals' poor social skills lead to social rejection and subsequent social withdrawal, stripping these persons of interpersonal relationships and their associated positive social reinforcement (Joiner, 2002). These individuals, moreover, are more likely internalize their interpersonal difficulties and evaluate themselves negatively (Cole, Martin, & Powers, 1997) and may lack adequate opportunities to learn emotional regulation skills in the context of interpersonal stressors (Garber, Braafladt, & Zeman, 1991).

Cognitive diathesis-stress theories of depression. The major cognitive theories are fundamentally diathesis-stress models, in that they posit that dysfunctional cognitive processes are thought to become activated subsequent to the occurrence of a negative life event (Ingram, Miranda, & Segal, 1998). As such, for persons in possession of such cognitive vulnerabilities, exposure to a negative life event often galvanizes into action a series of increasingly biased and internally focused processing that eventually terminate

in the development of depression. Several cognitive vulnerabilities have been proposed to be most salient in child and adolescent populations, including negative inferential style (Abramson, Seligman, & Teasdale, 1978), dysfunctional attitudes (Beck, 1967), rumination style (Nolen-Hoeksema, 1991), and personality predilections (Beck, 1983; Blatt & Zuroff, 1992). Each of these will be described in turn, though Beck's Theory of depression, as the major source of the proposed study's conceptualization of cognitive vulnerabilities of depression, will be elaborated upon in greater detail below.

Cognitive theories of depression. Hopelessness theory (Abramson et al., 1978, 1989), a reformulation of the Helplessness theory (Abramson et al., 1978; Seligman, 1975), asserts that persons possessing a more depressive inferential style, when exposed to life stressors, are apt to develop symptoms of depression. Three negative inferential styles are posited to lead to the development of depression. Causal inferences, or assumptions regarding the cause of an event, are deemed global and stable. Moreover, depressed individuals are said to catastrophize the outcome of negative events, as described the second inferential style of inferred consequences. Finally, inferences about the self include viewing oneself as flawed and deficient, incapable of producing a change to a negative situation. Possession of any of these styles increases the likelihood that a person will develop hopelessness, or the belief that negative events will continue to present themselves and one will have little control in altering this eventuality, and in turn depression, when confronted with a negative life event. Substantial evidence for the existence of the negative inferential styles in children and adolescents has been collected (Lakdawalla, Hankin, & Mermelstein, 2007). Some support has been garnered for the

vulnerability-stress model of the hopelessness theory (Hankin, Abramson, Miller, & Haeffel, 2004; Hankin, Abramson, & Siler, 2001; Metalsky & Joiner, 1997), though others have provided partial (Abela & Seligman 2000) or no support (Abela & Sarin, 2002).

The Response Style Theory posits that depressed individuals' responses to their symptoms dictate their ensuing experience of their affliction (Nolen-Hoeksema, 1991). Of the response styles, rumination and distraction, the former, or directing one's focus to one's negative thoughts and feelings, thereby escalating one's experience of them, is thought to maintain depressive symptoms. This is hypothesized to occur because of the increased attention to and recall of negative events, reducing one's belief of control over outcomes. Rumination is also believed to moderate helpful behaviors, lessening exposure to situations that might potentially increase a personal sense of control. Finally, its negative influence is also displayed in its intrusive effect on efficient problem solving, as is accomplished by increasing access to negative thoughts and hindering engagement in positive behaviors. The additional response styles of problem solving and distraction are presumed to reduce depressive symptoms by encouraging the active altering of adverse circumstances and the engagement in beneficial activities (Nolen-Hoeksema, 1991). The Response Styles Theory has been utilized to conceptualize depression in women and adolescent girls, postulating that the increased rate of depression in females is due to their proclivity towards the ruminative response style, with their male counterparts tending towards the distraction response style (Nolen-Hoeksema, 1995). Finally, ruminative response styles has been linked with increased depressive symptoms in adults (Butler &

Nolen-Hoeksema, 1994; Nolen-Hoeksema & Morrow, 1991) and in children (Schwartz & Koenig, 1996).

Several facets of personality, when possessed, are thought to lead to depression in these individuals when confronted by a negative life event. These depressogenic personality inclinations include sociotropy, or dependency on the approval of others, and autonomy, in which individuals place excessive amount of weight on personal achievement (Beck, 1983). It is hypothesized that sociotropic individuals are susceptible to depression following a negative interpersonal event, in which they experience interpersonal loss or social rejection; autonomous individuals, however, are believed to become prone to depression following negative achievement related events (Abela & Hankin, 2008). Support for the personality predispositions to depression have been varied in their findings (Abela & Taylor, 2003; Little & Garber, 2004).

Beck's cognitive theory of depression. Beck's (1967) Cognitive Theory of Depression purports that the development and maintenance of depression occurs as a consequence of depressed individuals' biases toward the negative interpretation of events. The theory posits three explicating concepts: schemas, the cognitive triad, and cognitive errors (or faulty information processing) (Beck, 1967). Schemas are viewed as established patterns of cognition that shape a person's understanding of events (Beck et al., 1979). When encountering a certain situation, a related schema is activated and shapes the way an individual conceptualizes it. In such a scenario, particular individuals' schema will, at times, attend to the negative aspects and ignore the positive features of the situation. These individuals, typical of depressed persons, are hypothesized to be in

possession of negative schemas that, when activated, are successful in distorting their understanding of the self, world, and future (Beck, 1967; Beck, 1976). In other words, individuals' construal of their environment and subsequent affective and behavioral reactions are the result of the activation of cognitive schemas; when in possession of maladaptive schemas, interpretations of such events are themselves negative, often resulting in a depressive state.

Next, Beck (1967) describes the cognitive triad, or those specific cognitive patterns (or schemas), originating by way of early developmental experiences that form a person's negative view of the self, world, and future. The first can be observed in depressed individuals' proclivity for self-ascribing blame for negative events because of such perceived internal deficiencies as personal inadequacies or general feelings of worthlessness; they believe themselves to be indisposed and disadvantaged (Beck et al., 1979). The depressed person's view of the world, tainted by a propensity for perceiving incidents in a negative light, is also flawed. These individuals believe that the world is making excessive demands of them and introducing insurmountable obstacles that will ultimately hinder the achievement of their goals. They are likely to attribute negative motives and causes for various events when less harmless ones would be more apt, and view the world as burdensome, precarious, and menacing (Beck, 1967). The third damaging cognitive pattern involves the depressed person's negative view of the future; this individual can be expected to possess overly unfavorable and hopeless outlooks, believing any existing predicaments to be permanent and ultimately leading to inevitable failure (Beck, 1967). Generally, the negative cognitive triad is hypothesized to impede

healthy and accurate information processing and facilitate a more pessimistic explanatory style, preventing effective coping and, consequently, leading to depression (Weersing & Weisz, 2002).

Finally, Beck's third element concerns the existence and implementation of cognitive errors, those that induce the overly negative interpretation, in the form of absolutistic thinking, overgeneralizations, and selective abstraction, among others, of events. Again, as a result, events are misconstrued and negative beliefs are maintained, even in the face of conflicting evidence, resulting in the creation of negatively distorted automatic thoughts (Beck, 1967). As such, depression results when individuals' maladaptive schemas concerning themselves, their worlds, and their futures are activated in the face of typically stressful life events and result in the formation of distorted cognitions, or negative automatic thoughts, which in turn beget depressed moods and behaviors (Beck, 1967; Kovacs & Beck, 1978).

Empirical support for beck's cognitive theory of depression. Extensive evidence supporting Beck's cognitive theory of depression in children exists; specifically, the existence of depressive self-schemas, the negative cognitive triad, and cognitive errors has been substantiated. Negative self-schemas have been linked to depression (Hammen & Zupan, 1984; Jaenicke et al., 1987; Prieto, Cole, & Tageson, 1992; Zupan, Hammen, & Jaenicke, 1987). For instance, in a study of 8 to 16-year-old children, clinically depressed youth were more likely to endorse possessing negative self-referent statements (Zupan et al., 1987). Further, in a study of depressed and nondepressed children aged 8 to 12 years, depressed youth were more likely to recognize and recall negative self-referential

statements; support for the existence of cognitive schemas, as well as their impact on storage and accessibility of information, was provided (Prieto et al., 1992).

Moreover, Beck's conceptualization of the cognitive triad in children has also been corroborated. Depressed 4th through 7th grade children, for instance, were found to exhibit a significantly greater number of negative cognitions concerning the self, world, and future, compared to anxious and nondepressed controls, as measured by the Cognitive Triad Inventory for Children (CTI-C) (Kaslow, Stark, Printz, Livingston, & Tsai, 1992). In a study of similarly aged peers, differences in cognitive variables, as assessed by the CTI-C and the Automatic Thought Questionnaire for Children (ATQ-C; Stark, Best, & Adam, 1990), were found between depressed, anxious, and control children; specifically, depressed children indicated experiencing significant more negative thoughts about themselves, the world, and the future than peers, providing support for the specificity of the cognitive triad in the presence of depression (Stark, Humphrey, Laurent, Livingston, & Christopher, 1993).

Support for the third premise, that of the presence of cognitive distortions, has also been garnered. For instance, depressed children have been demonstrated to display significantly more negative automatic thoughts than their nondepressed peers (Kazdin, 1990). Moreover, depressed youth have also been evinced to experience cognitions that are considerably more biased than their nondepressed counterparts (Haley, Fine, Marriage, Moretti, & Freeman, 1985). In additional support of the preceding, a study examining the presence of cognitive disturbances in children, noted increased negative self-evaluations, not confirmed by significant others in the children's lives, in depressed

youth (Kendall, Stark, & Adams, 1990). The above studies provide evidence for a distortion in depressed individuals' processing of information.

Research also substantiates with either partial or full support of the diathesis-stress model of Beck's theory of depression (Abela & D'Alessandro, 2002; Abela & Skitch, 2007; Abela & Sullivan, 2003; Hankin, Lakdawalla, Lee, Grace, & Roesch, 2004; Lewinsohn, Joiner, & Rhode, 2001). The Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project utilized a longitudinal, prospective design to assess cognitive vulnerability hypotheses of depression, as put forth by the Hopelessness theory and Beck's theory of depression (Alloy & Abramson, 1999). College students, aged 18 to 19-years, with no current Axis I diagnosis were assessed and classified as high- or low-risk for depressed, as defined by the presence of various cognitive vulnerabilities (e.g., negative inferential styles for negative events, dysfunctional attitudes). High-risk individuals had a higher lifetime prevalence of a major depressive disorder, marginally higher prevalence of a minor depressive disorder, more severe depressive symptoms, and were more likely to experience recurrent depressive episodes than low-risk counterparts (Abramson et al., 1999; Alloy et al., 2000). Moreover, these discrepancies were limited to depressive disorders and did not hold true for other Axis I disorders. This study provided strong evidence of the mediating role of depressogenic cognitions in the development and maintenance of depression (Alloy et al., 2000).

In a study examining the possession of dysfunctional beliefs and diathesis-stress theory of depression in children aged 8 to 14 years, the presence of depressogenic cognitions was assessed prior to the occurrence of a universal stressful event (i.e., receipt

of report card). Youth who endorsed higher levels of dysfunctional attitudes experienced a greater increase in depressive symptoms five days following the stressful event than those who initially reported lower levels of dysfunctional attitudes, though the preceding was evident only in the older children in the possession of more formal operation reasoning skills (D'Alessandro & Burton, 2006). Children with high levels of dysfunctional attitudes who received parental praise subsequent to the stressor, moreover, demonstrated greater decreases in depressive symptoms than youth who reported lower levels of dysfunctional attitudes and who received the same level of parental praise, supporting the hypothesis that negative self-referent thoughts mediated the development of depressive symptoms (D'Alessandro & Burton, 2006). The above provides support for Beck's diathesis-stress model of depression with youth.

Assessment of depressogenic conditions. Self-report questionnaires have been overwhelmingly used to assess depressogenic cognitions in youth. The Cognitive Triad Inventory for Children (CTI-C; Kaslow et al., 1992), the downward extension of the Cognitive Triad Inventory (CTI; Beckham, Leber, Watkins, Boyer, & Cook, 1986), is a 36-item questionnaire assessing cognitions about the self, the world, and the future. The Automatic Thoughts Questionnaire for Children (ATQ-C; Stark et al., 1990), derived from the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980), consists of 30-items evaluating the frequency of depressogenic negative self-statements. Another downward extension of an adult measure (Dysfunctional Attitude Scale) (DAS; Weisman & Beck, 1978), the Dysfunctional Attitude Scale for Children (DAS-C; D'Allesandro & Burton, 2006) also provides an assessment of dysfunctional attitudes in youth. Finally,

the Children's Attributional Style Questionnaire-Revised (CASQ-R; Thompson, Kaslow, Weiss, & Nolen- Hoeksema, 1998) assesses attributional style for life events and related cognitions.

Summary of theories of depression. Numerous theories, including genetic/biological, behavioral, interpersonal, and cognitive, provide elucidation into the nature and development of depression. Within the cognitive models, Beck's cognitive theory, the Hopelessness theory, and Response Styles theory represent the core. These models are cognitive diathesis-stress theories of depression, which proclaim that dysfunctional cognitive processes, depressive in nature, become galvanized following the occurrence of a negative life event. While certain cognitive theories inculpate negative inferential rumination styles, Beck implicates the individual's biases toward the negative interpretation of events. Schemas represent patterns of cognition that determine such interpretations, with those possessed by depressed persons encouraging the attention to the negative aspects of the situation. Beck further proposed that the depressed person's thoughts are often centered on dysfunctional views of the self, world, and future. Various cognitive errors, moreover, exacerbate the presence situation and hinder the recovery of the depressed individual. Extensive evidence supporting Beck's cognitive theory of depression in youth, as well as related methods of assessment, exists.

Cognitive Behavioral Interventions for Depressed Youth

Cognitive behavioral therapy was initially designed as a treatment for adult unipolar depression (Beck, 1967, 1983); it was subsequently applied to the treatment of depression in children and adolescents (Spence & Reinecke, 2004). In its application to

both, treatment is brief, with a mean length of twelve sessions with youth (Weersing & Weisz, 2002). Treatment, moreover, endeavors to be empirically based, highly focused in its goals, structured, and collaborative, with a consistent focus on cognitive content, affect regulation, and social skills (Beck et al., 1979; Reinecke & Ginsburg, 2008). Interventions are individualized and based on a comprehensive conceptualization of the individual child or adolescent, whether delivered by means of an individual or group format. Though some obvious benefits exist in the former, including greater flexibility in choice of technique more apt to the youth's presenting concerns and increased time dedicated to just one individual rather than divided across many, the latter is more cost-effective, and allows for learning through social modeling and exchange of feedback between group members (Lewinsohn & Clarke, 1999).

Cognitive behavioral interventions are founded on the theoretical postulate that individuals' conceptualizations of their experiences subsequently influence their affect and behavior (Beck, 1967). When their cognitions, such as beliefs relating to the cognitive triad based on earlier developed schemas, are distorted, their activation can trigger maladaptive information processing, thus leading to the development of depressive symptoms. These negative beliefs about the self, world, and future are unique to depression and differ from those cognitions characteristic to other disorders, exemplifying the content-specificity of cognitions (Beck, 1967). The central tenet underlying the multitude of CBT programs is that therapeutic change is generated when patients are successful at transforming their dysfunctional cognitions and behaviors (Curry & Reinecke, 2003). With regards to Beck's Cognitive Therapy for depression, on

which the subsequently described treatment protocol is based, the preceding equates to the collaborative identification and restructuring of negative cognitions related to cognitive triad to facilitate the alleviation of depressive symptoms. This is accomplished through a variety of cognitive strategies which seek to guide the patients in: (1) Identifying and attending to their negative automatic thoughts; (2) Becoming cognizant of the association between their thoughts, affects, and behavior; (3) Weighing the evidence for and against their negative thoughts; (4) Detecting and restructuring distorted cognitions, replacing them with more accurate interpretations; and (5) Developing the ability to modify maladaptive beliefs (Beck et al., 1979).

CBT treatment packages, however, are varied and emphasize an array of interventions (Lewinsohn & Clarke, 1999; Lewinsohn, Clarke, Hops, & Andrews, 1990); rarely do they solely focus on cognitive change and include only related interventions. Rather, the successful application of CBT dictates the employment of various cognitive and behavioral techniques (Friedberg & McClure, 2002), the latter of which are employed with the intention of altering behavior, extracting thoughts associated with behaviors, and testing the accuracy of particular dysfunctional cognitions (Reinecke & Ginsburg, 2008). Specific methods include teaching patients how to engage in pleasurable and enjoyable activities, as well as how to improve relational problem-solving skills; relaxation, self-control, and coping skills are also imparted in order to assist with the management of the patients' emotions (Curry & Reinecke, 2003; Lewinsohn & Clarke, 1999). Behavioral interventions, the focuses of which are general symptom relief, are frequently emphasized during the initial stage of therapy (J.S. Beck,

1995), though cognitive interventions are occasionally instituted earlier on when the patient is only moderately depressed (Rush & Beck, 1978). Thus, beyond the basic description of treatments as cognitive behavioral in nature, is a plethora of interventions offered in a variety of formats (Durlak, Fuhrman, & Lampman, 1991; Curry, 1991). As will expanded upon later, a drawback to this mélange is the seemingly less lucid picture of the individual contribution of each to the success of a particular treatment to the reduction in depressive in children and adolescents.

Developmental considerations. While CBT is widely used with (J.S. Beck, 1995) and researched in it's application to (Kazdin, Bass, Ayers, & Rodgers, 1990) children and adolescents, some uncertainty remains regarding the particular efficacy and effectiveness of particular components with children of a certain developmental level (Spence, 1994). Piagetian view, which differentiates between youth in the preoperational (approximately ages 2 through 7 years), concrete operational (approximately 7 to 12), and formal operational (approximately 12 or more years in age) stages, based on the quality of thinking about various concepts, provides some structure upon which the developmental appropriateness of cognitive interventions can be assessed (Grave & Blissett, 2004). Younger children are, specifically, believed to be somewhat deficient in the reasoning ability, causal reasoning, perspective taking, metacognition, as well as attention span and working memory capacity that proper engagement in cognitive interventions necessitate (Grave & Blissett, 2004; Kimball, Nelson, & Politano, 1992; Southam-Gerrow & Kendall, 2000; Stallard, 2002). Evidence, however, suggests that, while level of cognitive development plays a key role in the efficacy of CBT, CBT can be

effective with use in younger children, including children in the operational and even preoperational stages of cognitive development, if treatment delivery is developmentally appropriate (Grave & Blissett, 2004). Methods of adapting CBT for youth include the use of simpler, less verbally based cognitive restructuring techniques, concrete examples (e.g., visual devices), frequent summaries and reviews, mnemonic aids, metaphors, experiential learning, and frequent practice (Grave & Blissett, 2004; Weersing & Brent, 2006). The preceding study reflects the aforementioned recommendations and utilizes these developmentally considerate adaptations in order to better tailor the treatment for use those preadolescent females, aged 9-13, on which it was utilized (Stark, Hargrave, Sander, Custer, Schnoebelen, Simpson, & Molnar, 2006).

Efficacy of CBT for depressed youth. Research on the treatment of depression in children and adolescents has emerged only relatively recently (Asarnow et al., 2001; Weersing & Weisz, 2002), and is lagging behind that of the treatment of adult depression and other child disorders (Kaslow & Thompson, 1998). The paucity of research has been hypothesized to exist as a result of historical uncertainties regarding whether depression could actually exist during youth, and as a consequence of inconsistencies with assessment and diagnostic practices. The less disruptive nature of depression, as compared to externalizing and even other internalizing disorders, has also been put forth as a possible justification for this dearth (Kaslow & Thompson, 1998). In the extant literature, cognitive-behavioral therapy (CBT) is the most often evaluated (Curry, 2001; Weersing & Weisz, 2002) and the most empirically endorsed psychotherapeutic intervention for the treatment of child and adolescent depression (Birmaher et al., 1996;

Curry, 2001; Kaslow & Thompson, 1998; Lewinsohn & Clark, 1999; Reinecke, Ryan, & Dubois, 1998). It is, thus far, the only psychotherapeutic treatment to be accorded with the label "probably efficacious" (David-Ferdon & Kaslow, 2008), according to the criteria for empirically supported treatments (Chambless & Hollon, 1998). Large effect sizes concerning the impact of CBT for treatment of youth depression have been found (1.27, Lewinsohn & Clarke, 1999; 1.02, Reinecke et al., 1998). Those studies supporting the efficacy of CBT in a group context for the treatment of depression in both children and adolescents will be reviewed presently.

Empirical support for CBT with depressed children. Fifty-six fifth- and sixth-grade students who were referred by their teachers and subsequently screened for depression were assigned to one of four conditions: (1) a primarily behaviorally-focused CBT condition that highlighted the use of affective education, social skills, and problem solving via role-play; (2) a predominantly cognitively focused condition that emphasized various cognitive restructuring techniques; (3) an attention-placebo condition; or (4) a classroom control condition (Butler, Miezitus, Friedman, & Cole, 1980). The cognitive restructuring group, based on Beck's treatment for depression (1976), included instruction on the relationship between thoughts, feelings, and actions, as well as the identification and restructuring of dysfunctional thoughts. Children participated in a total of ten weekly one-hour sessions. Both cognitive and behavioral conditions lead to greater symptom relief than the attention-placebo and classroom control conditions, with the primarily behaviorally focused CBT intervention showing slightly greater promise (Butler et al., 1980). Results should be interpreted cautiously, however, as assignment to

treatment conditions was not random and children were not clinically diagnosed with depression. This study, however, does provide some support for the efficacy of both cognitive and behavioral interventions in the treatment of depressive symptoms in youth.

Stark and colleagues (1987, 1991) conducted two studies involving depressed children. In the first trial, 29 fourth- to sixth-grade students who met criteria for depression, as based on elevated scores on a self-report measure administered on two separate occasions, were randomly assigned to the following 12-session group interventions: (1) self-control therapy, a cognitively focused CBT condition; (2) behavior problem-solving therapy, a behaviorally focused CBT treatment; or (3) a wait-list control (Stark, Reynolds, & Kaslow, 1987). While both treatment conditions underscored the importance of engaging in pleasurable activities, highlighting the impact engagement has on mood, the former treatment condition emphasized goal setting, augmenting positive and reducing negative reinforcement, as well as addressing negative attributions; the latter treatment condition including problem solving, social skills, and affective education components. Post-intervention analysis revealed that children in both active treatment groups reported fewer depressive symptoms than the participants in the wait-list group; neither treatment condition was proven superior to the other. At eight-week follow-up, gains for both active groups were maintained, with a greater percentage of children from the self-control condition remaining so. This study again provides corroboration for the efficacy of cognitive and behavioral treatments for the treatment of depression as compared to no-treatment controls, as well as evidence of its long-term effectiveness.

In a second study, Stark et al. (1991) provided additional support that CBT, relative to treatment at usual in the form of school counseling, is more efficacious at reducing depressive symptoms following acute treatment. Comparing an enhanced version of self-control therapy (CBT) to traditional school counseling, 26 fourth- to seventh-grade students with elevated depressive symptoms were assigned to 24 to 26 sessions over a period of 14 weeks. Both groups improved with respect to depressive symptoms, with the CBT group exhibiting significantly greater progress; differential treatment gains were no longer found at seven-month follow-up, results that may have been complicated by disparate attrition (Stark, Rouse, & Livingston, 1991). This study offers substantiation of CBT as an improved treatment for depressive symptoms in youth as compared to treatment as usual.

Kahn, Kehle, Jenson, and Clark (1990) examined the efficacy of CBT, relaxation training, and self-modeling interventions for the treatment of depression in 68 moderate to severely depressed sixth-, seventh-, and eighth-grade students. Following the use of a multiple-gate screening procedure to evaluate the presence of depression, participants were randomly assigned to one of the three active treatments (i.e., CBT, Relaxation, or Self-Modeling) or to a waitlist-control condition. Over 15 two-hour sessions, those students in the full CBT condition, based on Lewinsohn's Coping With Depression-Adolescent CBT intervention (Lewinsohn, Antonuccio, Steinmetz, & Teri, 1984), were instructed in skills, including cognitive restructuring, self-reinforcement, pleasant events scheduling, and social skills training. Participants assigned to the relaxation treatment were taught, over twelve sessions, relaxation skills and made aware of the connection

between anxiety-arousing situations, stress and tension, and depression; children in the self-modeling group were made to repeatedly watch videotapes of themselves engaging in behavior discordant with the symptoms of depression (e.g., smiling, providing eye contact,, making positive self attributions) (Kahn et al., 1990). All three treatment groups exhibited significant reduction in depression scores at post-treatment and one-month follow up assessments, demonstrating the efficacy of CBT in the treatment of depressive symptoms. As the study could not differentiate between the cognitive and behavioral interventions, it remains uncertain which aspects of CBT treatments that lead to therapeutic change.

Weisz and colleagues (1997) compared a CBT program to a control condition; the active intervention, the Primary and Secondary Control Enhancement Training program, instructed students in to respond behaviorally when they were able to exert control over their situation and cognitively when external change was not feasible. Forty-eight third through sixth graders with mild to moderate depression were randomly assigned to either a condition. Brief (eight-week) participation in the active led to a significantly improved outcome than no treatment, as measured by self-reports and clinical interviews; gains were maintained at nine-month follow-up (Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux, 1997). While providing further evidence of CBT's efficacy in the short- and long-term treatment of childhood depression, it remains unclear, based on the preceding, which particular components of CBT contributed to diminishing of depressive symptoms.

CBT has also been shown to be a promising treatment for the alleviation of depressed youth when combined with a family education component (Asarnow, Scott, &

Mintz, 2002) and with European populations (De Cuyper, Timbremont, Braet, De Backer, & Wullaert, 2004). In summary, CBT with child populations has been found to be superior to no treatment and wait-list controls and been shown to be comparable to other active treatments; CBT has also been successful at reducing depressive symptoms following immediate completion of treatment and at long-term follow-up. Altogether, these childhood treatment studies provide support for the efficacy of CBT in the treatment of childhood depression. The above, however, provides an appreciation into the lack of understanding regarding the particular ingredients which contribute to the success of CBT as a treatment for depression in youth.

Empirical support for CBT with depressed adolescents. Further support for CBT as a potentially efficacious therapeutic intervention for the treatment of depression also exists in the form of numerous empirical studies executed with adolescent populations. Reynolds and Coats (1986) executed the first randomized control study of the efficacy of CBT in moderately to severely depressed adolescents. Following screening with multiple self-report measures and a rating scale, 30 high school students were assigned to a CBT, relaxation only, or wait-list condition; active treatments were completed in groups and comprised of biweekly sessions over the course of five weeks. The CBT condition included goal setting, self-reinforcement, monitoring of moods and their relation to engagement in pleasurable activities, and assessing the validity of attributions of events; the relaxation condition consisted of psychoeducation concerning the relationship between depression and stress, relaxation training, and guidance in the use of such skills in challenging situations. Though both the CBT and relaxation interventions were

successful at reducing experiences of depression, and gains were maintained at five-week follow-up, no significant differences between either active treatments were found. Limitations of this study include a lack of formal diagnosis with major depression; moreover, as both active conditions lead to treatment gains, it is difficult to ascertain which treatment components were responsible for this improvement.

Vostanis and colleagues (1996a) compared CBT to non-focused intervention (NFT), with 57 adolescents diagnosed with major or minor depression or dysthymia; treatment averaged six sessions over a 14-week period. The CBT treatment emphasized affect recognition, cognitive restructuring, and problem solving, whereas NFT consisted of psychoeducation concerning depressive symptoms and engagement in social activities. At post-treatment, both groups exhibited improvement; no significant differences between groups were found and, at nine-month follow-up, high remission rates were detected (Vostanis et al., 1996b). Suggestions for improving the CBT treatment were discussed. The length of treatment is also notable, as the shortened duration of treatment (i.e., six sessions) may have been insufficient in time in order to impart sufficient cognitive and behavioral skills to the adolescents.

Wood and colleagues (1996) compared CBT to relaxation-only with 53 9- to 17-year olds with major or minor depression. The CBT component was comprised of various cognitive interventions, behavioral activation, interpersonal problem solving, and other specific interventions for depressive symptom reduction (e.g., sleep hygiene). Participants in the CBT condition exhibited significant improvement at post treatment, with 54%, compared to only 21% of relaxation only, remitting (Wood, Harrington, &

Moore, 1996). At three- and six-month follow-up assessment, relaxation group members continued to show improvement while some adolescents in the CBT condition relapsed; it should be noted, thought, that a greater number of relaxation-only participants (71% vs. 42% in the CBT condition) obtained supplementary treatment. Moreover, results should be interpreted cautiously as a control group was not included and methodological limitations prevent any conclusions from being made regarding the long-term effects of CBT for the treatment of depressed adolescents.

A study by Brent and colleagues (1997) contrasted an adapted CBT treatment to systemic behavioral family therapy (SBFT) and nondirective supportive therapy (NST). The CBT condition, founded on Beck's theory of depression, emphasized psychoeducation, examination of matters relating to autonomy, and the attainment of problem-solving, social, and affect-regulation skills. In their trial, 107 adolescents were randomly assigned to one of the three conditions; treatment consisted of 12 to 16 weekly sessions. At post-treatment assessment, a greater number of CBT than SBFT or NST participants remitted (i.e., 60% vs. 38 and 39%, respectively), and adolescents receiving CBT exhibited more rapid rates of reduction in depressive symptoms than the other groups. The mean differences between conditions at long-term follow-up, however, were not significantly different. While providing support for the acute efficacy of CBT, lucidity regarding the impact of individual treatment variables was again not provided.

Lewinsohn and colleagues (1990) randomly assigned 59 outpatients, aged 14 to 18, diagnosed with various depressive disorders, to the Adolescent Coping with Depression Course (CWD-A), CWD-A with parent group (CWD-A+P), or a wait-list

condition. The CWD-A condition, incorporating numerous cognitive and behavioral interventions, was administered over 14 group sessions over a period of seven weeks; seven parent groups were held simultaneously for those in the CWD-A+P condition. At the completion of treatment, both groups displayed a significant reduction in depressive symptoms, as measured by self-reported measures of depression, with the CWD-A+P group also evidencing improvement in girls' experience of depression based on the parent-rated depression measures. Treatment gains were maintained at two-year follow-up (Lewinsohn et al., 1990).

In an additional replication study conducted by Clarke and colleagues (1999), 123 adolescents, aged 14 to 18, who had been diagnosed with major depression or dysthymia, were randomly assigned to CWD-A, CWD-A+P, or wait list control groups; treated adolescents participated in 16 2-hour sessions over an eight-week period, while parents in the CWD-A+P group attended eight meetings. Following acute treatment, active treatment participants were randomized to one of the following conditions for the subsequent two years: booster sessions and assessments every four months, assessments only every four months, or assessments every other year. CBT was linked with higher recovery rate and fewer depressive symptoms, as described by self-report measures; addition of the parent component proved to have little effect. Booster sessions were related to speedier recovery in those youth still depressed at the completion of the acute treatment phase (Clarke, Rohde, Lewinsohn, Hops, & Seeley, 1999). This study duplicated earlier findings that CBT is superior to no-treatment in treating depression and that parent-training does not contribute significantly to symptom remission, and

elaborated on the findings to demonstrate that extended implementation of CBT can lead to continued improvements in previously non-responsive participants.

Rossello and Bernal (1999) randomly assigned 71 Puerto Rican adolescents meeting DSM-III criteria for a diagnosis of depression to individual CBT, Interpersonal Therapy (IPT), or a waitlist condition. The CBT condition consisted of various cognitive interventions, including psychoeducation related to cognitions, identification and modification of cognitive errors, behavioral activation, and social skills training. Both active treatments were superior to waitlist condition in reducing depressive symptoms at post-treatment, though IPT produced greater gains in self-concept and interpersonal functioning. At three-month follow-up assessment, however, both active treatments proved similarly efficacious with regards to these construct, offering support for the efficacy of CBT with ethnic minority populations. Noteworthy is the rather unique placement of cognitive interventions, which were presented uncommonly early in the first four sessions, and the restricted focus on cognitive interventions; the aforementioned leave open for question the possibility of reduced efficacy based on the lack of focus on addressing dysfunctional cognitions. Nevertheless, the preceding does offer support for the use of CBT with ethnic minority populations, and elaborates upon previous findings demonstrating its superiority over other treatments.

In the Treatment of Adolescents with Depression Study (TADS), the relative efficacy of four interventions for the treatment of depression were evaluated (March et al., 2004). Three hundred and twenty-seven moderately to severely depressed adolescents, aged 12 to 17, were treated with 12-weeks of either CBT, fluoxetine, CBT

plus fluoxetine, or placebo. The CBT component was individualized, flexible, and developmentally sensitive. The first six weeks incorporated various cognitive behavioral interventions, including psychoeducation about depression, goal setting, mood monitoring, cognitive restructuring, behavioral activation, and interpersonal problem solving; subsequent weeks addressed social skill deficits of the adolescent and enhanced the development of related skills. Family sessions, incorporating a focus on psychoeducation and on parent-adolescent conflict, were also incorporated. The results indicated that fluoxetine alone was efficacious at reducing depressive symptoms, but to a lesser degree than fluoxetine plus CBT; CBT was not significantly more efficacious than placebo (Kennard et al., 2006; Vitiello, et al., 2006). It is worth mentioning that an atypical CBT protocol was utilized during treatment, as cognitive interventions were restricted to the six weeks of therapy, and that adolescents in the fluoxetine only condition experienced significantly more suicidal ideation than those participants assigned to other treatments. As this was not the case with individuals in the CBT plus fluoxetine condition, it was theorized that CBT may have played a protective role by shielding depressed adolescents from experiencing this sequela (March, Silva, & Vitiello, 2006; Emslie et al., 2006). Moreover, the use of varied therapists from diverse sites and the severity of the depression experienced by the treated group may have moderated the potential effects of the CBT condition (Weersing & Weisz, 2002).

At nine-month follow-up, differences in treatment effects of the three active treatments no longer held and remission rates converged, with the three active treatment groups indicating comparable rates (TADS Team, 2007). The preceding indicates that,

while antidepressant medication was efficacious in accelerating treatment response, CBT gradually proved comparable, with little difference in treatment modality used in the long term. These results were, for the most part, maintained at one-year follow-up (TADS, 2009).

In another multisite trial assessing efficacy of treatment of adolescent depression (TORDIA), 334 adolescents who were previously unsuccessfully treated with an SSRI, and with high rates of comorbidities and suicidality, were randomly assigned to antidepressant alone (another SSRI or venlafaxine) or antidepressant with CBT. The CBT component, based on existing manuals, emphasized cognitive restructuring, behavioral activation, emotional regulation, social skills, and problem solving (Brent et al., 2008). After twelve weeks of treatment, combination treatment with CBT plus antidepressant, specifically SSRI, produced greater results (Brent et al., 2008). Upon subsequent analysis, it was ascertained that patients who received nine or more sessions were 2.5 times more likely to than those who received nine or fewer to demonstrate a positive response. Moreover, patients who were presented with the problem solving and social skills modules were 2.3 and 2.6 times more likely to have a successful treatment response, respectively (Kennard et al., 2009). A 24-week follow-up further indicated that continued treatment proved advantageous for treatment-resistant youth, with early response more indicative of eventual remission of depressive symptoms (Emslie et al., 2010). The preceding has implications for the minimum dose of treatment and active treatment components to be considered when treating chronic and more severe depression in adolescents.

The observed trend across these adolescent treatment studies is that CBT reduces symptoms of depression to a greater extent than no-treatment or wait-list controls, both immediately following treatment and at long-term follow-up. CBT is analogous to alternative psychotherapies with regards to its success at reducing depression; when compared to psychopharmacological treatments, CBT is not superior but instead akin to placebo, unless combined with fluoxetine or other SSRI, which increases its efficacy to surpass pharmacological treatment alone. Another consistent finding is the uncertain determination of individual efficacy of treatment components.

Summary of cognitive behavioral interventions for depressed youth. In its application to youth, cognitive behavioral therapy is brief, empirically-based, structured, collaborative, individualized, and often varied in nature, with a consistent focus on cognitive content, affect regulation, and social skills. CBT for youth depression was created as a result of downward extensions of previously created interventions tailored to adults; as such, in order to ensure the more successful implementation of CBT with youth, thorough consideration of developmental factors is required.

CBT is the most empirically supported and sanctioned psychotherapeutic intervention for the treatment of youth depression. CBT with children has been found to be superior to no treatment and waitlist control, and comparable to other treatments, with the treatment being effective at reducing depressive symptoms immediately post treatment and at long-term follow-up. Empirical studies of adolescents have also confirmed the effectiveness of CBT as a therapeutic intervention for the treatment of depression, with a similar pattern of efficacy noted as in those studies with younger

populations. When compared to psychopharmacological treatments, CBT as a stand-alone treatment is comparable to placebo, though, when used in conjunction with medications, increases its efficacy, placing it above pharmacological treatment used independently.

Components of Cognitive Behavioral Therapy for Depressed Youth

While it is apparent that CBT as a treatment for a variety of disorders is efficacious (Weersing & Weisz, 2002), at present, there exists a paucity of knowledge concerning the specific ingredients of treatment contributing to the successful treatment of depressed youth (Kazdin & Weisz, 1998; Kennard et al., 2009). Specifically, is it less certain whether all components contribute in varying degrees to positive outcomes or, alternatively, whether particular components serve the purpose of priming the patient for the effective engagement in the others (Shirk & Karver, 2006). CBT, as a therapy, is often comprised of various components, including numerous cognitive (e.g., cognitive restructuring), behavioral (e.g., behavioral activation), and problem-solving interventions, as well as the ubiquitous therapeutic relationship, and is especially appropriate as the subject of such inquiries (McCarty & Weisz, 2007). Accordingly, the National Institute of Mental Health has suggested that research into the identification of efficacious treatment components, in order to inform the development of more effective, efficient, and transportable treatments, is indicated (NIMH, 2006).

A potential cause for this dearth in knowledge is concerns related to research design. The assessment of components of therapy necessitates evaluation beyond that of whole therapies (i.e., CBT vs. supportive therapy); specifically, randomized controlled

trials in which components are isolated, or in which components utilized in a specific therapy are assessed over the course of treatment, are required (Shirk & Karver, 2006). Generally, two approaches exist to evaluate treatment components: component analysis and process-outcome studies. The former includes those "experimental designs that isolate some of the specific ingredients in a therapeutic approach and provide information on which of these ingredients/components contributes to therapeutic outcomes" (Shirk & Karver, 2006, p. 469). Of these, both additive, in which a component is added to an existing treatment, and dismantling, in which components of an existing treatment are subtracted or isolated, designs are employed (Ahn & Wampold, 2001). Of these, dismantling studies, which seek to ascertain which components of an existing treatment are required and which may to be disregarded, are considered the "gold standard" of component analysis studies (Shirk & Karver, 2006). Process-outcome studies, alternatively, allow the researcher to reduce the level of analysis from a larger treatment module to the more refined examination of the particular processes, techniques, and interactions that occur within the treatment sessions (Shirk & Karver, 2006). These studies assess, for instance, such within-session processes as treatment adherence (Huey, Henggeler, & Brondino, & Pickrel, 2000).

Few studies have assessed individual components of cognitive behavioral treatment studies using the design strategies delineated above, particularly with regards to depression in child and adolescent samples. Related, however, was McCarty & Weisz's (2007) meta-analysis of nine treatment studies of depressed children and adolescents, in which only those studies which an effect size of 0.50 or greater were selected. The most

frequently included components of the studies, six of which were cognitive behavioral in nature, included a focus on achieving measurable goals, psychoeducation, self-monitoring, interpersonal skills, cognitive restructuring, problem solving, and behavioral activation. As these components were combined in those studies examining effective treatments, it remains unclear which particular component directly influences treatment outcome, though the study did provide some preliminary support for various elements of CBT treatments.

Kennard et al. (2009), in a secondary analysis of the TORDIA study described previously (Brent et al., 2008), assessed the impact of individual components of a CBT treatment for depressed youth on outcome. The authors found that neither general therapy processes, behavioral activation, emotional regulation or coping skills, or family-orientated components were related to outcome, while problem solving and social skills training were positively associated with improvements in depressive symptoms, providing some noteworthy initial findings regarding those components of CBT which contribute to treatment outcome in youth.

In the following review, the treatment components of cognitive behavioral therapy for the treatment of youth depression will be analyzed separately for their effectiveness. The discussion will begin with an outline of those interventions comprising the four commonly incorporated components of CBT (J.S. Beck, 1995; McCarty & Weisz, 2007), followed by an examination of the available research analyzing change attributed to the particular intervention components, as well as related methods of measurement. This will be undertaken in an effort to better comprehend the specific

ingredients used in the successful treatment of child and adolescent depression, thereby improving the strength of existing treatments for use with this population.

Cognitive interventions. According to Beck and colleagues (1979), cognitive interventions are "aimed at delineating and testing the patient's specific misconceptions and maladaptive assumptions" (p. 4). Generally, these techniques maintain that cognitive techniques are employed with the goal of encouraging the patient to: 1) monitor his automatic thoughts or cognitions; 2) identify the relationship between thoughts, emotions, and behaviors; 3) evaluate the evidence for and against his distorted cognitions; 4) replace maladaptive thinking with more accurate cognitions; and 5) detect and modify those dysfunctional core beliefs that taint his perception of his experiences and maintain his pathology (Beck et al., 1979). While current cognitive behavioral approaches underscore the importance of cognitive interventions as the core of their treatment (Beck et al., 1979), recent research has questioned the validity of the preceding (Hollon, 2000; Jacobson et al., 1996). Specifically, such studies have queried the generally accepted belief that cognitive interventions significantly enhance non-cognitive approaches (e.g., behavioral activation) and are necessary to produce changes (Weisz et al., 2006). Moreover, noteworthy are the attributions made by preadolescent children regarding perceived helpfulness of component treatments; expressly, such patients regarded various behavioral (e.g., behavioral activation, social skills) and problem solving interventions to be the most therapeutically beneficial (Asarnow et al., 2002). Nonetheless, cognitive interventions, as the theoretically-based techniques which possess the central role in cognitive behavioral therapy and related treatment packages, are described here.

Following a brief outline of the major techniques, the efficacy of and methods of assessing cognitive interventions will be addressed.

Eliciting automatic thoughts. An early step in the implementation of cognitive behavioral therapy is the recognition of those thoughts that are often slightly outside of one's consciousness and which occur in the context of certain situations, reflecting underlying core beliefs about the self, world, and future (J. Beck, 1995); with regards to treatment of depression, dysfunctional cognitions are of primary interest. As the detection of negative emotions, indicated by shifts in verbal and nonverbal behavior, is more readily accomplished (Rush & Beck, 1977), they are used, by both the patient and the therapist, as catalysts for the detection of automatic thoughts. If the client is challenged by the task, the therapist may assist by directly eliciting the thought, eliciting related imagery, role-playing with the client, or offering possible hypotheses as to the cognition (J. Beck, 1995). The aforementioned is either accomplished in session or between sessions, with the client noting their cognitions as they arise or following a pre-allotted period of time (Beck et al., 1979). This is conducted with greater ease as the client becomes proficient at detecting such thoughts and being aware of those situations that may elicit them (J. Beck, 1995).

Relationship between thoughts and feelings. Once accurately differentiated, the connection between cognitions and emotions is underscored; the preceding is accomplished, as noted above, by eliciting those cognitions experienced in the context of affective states (J. Beck, 1995). The client is encouraged to view the experience of various emotions as stemming from those cognitions possessed; thus, the realization that,

the negative interpretation of a situation, for instance, will lead to a negative feeling state, occurs. The degree to which the client believes the thought is also salient, and can be assessed with a rating scale, which assists in determining, among other things, the degree of improvement following the use of various interventions and serves the purpose of further underscoring the connection between emotions and cognitions (J. Beck, 1995).

Exploring personal meaning. In an effort to unearth the client's schemata, the therapist delves into those automatic thoughts which are believed to stem from various underlying beliefs and elicits the meaning of the thought to the client. At times, this will result in the disclosure of the client's intermediate beliefs (e.g., assumptions and rules) and core beliefs (J. Beck, 1995).

Exploring underlying assumptions. The client and therapist collaboratively explore the pattern of thinking underlying the client's negative thoughts, behaviors, and emotions across contexts (J. Beck, 1995). The preceding can also be viewed as a unique set of rules the client applies to himself (e.g., "I should achieve more than everyone") that likely result in negative affective states.

Development of underlying assumptions. The therapist promotes the exploration of the client's developmental experiences and their contribution to underlying beliefs and assumptions. The preceding is accomplished with the goal of examining and reframing the original experiences, which support the current dysfunctional beliefs, unearthing evidence invalidating the presently held assumption, and identifying core beliefs (J. Beck, 1995).

Recognizing cognitive errors. As depressed persons are inclined to form errors in

their thinking, the therapist assists in elucidating the presence of these distortions to the client. Twelve of such cognitive errors exist, including catastrophizing, overgeneralizing, dichotomous thinking, among others (see J. Beck, 1995, p. 119). Cognitive interventions are later applied to such cognitive distortions with the purpose of modifying dysfunctional thinking and thus improving mood.

Distancing from thoughts. The therapist further primes the client for engagement in cognitive restructuring techniques by underscoring the subjective nature of cognitions and discouraging the view of cognitions as established fact, as is often believed, particularly by children and adolescents (Stark, 2008). Various strategies, including eliciting feedback that one would give to a best friend were they in the same situation and the use of metaphors (i.e., "Muck Monster," in the case of the intervention utilized in this particular study) assist the client in gaining perspective and conceptualizing the cognition as a subjective one, and further as one that is distorted (J. Beck, 1995).

Examining available evidence. Following the identification of the automatic thought, as well as the underscoring of its relationship to the depressive symptoms, the therapist and client collaboratively discover evidence, from both current and past experiences, supporting and disconfirming the cognition in an effort to more accurately and objectively assess the situation (J. Beck, 1995).

Testing beliefs prospectively. In the context of cognitive interventions, the therapist may utilize behavioral experiments; rather than encourage engagement in activities with the goal of increasing mood, the therapist's goal has the client do so in order to assess of the accuracy of the client's beliefs (J. Beck, 1995). The therapist may,

in addition, elicit from the client predictions about the outcome of the experiment, reviewing the accuracy of the outcome after completion.

Searching for alternative explanations. The therapist employs the knowledge gained from the exploration of evidence for and against the initial dysfunctional cognition as a catalyst to a consideration of more adaptive and accurate alternative explanations (J. Beck, 1995). The preceding is often accomplished through the use of such questions as, "What is another way of looking at it?" and "What is the new thought?"

Realistic consequences of negative cognitions. The therapist, in an effort to address certain cognitive distortions and diffuse the strength of negative thoughts, encourages the client to consider the realistic consequences of the cognition if it were discovered to be accurate. The therapist may use such inquiries as, "So what if it is true?" and "What is the worst/best that could happen?" (J. Beck, 1995).

Adaptive functional value of beliefs. In an additional effort to modify the client's negative beliefs, the therapist encourages the client to assess the usefulness of the held cognitions. The client is prompted to consider both the advantages and disadvantages of possessing the dysfunctional thought; when the distressing consequences of its continued belief are revealed, the client is assisted in developing more beneficial cognitions (J. Beck, 1995).

Guided discovery & empiricism. The cognitive therapist embraces the approaches of guided discovery and empiricism throughout her use of the various techniques. The therapist, specifically, refrains from debating with the client in an effort to convince him to think differently; rather she collaboratively guides the client in an investigation of his

beliefs, gathering evidence and testing hypotheses before he, more autonomously, reaches a increasingly adaptive conclusion (J. Beck, 1995).

Practicing rational responses. Collaboratively, in an effort to disturb certain patterns of thinking and thus improve the client's mood, the therapist and client rehearse more adaptive responses to the client's negative cognitions. This may be executed, for instance, with the client rebutting his own negative thoughts, as presented to him by the therapist (J. Beck, 1995).

Recording thoughts. The therapist encourages the client to record several facets of his experiences of his thoughts as they occur in the interim periods between sessions. To assist with cognitive restructuring, as well as to highlight certain patterns of thinking, the client monitors the context in which the thought occurred, the thought itself, as well as the degree to which it was believed, the resultant emotions, and their intensity; when the client is more adept at modifying his thoughts, he is also instructed to record his cognitive restructuring attempt and the outcome of this attempt, including his new thoughts and subsequent emotions and behaviors (J. Beck, 1995).

Building a positive schema. While eradicating dysfunctional beliefs, the therapist simultaneously assists in the client's development of positive, though realistic, beliefs about the self (J. Beck, 1995). The therapist and client collaboratively identify positive qualities that concurrently support the client's new beliefs about the self, world, and future.

Empirical support for cognitive interventions. Cognitive interventions are often employed in conjunction with related techniques (e.g., problem solving, behavioral

interventions) in the context of CBT protocols, rendering it challenging to evaluate the efficacy of these interventions in isolation. Nonetheless, several attempts have been made and are discussed below.

Kendall and Braswell (1982) dismantled a cognitive-behavioral treatment in which twenty seven 8 to 12 year-olds were treated for concerns related to impulsivity, as well as hyperactivity and aggression, and randomly assigned to twelve weeks of one of three conditions. The attention-control condition incorporated psychoeducation and interpersonal contact, while the behavioral condition added a focus on modeling and contingency management; the cognitive behavioral condition contributed, in addition to the above, a cognitive component, namely cognitive modeling in problem resolution, as well as problem solving training. While treatment did not impact parent ratings of behavior, both the CBT and behavioral condition resulted in improvements in teachers' ratings of hyperactivity, with the former additionally improving teachers' ratings of self-control. CBT and behavioral treatments, further, improved academic achievement, though only CBT resulted in improved self-assessment of self-concept. Results were maintained at ten-week follow-up but were no longer apparent at one-year post-treatment. Though not with regards to the treatment of depression, this study provides a sound example of a component analysis study while also providing some support for the inclusion of cognitive interventions, though the latter is confounded with the inclusion of a problem-solving component.

In an effort to investigate the effect of positive and negative cognitions on depressive symptoms, Beck and Strong (1982) randomly assigned thirty college students

(aged 18 to 21) with self-reported depressive symptoms to one of two treatments, negative and positive connotation conditions, or control. The treatment conditions were similar though differed in the interpretation provided by the counselor in response to the clients' disclosure of negative affect or cognitions. Interestingly, both negative and positive connotation treatment conditions resulted in improvement in depression symptoms, though those in the negative reframe group experienced a relapse at follow-up while patients offered positive interpretations continue to maintain gains. The authors discussed an attributional explanation of the preceding, stating that hypothesized attributional differences between the two groups, with the negative reframe group attributing change to their therapist, while the positive reframe group attributing change to themselves, may have mediated the reduction in depressive symptoms. Thought not an examination of a complete cognitive treatment, the above does help to sketch the role of cognitive interventions in symptom change.

Jaycox, Reivich, Gillham, and Seligman (1994) assessed the efficacy of a depression prevention treatment with youth aged 10 to 13 years. The treatment, the Penn Prevention Program, was composed of two components. Based both on Ellis' (1962) and Beck's (1967) cognitive models, the cognitive component included the identification of negative attributions regarding problematic events and the evaluation of the accuracy of such beliefs. The second component included the instruction of social problem solving and coping skills. One hundred and forty three participants were randomly assigned to either to the cognitive, social problem solving, combined treatment, or control conditions. Results indicated that all treatment groups were comparably more efficacious at reducing

existing depressive symptoms, as well as diminishing externalizing conduct problems, than control. The relative contribution of each component was not studied and, despite data that supported the use of a deconstructed version of program, follow-up studies of the program continue to combine treatment components (Shirk & Karver, 2006).

Hayes and colleagues (1996), in a detailed investigation of the target of cognitive restructuring, coded archival data of a cognitive behavioral treatment for depressed adults. Results of the retrospective analysis indicated that cognitive interventions directed at altering thoughts of the self or of others were not related to decrease in symptom reduction; those cognitive interventions which focused on interpersonal vulnerabilities of depression, were, moreover, related to deterioration in global functioning. A focus on cognitions regarding developmental vulnerabilities, however, specifically with regards to beliefs related to experiences of attachment, predicted greater improvement in global functioning at post-treatment and at two-year follow-up. Though ostensibly indicating otherwise, the investigators concluded that the preceding was actually quite theoretically coherent. As intrapersonally- and interpersonally-inclined cognitive interventions were not immersed to the necessary degree in addressing core beliefs, as those developmentally-focused interventions were, they were hypothesized to not be sufficiently concentrated to produce meaningful change (Beck et all, 1979). A separate concern regarding the representativeness of the data sample, which included just one randomly selected transcript from the first four weeks of treatment, was also proffered as potential source of the unanticipated results (Hayes et al., 1996).

Examining only those randomized controlled trials evaluating treatments of depressed youth, in an effort to parse, to some degree, their relative contribution, Weisz and colleagues (2006) compared the mean effective size of treatments that incorporated a cognitive change component to the mean effective size of those treatments that did not (e.g., relaxation training). The mean effective size of both groups, while significantly different from zero, were comparable and did not differ to a significant degree, leading the authors to conclude that treatment for youth depression may not require a focus on cognitive change.

Measurement of cognitive interventions. Several instruments that allow the investigator to assess the use of cognitive interventions in the context of therapy exist. One of the first of such instruments was the Cognitive Therapy Scale (CTS; Young & Beck, 1980), an 11-item rating scale comprised of two scales: the General Therapeutic Skills and the Conceptualization, Strategy and Technique subscales. While the former evaluates the degree to which the therapist structures the session, elicits feedback, and works collaboratively with the client, the latter evaluates the quality of the therapists use of cognitive and behavioral techniques, including the elicitation of key cognitions, guided discovery, and goal setting, among others. Despite excellent inter-rater reliability (.94) (Dobson, Shaw, & Vallis, 1985), the scale was determined to inadequately discriminate between cognitive and other interventions.

The Collaborative Study Psychotherapy Rating Scale (CSPRS; Hollon et al., 1988), an assessment of therapist adherence to treatment, includes 96 items divided into seven subscales. The Cognitive Behavioral Therapy subscale assesses therapists' use of

cognitive strategies, among others. While psychometric estimates for the scale were adequate (Hill, O'Grady, & Elkin, 1992), the CBT scale was purported to not differentiate cognitive interventions from others, including behavioral and therapist relational interventions (Spangler, Beckstead, Hatch, Radpour-Wiley, & Agras, 2001). In order to more appropriately assess cognitive interventions and the mechanisms of change in cognitive behavioral treatments, a more refined measure, which more precisely measured cognitive techniques in isolation, was necessary.

The CBT Coding Scale for Bulimia Nervosa (CCS-BN; Spangler, 1998) combines various subscales which appraise the use of cognitive, behavioral, structural, and therapeutic interventions. Although, as the eponymous scale suggests, not initially intended to assess components of cognitive therapy for depression, the scale does assess CBT-specific interventions and is an observer-coded scale with discrete therapist and client segments. Of the two sections, the first, the therapist section, which incorporates items from both aforementioned measures, assesses general cognitive behavioral techniques, while the other, the patient section, assesses cognitions and behaviors specific to bulimia nervosa. As the therapist section of this measure (CCS-BN-TS) has been demonstrated to reliably assess cognitive interventions in seclusion, as well as possess adequate psychometric properties (Spangler et al., 2001), a more comprehensive and developmentally appropriate version of the scale will be utilized in the current study.

Summary of cognitive interventions. CBT, often comprised of various cognitive, behavioral, and problem-solving interventions, executed in an atmosphere enhancing a therapeutic relationship, has been shown to be effective in the treatment of child and

adolescent depression. Less, however, is known about the precise ingredients of the treatment, which contribute to this change. Research addressing this ambiguity has been recommended, in an effort to better inform the advancement of increasingly efficient, effective, and transportable treatments. Concerns with research design have been proffered as potential challenges to conducting such investigations; initial findings have implicated problem solving and social skills training as components associated with reductions in depressive symptoms.

One of these components, cognitive interventions, is aimed at identifying and addressing the depressed person's dysfunctional cognitions. Numerous techniques are encompassed within this domain, including the elicitation of automatic thoughts, underscoring of the relationship between thoughts and feelings, exploration of underlying beliefs, recognition of cognitive errors, examination of available evidence, search for alternative explanations, and recording of thoughts.

As cognitive interventions are frequently used alongside other related interventions in the context of CBT treatment, their discrete effects are challenging to ascertain. However, in those few studies that have been conducted, results have been mixed, with cognitive interventions demonstrating a positive association with improved outcome in some, with others indicated no effect. The latter studies conclude that change is attributed to other contributors, resulting in some questions about the importance of inclusion of cognitive interventions with child and adolescent populations.

Several notable methods of measuring cognitive techniques exist, though these have been critiqued for not measuring them comprehensively or in seclusion. As such, as

well as due to the nature of the data of the present study, the use of an observer-coded instrument was highlighted.

Behavioral interventions. The utilization of behavioral strategies was initially conceptualized, in the context of CBT, as a method to achieve the goal of altering negative cognitions; specifically, behavioral interventions were hypothesized to increase mood to a sufficient degree to permit the patient to engage in more meaningful introspection, as well as with an aim to disconfirm faulty beliefs (Beck et al., 1979). This facet of treatment contrasts to behavioral therapy, namely behavioral activation, which purports to bring about decreases in depressive symptoms by presenting the client with greater experiences of positive reinforcers (Martell, Dimidjian, & Herman-Dunn, 2010), as per the behavioral theory of depression (Lewinsohn, 1974). The following discussion will begin with a brief description of several core behavioral interventions often used in CBT manualized treatments for depression with youth, before examining the empirical evidence assessing such components, as well as their assessment methods.

Coping skills training. Coping skills are thought to be effective in improving the negative mood resulting from situations in which the depressed person has little influence. Engagement in these tasks is, as such, thought to assist with emotional dysregulation. In the context of the treatment used in this study, five coping skills are taught, which entail the following practices: engaging in an activity that is fun and distracting, engaging in an activity that is soothing and relaxing, expending energy, talking to someone, and reframing the cause (Stark, Hargrave, et al., 2006).

Mood monitoring. Mood monitoring underscores for the child the relationship

between his cognitions, emotions, and behavior. Ratings of mood taken prior to engagement in a coping skill activity or cognitive restructuring are compared to ratings taken after, as a experiential way to highlight this connection. As such, the patient gains an awareness of their mood and is cued into changes in the preceding, using it as an indication to engage in a strategy to increase their mood (Stark, Hargrave, et al., 2006).

Interpersonal skills training. Interpersonal skills acquisition is completed along the course of CBT in an effort to improve the quality of the youth's relationships. This is accomplished by addressing, teaching, and practicing such skills as assertiveness training and using appropriate body language, among others (Mccarty & Weisz, 2007).

Behavioral activation. A main purpose of behavioral activation, also called pleasant event scheduling and activity scheduling, is the increase in mood that allows for more efficient engagement in cognitive interventions, as well as the provision of discrediting evidence for the youth's negative cognitions (Beck et al., 1979). In the context of behavioral activation strategies, the therapist assists the child client in identifying pleasant activities in which to engage; the child subsequently monitors their mood in an effort to underscore the association between engagement in activities and increase in mood. Activities chosen are those associated with mastery and pleasure for the child, but which he has, since the onset of depressive symptoms, avoided.

Empirical support for behavioral interventions. Several studies examining the efficacy of behavioral strategies, in the form of behavioral activation treatments, have been conducted. While employing similar behavioral interventions as those often included in cognitive behavioral treatments based upon the cognitive theory of depression

(Beck et al., 1979), these treatments employ them in isolation, embracing the more strictly behavioral view of depression that purports that depression results from the diminution of positive and increase in negative reinforcement (Lewinsohn, 1974).

In order to assess the relative efficacy of components of CBT, as well as the theory of change as proposed by Beck and others (1979), Jacobson and colleagues (1996) assigned 152 adults meeting criteria for major depression to 12 sessions of one of three conditions: 1) behavioral activation (BA), which included a focus on monitoring activities that were associated with pleasure and mastery, cognitive rehearsal of activity engagement, and interpersonal skills instruction; 2) behavioral activation with dysfunctional automatic thought modification (AT), which consisted of highlighting the association between cognitions and feelings, recording dysfunctional thoughts, responding appropriately to negative thinking (i.e., coping skills training), assessing presence and addressing attributional biases, and completing homework in order to assist with the more accurate interpretation of negative thinking, in addition to those behavioral interventions noted in the previous condition; and 3) a full cognitive therapy (CT) condition, which incorporated all of the above and added various traditional cognitive strategies, including the "downward arrow" technique, explicit determination of thoughts and core beliefs, and cognitive restructuring related to the core beliefs. Participants were assessed at pre-treatment, as well as at follow-up with multiple self-report and diagnostic interviews for depression. At post-treatment and follow-up, all treatments were deemed equally efficacious at reducing depressive symptoms, providing support for the role of behavioral interventions in the treatment of depression (Jacobson et al., 1996; Gortner,

Gollan, Dobson, & Jacobson, 1998).

Some concerns with regards to the preceding have been presented; specifically, critics have noted that the skill of the therapists administering the cognitive therapy was questionable, as the novice therapists were supervised by experts in behavior therapy and not cognitive interventions (Hollon, 2000). Moreover, unlike traditional cognitive approaches, which integrate behavioral strategies throughout the treatment for the purpose of assessing accuracy of beliefs, the cognitive condition above presented cognitive and behavioral strategies in a sequential fashion, leaving some uncertainty as to the impact of this shift of the efficacy of the invention (Hollon, 2000).

In a subsequent randomized placebo-control study, with the above criticisms considered and addressed, Dimidjian and colleagues (2006) compared treatment with behavioral activation to those with cognitive therapy and antidepressant medications. Two-hundred-and-forty-one adults diagnosed with major depression were assigned to one of the four conditions. Behavioral activation, based on Beck and colleagues' (1979) model, consisted of self-monitoring, structuring and scheduling activities, mood monitoring, and role-playing skills learned. Cognitive therapy, again based on previously described models (Beck et al, 1979; J. Beck, 1995), addressed cognitive distortions and underlying dysfunctional beliefs. The remaining participants were either treated with the SSRI paroxetine or placebo. Depression was assessed by diagnostic interview and self-report measure; treatment adherence was assessed using a modified Collaborative Study Psychotherapy Rating Scale (Hollon et al., 1989) and the Cognitive Therapy Scale (Young & Beck, 1980). Behavioral activation was found to be comparable to

antidepressant medication in the treatment of more severely depressed clients; with this population, cognitive therapy was deemed less so. Differences with regards to mildly depressed persons were negligible. While in agreement with some notable previous findings (Elkin et all, 1989), the preceding is in disagreement with the results of other studies, which have found cognitive therapy to be comparable to treatment with antidepressant medication (DeRubeis et al., 2005).

In a follow-up study, which evaluated the long-term effects of the previous treatments, Dobson and colleagues (2008) found that both therapeutic interventions were more efficacious than medication withdrawal, and at least as efficacious as continued treatment with medication, in preventing recurrence of symptoms. Those previously treated with cognitive therapy were, moreover, significantly more likely to maintain gains and postpone relapse at both one- and two-year follow-ups, consistent with Beck and colleagues' theory (1979) that restructuring underlying schemata prevents symptoms of depression from recurring.

Finally, in a comparable study comparing behavioral activation to cognitive therapy, in which both were delivered similarly to the above studies, behavioral activation was found to be superior to cognitive therapy in a subset of adult patients, termed extreme non-responders (Coffman et al., 2007). Specifically, this group of individuals was differentiated from others in their more severe experience of depressive symptoms, greater functional impairment, and more challenging problems with support group. These component analysis studies provide some support for an ingredient of CBT, behavioral interventions, suggesting that they, in isolation, may satisfactorily address the

concerns presented by clients, as previously hypothesized, experiencing particularly challenging or severe depressive symptoms (Beck et al., 1979; Martell et al., 2010).

Measurement of behavioral interventions. Several methods of assessing behavioral interventions exist. Most notable among these are the Collaborative Study Psychotherapy Rating Scale (CSPRS; Hollon et al., 1988) and the CBT Coding Scale for Bulimia Nervosa (Spangler, 1998). Of the seven subscales on the CSPRS, as noted above, the Cognitive Behavioral Therapy subscale, assesses, among other areas, behavioral interventions with the inclusion of four items. The measure is reported to possess high internal consistently (CBT = .94) and high inter-rater reliability (CBT = .90) (Hollon et al., 1988).

The behavioral subscale of the CBT Coding Scale for Bulimia Nervosa (CCS-BN; Spangler, 1998) assesses therapists' assessment of problematic behaviors, use of alternate behaviors, instruction in behavioral skills, and behavioral activation. This particular scale is reported to possess adequate inter-rater reliability, with estimates at .64. This measure, moreover, presents the investigator with the added benefit of retrospectively examining previously collected data.

Summary of behavioral interventions. Behavioral techniques have been utilized, in the context of cognitive behavioral therapy, with the intention of increasing mood to allow for the more meaningful engagement in cognitive restructuring. Behavioral techniques, however, are also employed in isolation, and are believed, in this fashion, to be sufficient in improving depressive symptoms. Coping skills training, mood monitoring, interpersonal skills training, and behavioral activation are notable exemplary

strategies.

Several studies have provided persuasive evidence of the use of behavioral interventions in the treatment of depression. Though conducted primarily with adults, behavioral techniques have been demonstrated to be either equally as effective as or more so than cognitive therapy, though use of the latter resulted in preventing recurrence of symptoms.

Behavioral interventions are typically assessed using several scales, though, similar to the concern presented with cognitive interventions, one observed-coded was underscored as a preferred method of assessment.

Problem-solving interventions. Problem solving, used both as a stand-alone treatment and as a component of various cognitive-behavioral approaches, is generally defined as "the self-directed cognitive-behavioral processes by which an individual, couple, or group attempts to identify or discover effective solutions for specific problems encountered in everyday living" (Nezu, Nezu, & D'Zarilla, 2010, p. 199). Specifically, it is a deliberate, effortful, and directed endeavor and addresses various concerns, including those of an impersonal (e.g., financial difficulties), intrapersonal (e.g., cognitive challenges), and interpersonal (e.g., argument with peer or significant other) nature (Nezu et al., 2010), with the goal of preventing and treating psychopathology, thus improving mental health (Bell & D'Zurilla, 2009). Problem solving is conceptualized as comprising two processes: problem-solving orientation and rational problem-solving skills (D'Zurilla, 1986). The former is defined as one's awareness of the existence of the problem, his self-appraisal regarding his ability to solve the problem, as well as his

beliefs regarding the outcome of the problem-solving attempt. When negative, related cognitions hinder the development of adaptive problem-solving skills, and are posited to be associated with depression (D'Zurilla, Chang, Nottingham, & Faccini, 1998). Rational problem-solving skills have generally been defined as inclusive of: 1) problem defining and conceptualization; 2) generation of alternate solutions; 3) selection among options; and 4) solution implementation and evaluation (D'Zurilla & Goldfried, 1971, Nezu et al., 2010). During the first stage, the patient is encouraged to operationalize the problem, both specifically and comprehensively, so as to of assess its potential for modification, as well as to set a goal regarding a favorable outcome. Subsequently, though oft challenging for the depressed individual (Marx, Williams, & Claridge, 1992), the patient is instructed to generate multiple solutions to the problem, one of which is expected to generate a suitable outcome. The patient is then directed, following a period of proper evaluation of the consequences, to choose an option from those brainstormed previously. Following the selection of an adequate plan, in the effort of increasing the likelihood of a positive outcome, the patient implements the chosen solution and evaluates its effectiveness, so as to promote self-correction, should it be needed. Treatment typically proceeds first with the establishment of a strong problem orientation, or the view of the concern as a problem that is capable of being solved with some thoughtful effort, followed by the instruction of the preceding skills.

Problem-solving therapy is purported to be appropriate for depressed young adults, adolescents, or children (Nezu, Nezu, & Perri, 1989), who have been shown to possess problem-solving deficits (Asarnow, Carlson, & Guthrie, 1987; Gotlib &

Asarnow, 1979; Reinecke et al., 2001). Depressed patients are, for instance, less likely to generate effective solutions to problems than their nondepressed counterparts (Marx et al., 1992; Rotheram-Borus, Trautman, Dopkins, & Shrout, 1990) and are thought to possess negative problem-solving appraisal, viewing themselves as lacking in this regard (Haaga, Fine, Terrill, Stewart, & Beck, 1993; Heppner, Baumgardner, & Jackson, 1985), providing support for the inclusion of focus on both problem-solving skills and problem-solving orientation, respectively, though with a greater weight placed upon the latter (Becker-Weidman, Jacobs, Reinecke, Silva, & March, 2010). It is posited that these deficiencies complicate an already challenging situation, as the depressed individual is also hypothesized to be in greater need of such skills due to the likely increase in exposure to stressful life events (Nezu & Ronan, 1985). Problem solving has been conceptualized as a key component of cognitive behavioral therapy (Beck et al., 1979) and has been incorporated into cognitive behavioral treatments for depression (e.g., Stark, Hargrave, et al., 2006). In this study, the cognitive behavioral treatment utilized incorporates a modification of an existing problem-solving procedure (Kendall & Braswell, 1993).

Empirical support for problem-solving interventions. Numerous studies assessing the efficacy of problem solving as an exclusive treatment (i.e., without the assistance of other CBT techniques) have been conducted (Bell & D'Zurilla, 2009). The following will describe the results of several studies conducted with adult, adolescent, and child populations.

In a meta-analysis of randomized controlled trials assessing the efficacy of

problem-solving therapy as a stand-alone treatment, Cuijpers and colleagues (2007) examined 13 studies of problem-solving therapy with adults diagnosed with a depressive disorder. Problem-solving therapy was defined as any therapy which included the following components: problem definition, solution generation, solution selection and implementation, and solution evaluation. Problem-solving therapy was found to have a large effect on depression, with those receiving group interventions and with less severe depression demonstrating the greatest effect.

Bell & D'Zurilla (2009) expanded upon the previous meta-analysis by conducting their own; specifically, this meta-analysis progressed beyond the aforementioned in that it added alternative psychosocial treatments, as well as studies conducted with children and adolescents. Nineteen studies analyzing 21 samples were included in this review, which examined the efficacy of pure-form problem-solving therapy for reducing depressive symptoms. Results indicated that problem-solving therapy was equally as efficacious as treatment with medication, and significantly more so than support and attention control group or no treatment. Training in all four key skills (i.e., problem definition, solution generation, solution selection and implementation, and solution evaluation), was, moreover, more efficacious than those incorporating a single or a combination of components. Finally, attention to building a positive problem orientation, which was sought by fostering positive beliefs regarding one's problem-solving ability and correcting negative beliefs regarding the view of the problem as a more precarious threat than it actually presented as requiring an amount of effort greater than what was necessary to solve the problem. Other meta-analyses have confirmed the above results

(Malouff, Thorsteinsson, & Schutte, 2007).

In an assessment of youth offenders, Biggam & Power (2002), the efficacy of a time-limited, group problem-solving therapy was evaluated. Forty-six participants, aged 16 to 21, were assigned to problem-solving therapy or a control condition. Though not formally diagnosed with a depressive disorder, selection of offenders was based on suicidal risk and observation of skills deficits, as evidenced by increased incidents of bullying and violence with other inmates. Problem-solving ability was assessed with the Social Problem Solving Inventory-Revised (PSI-R; D'Zurilla, Nezu, & Maydeu-Olivares, 1996); measures of depression and hopelessness, *The Hospital Anxiety and Depression Scale* (HADS; Zigmond & Snaith, 1983) and *Beck Hopelessness Scale* (BHS; Beck, Weissman, Lester, & Trexler, 1974), were additionally included. Post-treatment data indicated that youth experienced significant decreases in symptoms of depression and anxiety, as well as reductions in hopelessness; problem-solving ability, moreover, was enhanced, with results maintained for all areas at three-month follow-up. Similar findings were found with regards to male and female youth incarcerated for having committed a violent crime (Guerra & Slaby, 1990). Specifically, engagement in the problem-solving intervention was found to increase problem-solving skills and reduce aggressive behaviors. Noteworthy was the intervention's purported effects on altering beliefs regarding aggression.

Though without the inclusion of a focus on a problem-solving orientation, as well as lacking an active treatment comparison, Eskin and colleagues (2008) examined the efficacy of problem-solving therapy in treating depression in high-school and university

students. Forty-six depressed young persons were assigned to a six-session problem-solving therapy condition or waitlist control condition. Numerous self-report depression scales, as well as measures of assertiveness and self-esteem, were incorporated; problem-solving ability was assessed using the Problem Solving Inventory (PSI; Heppner and Petersen, 1982). At post-treatment, a significantly greater portion of those in the active treatment condition were improved, with symptoms no longer meeting criteria for their depressive disorder; the treatment was additionally efficacious at increasing assertiveness and self-esteem. Results were maintained at 12-month follow-up, providing evidence supporting the use of problem-solving therapy in the treatment of depression (Eskin, Ertekin, & Demir, 2008).

In light of the above, as well as findings demonstrating that child and adolescent patients, as well as their parents, attribute a great deal of improvement in depressive symptoms to problem-solving skills training in the context of cognitive behavioral therapy (Feehan & Vostanis, 1996), problem-solving skills training appears to be a vital component to CBT treatment for depression with youth.

Measurement of problem-solving interventions. Measures of problem-solving abilities can be subdivided into two forms: process and outcome (D'Zurilla et al., 1996). The former evaluates the individuals approach toward and view of problem solving (i.e., problem-solving orientation), as well as the skills implemented in doing so (i.e., problem-solving skills), while the latter assesses the quality of the problem-solving attempt (D'Zurilla and Nezu, 1990). Several of such measures exist. The Social Problem-Solving Inventory-Revised (SPSI-R; D'Zurilla et al., 1996) is theoretically-based process measure

which assesses five problem-solving factors, as indicated by the positive problem orientation, negative problem orientation, rational problem-solving, impulsive/carelessness style, and avoidance style scales. The Problem-Solving Inventory (PSI; Heppner & Peterson, 1982) is another such process instrument which assesses self-appraisal of problem-solving ability. Again, as the nature of this study precluded the use of such measures, an observer-rated instrument was created specifically for the study to allow the assessment of problem-solving interventions based on previously conducted therapy sessions.

Summary of problem-solving interventions. Problem-solving, defined as the focused and directed effort in eliciting methods of addressing impersonal, intrapersonal, and interpersonal concerns. Problem-solving orientation and problem-solving skills are differentiated, with the former encompassing an individual's beliefs about his ability to solve the problem, as well as his predictions about the outcome of the problem-solving attempt. Problem-solving skills include problem definition, generation of potential solutions, solution selection, and solution implementation and evaluation. Depressed persons, individuals demonstrated to be suffering from deficits in problem-solving, are appropriate targets of such interventions.

Several meta-analyses and empirical studies have supported the use of problem-solving interventions used in isolation for the treatment of depression in both adults and youth. Measures of problem-solving are of the process and outcome variety, differentiated by evaluation of the individual's use of problem solving skills and the quality of their attempt, respectively. As the nature of the present study precluded the use

of such measures, an observer-rated scale was created, designed to more precisely assess the problem-solving interventions employed.

Relational interventions. Relationship components involving the therapist and child (e.g., therapeutic alliance) and additionally, when a group format is utilized, individual members (i.e., group cohesion) also comprise cognitive behavioral treatments. Both variations of relational interventions will be discussed below.

Therapist relational behaviors. Though the conscientious application of specialized aspects of the selected therapy is essential to its success (Beck et al., 1979), it has been hypothesized that therapeutic change is also contingent on nonspecific elements of treatments (Frank & Frank, 1991; Shirk & Karver, 2003). In addition to client and extratherapeutic factors (e.g., social support) and expectancy and placebo effects, the therapeutic relationship, a nonspecific element of treatment (Hubble, Duncan, & Miller, 1999), has been conceptualized in a multitude of manners (Karver, Handelsman, Fields, & Bickman, 2006), with the construct being operationalized as "an umbrella term for a variety of therapist-client interactional and relational factors operating in the delivery of treatment" (Green, 2006, p. 426). As opposed to its classification as the central mechanism of change in primarily relationship-focused treatments (Shirk & Karver, 2003), within the realm of CBT the therapeutic relationship is crucial by reason of its impact on the quality and effectiveness of techniques used; the therapeutic relationship, in other words, is purported to enhance the effectiveness of various CBT interventions (Kendall, 2006; Shirk, 2001). The therapeutic relationship is increasingly salient with child and adolescent populations, moreover, due to the added challenge of establishing

engagement in therapy that sometimes exists with youth (Kendall, 2006). The present study employs a group-therapy format, which would seem to dilute the importance of the therapeutic relationship between therapist and patient and focus more on the group dynamic. However, because the therapist remains an integral member of the therapy process the patient-therapist relationships are still likely to be impactful and thus its consideration in the following examination is vital (Stewart, Christner, & Freeman, 2007). The subsequent discussion will further define the concept of therapeutic relationship, specifically in the context of CBT.

Essential to the development of a productive interaction in the context of CBT with youth are certain therapist traits, due to their putative effects on facilitating the modification of negative cognitive distortions (Beck et al., 1979; Friedberg & Gorman, 2007). Inspired by Rogers' (1957) conceptualization of the therapeutic relationship, Beck and colleagues (1979) noted that warmth, accurate empathy, and genuineness were of utmost importance and resulted in increasing the efficacy of treatment. The preceding were thought to be successful in allowing the therapist to comprehend the way the patient structures and responds to life events, and encouraging greater patient disclosure, among other factors. Warmth, as defined by the therapist's possession of a kind and invested stance, is hypothesized to promote the establishment of a nonjudgmental environment and, particularly salient for the depressed individual, a setting in which the client's distortions regarding others' views of himself, as evidenced through the therapist, can be addressed (Beck et al., 1979). The therapist's accurate empathy refers to "how well the therapist can step into the client's world and see and experience life the way the client

does" (Beck et al., 1979, p.47). This purportedly allows the therapist to share the client's distress and appreciate his internal state, specifically in the client's maladaptive patterns of thinking, thus facilitating the client's disclosure. The therapist, finally, is encouraged to endeavor to communicate his genuineness to the client, in an effort to strengthen the legitimacy of and the client's faith in the therapist and his use of the aforementioned therapeutic strategies.

The therapeutic interaction, moreover, is purported to be based upon trust, rapport, and collaboration, with the therapist actively involved in the client's treatment (Beck et al., 1979). With regards to the first, the therapist strives to establish appropriate boundaries, cautiously balancing the need for autonomy and structure, dependability and limit setting, and affability and objectivity. The therapeutic interaction thrives when rapport, namely attunement to feelings, sympathy and understanding, acceptance, and open communication are fostered. The preceding facilitates authentic interaction and encourages the client's engagement in challenging therapeutic endeavors. Collaboration, a key component to the effective implementation of various cognitive techniques, is considered present when client and therapist are working together on goals deemed important by both. The therapist, finally, is advised to remain responsive to the client, attentive to his verbalizations and needs (Hollon et al., 1988). The therapeutic relationship and interaction, thus, are founded on the aforementioned qualities which promote a secure interaction between both participants, foster direct communication, and, eventually, enable the progress of the patient towards the ultimate remission of depressive symptoms (Beck et al., 1979).

Empirical support for therapist relational behaviors. A dearth of research examining the relationship between such process related variables and treatment outcomes, specifically with children and adolescent and more so in the context of CBT, exists (Kazdin et al., 1990; Russell & Shirk, 1998). Considering the reality that referrals are often made by parents and occasionally accompanied by a lack of awareness of the problem itself or resistance to engage in therapy, the preceding is especially noteworthy as the contribution of such therapeutic factors may be more salient in the context of therapy with youth (Shirk & Karver, 2003). Within the context of individual therapy, various therapeutic relational factors have been linked to positive therapeutic outcomes in youth (Braswell, Kendall, Braith, Carey, & Vye, 1985; Green, 1996; Kazdin, Marciano, & Whitley, 2005; Truax, Altman, Wright, & Mitchell, 1973). Recent meta-analyses have indicated that relational factors have a moderate, though reliable impact on CBT outcome (Keijsers et al., 2000). Though evidence incompatible with the preceding does exist (Hogue, Dauber, Stambaugh, Cecero, & Liddle., 2006), the following outlines extant evidence supporting the role of therapeutic relational factors in treatment outcomes in youth suffering from a variety of disorders.

Building upon previous meta-analytic studies, Karver and colleagues (2006) consolidated the results of 49 independent, empirical studies in a meta-analysis examining the strength of association between therapeutic relational factors and treatment outcome in youth. Several findings of the study were noteworthy. Therapist direct influence skills, defined as active therapist behaviors involved in the appearance of competence and concern, and the therapeutic relationship with the youth, noted as having

several definitions depending on the study examined, had moderate to large associations with therapeutic outcome (mean effect sizes of 0.40 and 0.37, respectively). The therapists' interpersonal skills, including empathy, warmth, and genuineness, were moderately related to outcome (mean effect size of 0.35). Therapeutic alliance with the client and family, differentiated from therapeutic relationship and construed as "a more mature form of the therapeutic relationship" (p. 53), was found to have a small to moderate relationships with outcome (mean effect sizes of 0.21 and 0.22, respectively). Taken together, this analysis provides support for the consideration of therapeutic relational factors as contributors to treatment outcome.

In a study assessing a temporal mediation model concerning the influence of therapeutic alliance on treatment outcome in the context of depression, 23 adolescents, aged 13 to 17 years, were randomly assigned to treatment with CBT or nondirective supportive therapy (NST) (Karver et al., 2008). CBT sessions consisted of problem-solving, cognitive restructuring, and relaxation training, with an emphasis on homework completion in order to encourage generalization of skills learned. Therapeutic alliance was assessed using a coding system, as well as by client report. Therapeutic alliance predicted to a significant degree later involvement in therapy and, consequently, decreases in depressive symptoms, though the preceding association emerged in the CBT condition only. This study underscores the role of therapeutic alliance in the creation of youth engagement in therapy, and thus in a positive treatment outcome, though suggests that therapeutic factors may be more a mechanism of change in CBT versus other treatment modalities (Karver et al., 2008).

Finally, in a study examining the alliance-outcome relationship in a manualized CBT treatment for depression, 54 adolescents were treated with 12 sessions of a CBT treatment previously assessed by Rossello and Bernal (1999), which consisted of cognitive restructuring, behavioral activation and engagement in coping strategies, and interpersonally focused problems solving skills (Shirk Gudmundsen, Kaplinski, & McMakin, 2008). Depression was assessed via self-report scale and diagnostic interview; alliance was measured using the Therapeutic Alliance Scale (TASA; Shirk, 2003). While adolescent-reported alliance significantly predicted treatment gains, therapist-reported alliance was not significantly related to outcome, although it did predict attendance. The preceding analyses provide varying degrees of support for the rather complex role of therapeutic relational factors as in treatment outcome, particularly with depressed youth.

Measurement of therapist relational behaviors. While it remains uncertain as to whether therapeutic alliance is better assessed via the client's experience or by a more objective observer (Shirk & Karver, 2003), it has been suggested that observer ratings may be preferable due to concern of repeated administrations in order to assess alliance over time (Friedlander et al., 2006). Numerous developmentally appropriate coding systems with the purpose of assessing therapeutic relational factors exist.

Based upon attachment and social development literature, through experiences working with adolescents in therapy, Karver and colleagues (2003), as cited in Karver et al. (2008) created the Alliance Observational Coding System. Unlike those preceding it (Karver et al., 2008), the coding system is not a downward extension of assessments primarily designed for use with adults. The coding system codes across 10 categories,

including feeling understood, feeling comforted after experiencing distress, synchrony, feeling advocated for, positive affect toward therapist, and negative reactions, and encourages use of observable client behaviors in order to make such assessments. The system demonstrated high inter-rater reliability (ICC = .84). While the measure enjoys frequent use in youth samples, it is not linked to a particular treatment.

Young and Beck (1980) created the Cognitive Therapy Scale (CTS) in order to assess various characteristic components of CBT, of which therapist relationship was included. The CTRS, a 11-item rating scale composed of two parts, was, however, critiqued for poorly uniquely measuring the construct of interest, as based upon the strong correlation between both scales (Dobson, Shaw, & Vallis, 1985; Vallis, Shaw, & Dobson, 1986). In order to build upon this, as well as other adaptations of the CTRS (e.g., CRPRS; Hollon et al., 1988), Spangler (1998) developed the Cognitive Coding Scale-Bulimia Nervosa (CCS-BN). Of the four therapist based subscales, one is of interest in the coding of therapist relational behaviors; the relational interventions subscale, a seven-item scale, assesses the degree to which the therapist displays empathy, warmth, understanding, interpersonal effectiveness, and collaboration. Adequate inter-rater reliability for the relational subscale was found (ICC = .71) (Spangler et al., 2001). Accordingly, the relational scale within the CCS-BN proffers an appropriate method of assessing therapist relational behaviors, as deemed salient in the execution of CBT (Beck, 1976), and will thus be used in the proposed study.

Group cohesion. Though CBT had initially been conceptualized as an individual therapy, its application in a group context has, in the recent past, become increasingly

prevalent, perhaps due to the associated benefits of time and cost effectiveness, with positive results (Oei & Browne, 2006). Group cohesion, a group therapy mechanism of change analogous to the therapeutic alliance in individual therapy (Braaten, 1990), is posited to be a required ingredient for clinical success (Yalom, 1995). Though definitions of the construct are numerous and varied (Bednar & Kaul, 1994), group cohesion has generally been described as "the therapeutic relationship in group psychotherapy emerging from the aggregate of member-leader, member-member, and member-group relationships" (Burlingame, Fuhriman, & Johnson, 2001, p. 373). Furthermore, it has been associated with such intrapersonal elements as acceptance, belonging, and personal commitment to the group, and intragroup components including compatibility among the group members, mutual liking, bonding, and support (Burlingame et al., 2001; Marziali, Munroe-Blum, & McCleary, 1997). For the purposes of the following study, cohesion will be defined as the relatedness between group members and their engagement in group therapeutic tasks (Budman, Soldz, Demby, & Davis, 1993).

Group cohesion is posited to occur over and following a certain period of time, as the group progresses through various stages and reaches a certain level of development (Yalom, 1995). Specifically, following initial stages of therapy, during which time members learn ways in which to relate to one another, each seeks to be heard, and thus some conflict is introduced into the group. Following this, maturity is reached when group members progress past conflict, working through such concerns to develop trust. Group cohesion is thought to develop along this process (Yalom, 1995), though, in the

context of CBT, cohesion may arrive along the course of collaborative goal formation, rule generation, and role-playing, among other activities (Stewart et al., 2007).

Group cohesion is believed to cultivate productive therapeutic climates that produce positive clinical outcomes (Braaten, 1990; MacKenzie, 1998; Stewart et al., 2007). It is hypothesized to do so by increasing feelings of support, security, and acceptance among group members, promoting active participation and greater self-disclosure (Canham & Emanuel, 2000; Corey & Corey, 2006). Improved experience of cohesiveness in groups is thought to be predictive of increased risk-taking, understanding, listening, and productive expressions concerning intra-group conflict (Yalom, 1995). The presence of same-aged peers presents an opportunity for members to receive feedback from others, gaining insight into their problems, as well as sources from whom relevant and improved solutions to such problems can be learned (Reid, 1999). Furthermore, numerous studies have explored the correlation between group cohesion and various organizational aspects of groups related to positive therapeutic outcomes, including reduced levels of absenteeism and turnover (Keller, 1983). A review of empirical research examining cohesion in adult and youth populations follows.

Empirical support for group cohesion. Research has revealed mixed results concerning the relationship between group cohesion and clinical outcomes in adult populations. As a paucity of research exists with regards to child and adolescent population, the following will begin with a discussion of those studies concerning group cohesion and treatment outcomes in adult samples, before turning to an exploration of youth studies.

Several studies conducted with adult populations provide support for the role of group cohesion as a predictor of therapy outcome at both acute assessment (Marziali et al., 1997; Schiff, Suvak, Antony, Bieling, & McCabe, 2007) and at follow-up (Hand Lamontagne, & Marks, 1974; Mackenzie and Tschuschke, 1993; Tschuschke and Dies, 1994).

Hoberman, Lewinsohn, and Tilson (1988) assessed the impact of group cohesion on treatment outcomes in a group of 40 depressed adults treated using the 12-session Coping With Depression group treatment (Lewinsohn et al., 1984). Group cohesion, assessed mid-treatment (i.e., three, and seven) using the Barrett-Lennard Relationship Inventory (BLRI; Barrett-Lennard, 1962), was determined to be a predictor of post-treatment depression scores, with higher levels of cohesion associated with lower depression scores. As ratings of cohesiveness at pre-treatment were not predictive of treatment outcome, the authors concluded that the development of group cohesion, particularly so early on in therapy, was observed.

Budman and colleagues (1989), for instance, examined the association between alliance, cohesion, and treatment outcome. Videotaped sessions of 90 depressed and anxious outpatients in 12 short-term therapy groups were observed and assessed using a modified Penn Helping Alliance Scale (HAq-II; Luborsky et al., 1996) and the Harvard Community Health Plan Group Cohesiveness Scale (HCHP-GCS II; Budman et al., 1987); the experience of the whole group rather than just those of the separate members was taken into account when utilizing the latter measure. Results indicated that both alliance and cohesion were related to the other, to reductions in symptoms, and to

increases in self-esteem, providing support for the relationship between group cohesion and decreases in depressive symptoms (Budman et al., 1989).

Taft and colleagues (2003), in their study of mechanisms of change in psychotherapy, investigated the influence of participation in a 16-week group CBT intervention on post-treatment levels of physical and psychological abuse in 107 violent men. Though ratings of therapist alliance, as measured by the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989), were the strongest predictors of outcome, group cohesion, assessed using the Group Environment Scale (GES; Moos, 1986), was also related to outcomes measures of violence at 6-month follow-up assessment (Taft, Murphy, King, Musser, & DeDeyn, 2003).

In a recent study, both therapeutic alliance and group cohesion, assessed with the use of self-report measures, were examined with regards to their role as predictors of outcome in group therapy (Joyce, Piper, & Ogrodniczuk, 2007). One hundred and seven adult patients were treated with either supportive or interpretative therapy over the course of 12 weeks for a heterogeneous array of Axis I disorders, including depression and dysthymia as the most frequently diagnosed. While the former treatment emphasized development of coping to life stressors, it was the goal of the latter to increase patient insight about their presenting concerns. Alliance measures demonstrated moderate association with treatment outcomes while cohesion measures indicated little to no statistical associations; only the therapists' view of clients' compatibility with other group members was significantly related to treatment gains. The authors hypothesized

that the time-limited nature of the group may have precluded the full development of group cohesion.

Several studies have provided differing evidence, failing to find a meaningful relationship between the group cohesion and treatment outcomes, whether in the context of CBT treatments (Oei & Browne, 2006; Teasdale, Walsh, Lancashire & Mathews, 1977; Woody & Adessky, 2002) or otherwise (Lorentzen, Sexton, & Høglend, 2004). The absence of a coherent, comprehensive, and universally accepted definition of group cohesion, in addition to variations in its measurement methods, have been suggested as possible explanations for these inconsistent results (Budman et al., 1989; Hornsey, Dywer, & Oei, 2006; Woody & Adessky, 2002).

Despite a plethora of studies assessing group CBT interventions in child and adolescent samples, few specifically examine the relationship between group cohesion and treatment outcome (Shechtman & Katz, 2007). The unique developmental aspects of children and adolescents may provide additional challenges to the growth of group cohesion and may, additionally, be more salient with regards to outcome in this youth population. Moreover, cohesion in the context of group therapy is often seen as a strong curative factor by child and adolescent clients, and has additional value placed on it as such (Chase & Kelly, 1993; Schechtman & Gluk, 2005). Those studies that examine the previously described constructs with the population of interest are subsequently discussed.

Though termed and more narrowly defined as group climate, Kivlighan and Tarrant (2001), considered the impact of the former on outcome of treatment. Two

hundred and thirty three adolescents, aged 13 to 15 years, were assigned to a living skills group therapy treatment, in which anger management and decision-making skills were imparted. Group climate, assessed with the Group Climate Questionnaire (Mackenzie, 1981) was noted to be a significant predictor of outcome, as measured by the CBCL. Though not specifically in the context of treatment for depression, these findings provide initial endorsement for the positive role of group cohesion in treatment gains.

In a direct analysis of group cohesion within a group CBT therapy context for the treatment of depression, Kaufman and colleagues (2005), assigned 13 to 15 year-old youths to either a CBT group treatment or a Life Skills control. In an effort to assess whether group cohesion and therapeutic alliance mediated treatment outcome, both were examined to locate differences in each between groups. As this was the case only therapeutic alliance and not group cohesion, only the former was entered into the mediation analysis and found not to be a significant predictor; regrettably, group cohesion was not further assessed.

Lastly, in a study of 87 children diagnosed with a variety of learning disorders, therapeutic alliance and group cohesion were investigated with regards to treatment outcome (Schechtman & Katz, 2007). Participants were assigned to 15 sessions of an expressive-supportive social skills group therapy treatment. Results indicated that both constructs were significant predictors of outcome, as assessed by a social competence measure, though therapeutic alliance was more so.

Measurement of group cohesion. Group cohesion is often measured through the use of self-report or therapist-report measures, questionnaires, including the Group

Climate Questionnaire (GCS; MacKenzie, 1981) and Therapeutic Factors Inventory (TFI; Lese & MacNair-Semands, 2000), among others. As the design of this study precluded the use of such measures, specifically due to utilization of extant data, observer ratings, as an oft used and effective method for assessing group cohesion (Fuhriman & Barlow, 1983), was opted for in its stead.

Few coding scales, however, focus exclusively on group cohesion or comprehensively conceptualize (Group Rating Scale, GRS; Cooper, 1977) or assess (Semantic Cohesion Analysis, SCA, Halliday & Hasan, 1976) the construct (Fuhriman & Barlow, 1994). As such, the Harvard Community Health Plan Group Cohesiveness Scale (HCHP-GCS) was developed, and then later expanded upon, in order to provide a more theoretically driven and thorough assessment of group cohesion (Budman et al., 1987). Now in second version, the measure consists of five total scales and is ported to have adequate psychometric properties (Budman et al., 1993).

Summary of relational interventions. Nonspecific elements of treatment, or the therapeutic relationship, have been proposed as contributors to the potential success of treatment. Within the context of CBT, the therapeutic relationship is deemed crucial as it is purported to facilitate the implementation of the techniques employed. Therapist warmth, accurate empathy, and genuineness are noted to be of importance in the development of a sound therapist alliance based on trust, rapport, and collaboration. Recent meta-analyses have pointed to a moderate, though reliable impact of therapeutic relational factors on CBT outcome, and several empirical studies have noted the positive impact of therapeutic alliance, specifically in the context of CBT for depressed youth.

Both client-rated and observer-rated assessment instruments have been purported to possess benefits and disadvantages. Due to the nature of the study, observer-rated scales, of which several strong choices exist, were deemed more appropriate.

In the context of group therapy, group cohesion is viewed as the analogous term to the therapeutic relationship in individual therapy, and represents the aggregate of the alliance between therapist and client, as well as client with other clients and with the group as a whole. The presence of positive group cohesion is purported to lead to greater feelings of support, security, and acceptance among group members, thus galvanizing active participation and self-disclosure. While evidence of the contrary also exists, numerous studies have provided evidence of the positive effects of increased group cohesion in treatment outcome, at both post-treatment and follow-up with adults and youth populations. Though often measured through the use of self-report and therapist-reported measures, coding scales also exist and are highlighted due to their suitability for the current study.

Mechanisms of Change in Cognitive Behavioral Therapy

Shirk and Karver (2006) conjecture that, in order to appropriately determine the rationale for a treatment's effectiveness, effective interventions must be identified, and the mechanisms through which the disorder develops and is maintained, discovered, an endeavor which has been undertaken by few (Weersing et al., 2009). In the above, a discussion of cognitive, behavioral, problem-solving, and relational interventions as specific components related to change in outcome in the CBT treatment of child and adolescent depression was presented. The path through which the preceding may produce

ostensible improvements, however, has not yet been addressed.

Presently, there exists a dearth of understanding of the manner in which psychotherapy effects change. The cognitive treatment of depression, as put forth by Beck and colleagues (1979), proposes that changes in cognitions, attempted through the use of a number of techniques, are responsible for subsequent improvement in experiences of depression. A variety of cognitive constructs, including automatic thoughts, dysfunctional attitudes, negative attributions, and cognitive distortions, are putatively available as potential contributors to the above, also termed the mediation hypothesis (Garratt, Ingram, Rand, & Sawalani, 2007). Few studies, however, have addressed this, and, as such, little understanding of the role of CBT in altering targeted pathogenic domains (i.e., how CBT produces improvements) exists (Kolko et al., 2000; Shirk & Karver, 2006). Thus, while CBT has been demonstrated to be superior to supportive and family therapies in the treatment of depressed youth, treatments that do not directly address depressogenic cognitions, increasingly direct evidence of the role of cognitions as pathways of change is not often addressed. For instance, while a great percentage of studies include assessment of potential mediators, few conduct the necessary statistical analyses to actually assess the mediators (63% and 9%, respectively) (Weersing & Weisz, 2002).

In a recent review of the cognitive mediation literature, Garratt and colleagues (2007) assessed studies that evaluated the effectiveness of cognitive behavioral therapy for depression and included a measure of cognitions, including Attributional Style Questionnaire, Automatic Thoughts Questionnaire, Beck Hopelessness Scale, and

Dysfunctional Attitudes Scale, among others. The authors concluded from their review that CBT for the treatment of depression did produce changes in cognitions, which predicted improvement in depressive symptoms, providing support for the mediation hypothesis. A limitation of the review, with regards to the current study, was the lack of differentiation between those components of the specific treatments that led to alterations in depressogenic cognitions. This concern is echoed in those results presented by similar studies, specifically in the context of child and adolescent depression, which provide evidence of changes in cognitive distortions, dysfunctional attitudes, and automatic thoughts, though neglect to parse the effect on depression based on treatment component (Ackerson, Scogin, McKendree-Smith, & Lyman, 1998; Kaufman et al., 2005; Kolko et al., 2000; Stice et al., 2010). Noteworthy also are the parallels between this review and that of Whisman (1993), providing some indication of the speed of growth with which this area is growing.

Further research is needed to elucidate these uncertainties, as an increasingly precise awareness of these mechanisms of change (i.e., the "how" and "why" a specific treatment is effective) will enhance the therapeutic experience and contribute to potential positive effects of these interventions (Kazdin & Weisz, 1998). Presently, very little is understood about how specific therapeutic processes influence potential mediators and outcomes (e.g., how cognitive restructuring influences cognitions and thus reduces symptoms of depression) (Shirk & Karver, 2006). In the subsequent section, research related to the relationship between interventions and depressogenic cognitions in the context of CBT will be synthesized. This, in addition to the previous discussions of the

associations between specific interventions and depression and depressogenic cognitions and depression, will form the basis of a mediation model of the treatment of depression with CBT.

Cognitive interventions and depressogenic cognitions. Cognitive interventions for depression are purported to alter depressogenic cognitions; as such, they are believed to mediate experiences of depression and are thus targeted in the treatment of this disorder (Beck, 1976). In order to assess the preceding, it is necessary that the specific impact of cognitive interventions on depressogenic cognitions be ascertained. Those few studies that address this concern are highlighted below.

Butler and colleagues (1980), detailed previously, examined the efficacy of cognitive interventions in altering depressogenic cognitions in the first study of its kind. Children in the role-play condition, a problem-solving intervention, demonstrated significant improvements in self-concept, a measure of negative view of self, and notable though not significant decreases in cognitive distortions; the above was not found for those youth in the cognitive-restructuring condition, a result potentially attributable to the small sample size of the active condition (N=14). The preceding, though with its limitations, necessitates some questions about the cognitive mediation hypothesis, as it relates to cognitive interventions, and behooves further investigations.

Stark and colleagues (1987) provide support for the role of depressogenic cognitions as mediators in the relationship between cognitive interventions and outcomes in depression. In their study, described previously, youth assigned to a primarily cognitive intervention-based self-control condition displayed changes in self-concept,

otherwise viewed as negative thoughts about the self, directly contrasting to the results indicated in the Butler et al. (1980) study. Results, as it relates to the current focus, should be interpreted with caution as the self-control condition also incorporated some behavioral strategies, rendering a more precise attribution unfeasible.

Gillham and colleagues (1994), in a study outlined above, demonstrated that youth in both cognitive and social problem-solving conditions displayed significantly improved attributional styles, being less likely to attribute negative events to stable causes following treatment and at follow-up. Following further tests of mediation, the authors concluded that youth's improvements in attribution styles mediated the impact of treatment in decreasing symptoms of depression. Though both active treatments resulted in subsequent changes in cognition, this study nonetheless provides evidence of the effects of cognitive interventions on depressogenic cognitions and treatment outcome in youth, aged 10-13.

Behavioral interventions and depressogenic cognitions. Behavioral interventions are believed to be an effective method of altering negative cognitions (Hollon, 2001). Few investigations of the role of behavioral techniques in altering depressogenic cognitions, however, have been undertaken. In their assessment of particular mechanisms of change, Jacobson et al. (1996), detailed previously, found that behavioral activation and automatic thought treatments were equally as efficacious at modifying negative thinking, specifically automatic thoughts, and attributional styles at six-month follow-up as the full cognitive therapy condition in the treatment of adult major depression. In addition to demonstrating the efficacy of behavioral interventions in

reducing depressive symptoms, this study challenged the theory proposed by Beck and colleagues, (1979) which hypothesized that cognitive interventions were necessary for cognitive change.

Gaynor & Harris (2008), in an effort to address the supposition that behavioral interventions exert change by altering cognitions (Hollon, 2001), assessed four depressed adolescents using a repeated measures design. Treatment was behaviorally-based and consisted of 12 sessions which included psychoeducation, self-monitoring of activities and mood, and behavioral activation. Results indicated that the treatment, for some, resulted in increased activities and was followed by significant changes in depressogenic cognitions, as assessed by the Automatic Thought Questionnaire (Hollon & Kendall, 1980). The authors note that the preceding offered notable initial evidence of the role of behavioral interventions in producing cognitive change, though, due to the small sample size, would require replication.

Problem-solving interventions and depressogenic cognitions. Problem-solving interventions, particularly those addressing problem-solving orientation, are purported to influence beliefs, appraisals, and expectations concerning the problem and one's problem-solving ability. Extant findings assessing the role of problem-solving in altering pathogenic cognitions is mixed, with some findings indicating that problem-solving interventions have little impact on perception of control (Mynors-Wallis, 2002), while others note a relationship between problem-solving treatment and internal locus of control (Nezu, 1986). Only one study that examined the role of cognitions as mediators for problem-solving interventions could be located. Warmerdam, van Straten, Jongsma,

Twisk, Cuijpers (2010) evaluated potential mediators of two online therapies treating depression. Two hundred and sixty three adult participants with some experience of depressive symptoms were randomly assigned to online CBT, online problem-solving therapy, or waitlist control. The former, based on the Coping with Depression course (CWD; Lewinsohn et al., 1984), included a mélange of psychoeducation, coping skills, cognitive restructuring, and behavioral activation, among other interventions; problem-solving therapy introduced the traditional problem-solving steps, which were applied to the patients' problems during sessions. Measures of mediators included the Dysfunctional Attitudes Scale (DAS; Weissman, 1979) and the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990); problem solving orientation and perceived control were also assessed. Both active treatments resulted in positive outcome; problem-solving therapy, moreover, was demonstrated equally as effective as CBT at improving dysfunctional attitudes, worrying, problem-orientation, and perceived control. Formal tests of mediation indicated that dysfunctional attitudes, worrying, problem-orientation, and perceived control all played a mediating role in problem-solving therapy, as well as in CBT. While striking differences between this study and the present exist, including the target population, online treatment format, and shift to the Dutch language, the results are still noteworthy, motivating the authors to call for additional studies replicating such examinations (Warmerdam et al., 2010).

Relational interventions and depressogenic cognitions. While seen as insufficient as a standalone treatment, the therapeutic relationship has been granted a vital place in the context of CBT, specifically in the alteration of depressogenic cognitions

(Beck, 1976). Through the therapist's relational stance, namely via warmth, positive regard, genuineness, and a display of empathy, the client's negative cognitions concerning the self, world, and future are reduced (Beck et al., 1979; Rogers, 1957). In this manner, relational interventions are believed to facilitate modifications in pathogenic interpersonal- and self-schemata. Paralleling research in related areas, as noted above, studies examining the relationship between therapist relational behaviors and depressogenic cognitions are few in number, specifically in the context of child and adolescent treatment for depression.

Within the adult treatment literature, early therapeutic alliance was noted to predict changes in depressogenic cognitions, namely automatic thoughts, dysfunctional attitudes, and cognitions concerning the self (Muran et al., 1995; Rector, Zuroff, & Segal, 1999; Whelton, Paulson, & Mausiak, 2007). Further, in an assessment of relational processes and depressogenic cognitions, therapist relational data and dysfunctional attitudes data of 66 depressed adult patients treated with either CBT or Process-Experiential Psychotherapy was examined (Watson & Geller, 2005). Differences in therapeutic alliance between both active treatments were not found; therapeutic relational factors, moreover, were associated with positive changes in dysfunctional attitudes and self-worth.

In a noteworthy study of the assessment of mechanisms of change in the treatment of bulimia nervosa, Spangler, Baldwin, and Agras (2004) reviewed the effects of cognitive, behavioral, relational, and structural (e.g., agenda setting, session pacing) interventions on various client mechanisms and treatment outcome. The investigators

hypothesized that behavioral interventions would be strongly associated with changes in eating behavior (e.g., dietary restriction, purging), cognitive interventions would be associated with changes in body-related beliefs, and that relational and structural interventions would be associated with treatment engagement. Fifty-six adult females were treated with a 19-session manualized CBT treatment over the course of 20 weeks. CBT treatment components were assessed using the CBT Coding Scale for Bulimia Nervosa, (CCS-BN; Spangler, 1998), while body-related cognitions and eating-related behaviors were assessed using the Eating Disorder Examination (EDE; Fairburn & Cooper, 1993). Behavioral interventions were noted to best predict improvements in symptoms. Body-related beliefs were not related to cognitive interventions, and were, interestingly, negatively associated with behavioral interventions (i.e., increased changes in body-related dysfunctional beliefs with decreased behavioral interventions). Therapist relational behaviors were associated with changes in body-related dysfunctional beliefs, as well as eating-related behaviors, and accounted for almost all of the changes in client engagement. Improvements in dysfunctional body-related cognitions, finally, were related to symptom improvement, providing support for cognitive theory of treatment.

Indirect evidence of the aforementioned relationship can also be located with regards to youth by examining treatments whose active ingredients are hypothesized to consist of therapeutic relational factors. In a randomized trial of CBT and non-focused intervention, Vostanis and colleagues (1996a, 1996b), outlined previously, examined a supportive therapy purported to consist mainly of therapeutic relational elements, such as empathy and supportive listening, in the treatment of depressed youth. Both treatment

conditions resulted in improvements in self-esteem, or positive beliefs about the self, at post-treatment.

Play therapy provides another therapy primed for such an examination. Play therapy, a nondirective therapy in which Rogerian therapist relational behaviors are underscored, have produced changes in cognitions related to self, namely self-concept and self-esteem (Baggerly, 2004; Tyndall-Lind, Landreth, & Giordano, 2001).

Group therapy introduces a plethora of opportunities for cognitive change in the depressed youth, who is purported to possess negative beliefs about himself, particularly in his interactions with others (J. Beck, 1995). As such, the group therapy context, replete with occasions to engage with same-aged peers in possession of similar concerns, may allow for the direct and indirect experiences necessary to alter dysfunctional thinking by providing the depressed youth with feelings of normalcy and hopefulness (Stewart et al., 2007). Peer group members, particularly in environments of high cohesion, may be more apt to provide the depressed youth with feedback about his negative thinking, providing evidence to the contrary (Budman et al., 1993; Stark, Hargrave, et al., 2006). In the context of high group cohesion, extant negative schemata related to the self, world, and future may thus be challenged and potentially altered.

A significant lack of studies assessing the hypotheses presented above exists. Several studies note a relationship between group CBT and changes in depressogenic cognitions, in both adult and youth outcome studies, though do not succeed in parsing the influence of group cohesion on the latter (Kaufman et al., 2005; Munoz et al., 1995). In alignment with the rationale provided above, with regards to treatments whose active

ingredient can be inferred to be various therapeutic processes, an analysis of one study does provide noteworthy results. Fine, Forth, Gilbert, and Haley (1991) compared social skills group to therapeutic support group in the treatment of depressed adolescents, aged 13 to 17, assessing cognitions related to the self (e.g., self-image), as well as cognitive distortions. Results indicated that both conditions produced significant improvements in self-concept and cognitive distortions. While group cohesion was not statistically different between groups, the investigators conjectured that the construct was a potential contributor to the improvements evinced by the therapeutic support group, due to their increased levels of engagements and decreased avoidance in group interactions, as compared to the social skills group.

Summary of mechanisms of change in cognitive behavioral therapy. Whereas the efficacy of CBT a treatment for youth depression has been demonstrated, little is currently understood about the path through which CBT accomplishes this improvement. According to the theory upon which the treatment is based, the various components (i.e., cognitive, behavioral, problem-solving, and relational interventions) exert this change by altering depressogenic cognitions. In order to more accurately determine the basis for a treatment's effectiveness, the mechanisms through which the disorder develops and is maintained must be assessed; as such, investigating mediators in treatment presents a method for determining the way in which treatments, specifically CBT, results in improvements in depressive symptoms. To test for mediation, the following must be demonstrated: 1) treatments or specific interventions are associated with depression; 2) treatments of specific interventions are associated with potential mediators; and 3)

potential mediators are associated with depression. Building upon previous examinations of the relationship between interventions and depression and depressogenic cognitions and depression, the relationship between interventions and depressogenic cognitions was subsequently addressed.

Cognitive interventions, the core of CBT for depression, are purported to alter depressogenic cognitions. Empirical investigations of this are few, with existing studies lacking in sample size and insufficiently differentiating between cognitive interventions and other such techniques (e.g., behavioral interventions). In those extant studies, the relationship between cognitive interventions and depressogenic cognitions is ambiguous, with studies reporting a positive or no relationship in youth depression research.

With regards to behavioral interventions, which are hypothesized to alter negative cognitions by way of providing experience counteracting negative thoughts, the few studies conducted with depressed individuals provide more consistent results, indicating that behavioral interventions have a positive association with changes in depressogenic cognitions.

Problem-solving interventions are also purported to influence beliefs about one's problem-solving ability. One study examining this association with depressed adults was located. The preceding indicated that problem-solving therapy was equally as effective as CBT as a whole in altering dysfunctional attitudes, worrying, problem-orientation, and perceived control, and that all possessed a mediating role in problem-solving therapy.

Finally, therapeutic relational factors, including therapeutic alliance and group cohesion, are purported to facilitate modifications in depressogenic cognitions.

Therapeutic alliance has been demonstrated to be related to improvements in dysfunctional cognitions, as well as treatment outcome, in both adults and youth. Group cohesion, assessed more infrequently, was deemed, in a noteworthy study of depressed adolescents, to be related to improvements in self-concept and cognitive distortions.

Statement of the Problem

Affecting approximately 28% of children and adolescents (Lewinsohn & Clarke, 1999), depression is a significant mental health concern in youth. While conceptualization and treatment of the disorder in this age range is often complicated by its numerous comorbidities (Agnold & Rutter, 1992; Rhode et al., 1991), effective treatment is vital due to abundant and deleterious emotional sequelae, which impact such areas of the youth's life as academic achievement, social functioning, and family relations (Puig-Antich et al., 1993; Puig-Antich et al., 1985; Stark, 1990). Beginning in adolescence, females become twice as likely as boys to suffer from depression (Culbertson, 1997; Lewinsohn et al., 1993; Lewinsohn et al., 1994a), present with a discrete symptom profile, and experience more severe symptoms than their male counterparts (Kandel & Davies, 1986; Ostrov et al., 1989; Stark et al., 2000), making adolescence an especially crucial period with regards to the assessment and treatment of depression in females.

According to Beck's Cognitive Theory of Depression (1967), one of several cognitive diathesis-stress models, the development and maintenance of depression arises as a result of the depressed individual's biases toward negative interpretation of events, particularly those related to the self, world, and future, also termed the cognitive triad.

Therapy is consequently charged with addressing depressogenic patterns in thinking, altering the aforementioned, thus producing shifts in the cognitive triad and alleviating emotional suffering (Beck et al., 1979).

Cognitive behavioral therapy (CBT), founded upon Beck's cognitive theory, is an empirically supported intervention for the treatment of youth depression (Asarnow et al., 2001; Birmaher et al., 1996; David-Ferdon & Kaslow, 2008; Kaslow & Thompson, 1998; Kazdin & Weisz, 1998; Lewinsohn & Clark, 1999; Weersing & Weisz, 2002). CBT has been shown to be more effective than no treatment for reducing symptoms in depressed children and adolescents, in both the short-term and long-term outlook, and particularly in combination with psychopharmaceuticals (Brent et al. 2008; TADS Team, 2007); with regards to its effectiveness in treating depression in youth, it is generally on par with or just marginally superior to other psychological treatments (Curry, 2001; Weisz et al., 2006).

Treatment protocols based upon the cognitive behavioral therapy modality rarely limit themselves to the inclusion of cognitive strategies (McCarty & Weisz, 2007). Rather, they are typically combined with other strategies within CBT protocols, including behavioral and problem-solving, and relational interventions. While the efficacy of CBT has been demonstrated, less is known about the treatment-specific effects responsible for positive clinical outcomes. Clarification of the former would allow for the development of increasingly successful, efficient, and mobile treatments.

Discrete effects of the various components of CBT treatment protocols are challenging to ascertain as they are rarely employed in isolation (Shirk & Karver, 2006).

The utility of cognitive interventions in the treatment of depressed youth is uncertain (Weisz et al., 2006), with studies conducted with other populations (e.g. depressed adults, impulsive youth) indicating mixed results (Hays et al., 1996; Kendall & Braswell, 1982). Behavioral interventions have more consistently demonstrated efficacy in reducing symptoms of depression, though only with adult populations (Coffman et al., 2007; Dimidjian et al., 2006; Jacobson et al., 1996). Though few in number, examinations of problem-solving interventions have garnered some support in the use of treatment of depression in both adult and youth samples (Bell & D'Zurilla, 2009; Cuijpers et al., 2007). Research indicates a moderate, though reliable impact of therapeutic alliance on treatment outcome (Keijsers et al., 2000), while the role of group cohesion in treatment outcome, specifically with youth populations, is mixed (Kivlighan & Tarrant, 2001; Oei & Browne, 2006). Generally, a dearth of knowledge in all noted areas exists and additional research is warranted in order to clarify existing ambiguities. Investigating whether cognitive, behavioral, problem-solving, and relational interventions incorporated in CBT for the treatment of youth depression addresses a current limitation in existing research and is thus needed.

In order to more accurately establish their effectiveness, an understanding of the mechanisms through which the techniques exert their impact is also needed; (Shirk & Karver, 2006). According to cognitive theory, symptom reduction occurs as a result of alterations in depressogenic cognitions, specifically those negative views of the self, world, and future (Beck, 1967). While some studies support the preceding claim, thus demonstrating the role of CBT in modifying cognitions (Kaufman et al., 2005; Kolko et

al., 2000; Stice et al., 2010), they often neglect to dissect the effect based on treatment component, a crucial task that few have opted to undertake, particularly with youth (Weersing et al., 2009). Empirical investigations of the impact of cognitive, behavioral, problem solving, and relational interventions are few, with additional concerns including small sample size and insufficient differentiation between techniques (Butler et al., 1980; Gaynor & Harris, 2008; Kaufman et al., 2005; Stark et al., 1987).

Hypotheses.

Hypothesis 1. After controlling for pre-treatment levels of depression, higher levels of participant cognitive, behavioral, problem-solving, and relational interventions will be negatively associated with post-treatment depression. That is, higher scores on cognitive interventions (Cognitive Intervention subscale of the CCS-BN), behavioral interventions (Behavioral Intervention Subscale CCS-BN), problem-solving interventions (created Problem-Solving Coding Scale), relational interventions (Empathy subscale of the CCS-BN and HCHP-GCS-II) will be associated with lower total depressive symptoms scores on the Schedule for Affective Disorders and Schizophrenia for School Age Children (KSADS-IVR; Ambrosini & Dixon, 2000) at post-treatment.

Rationale. Various incorporated components of cognitive-behavioral treatment protocols are posited to account for decreases in depressive symptoms following treatment. Cognitive interventions, aimed at extricating and subsequently examining the individual's misconstructions and faulty suppositions, are historically deemed to be the core of CBT components. Current evidence with regards to the impact of cognitive interventions on treatment outcomes with depressed individuals, however, is mixed

(Jaycox et al., 1994; Kendall and Braswell, 1982; Weisz, McCarty, and Valeri, 2006). Behavioral interventions are also employed in the context of CBT treatments with the purpose of initially ameliorating depression and allowing for the more meaningful engagement in cognitive restructuring (Beck et al., 1979). Behavioral interventions used and assessed in isolation hold consistent support in the treatment of depression, with numerous studies, conducted predominately with adults (Dimidjian et al., 2006; Dobson et al., 2008; Jacobson et al., 1996; Gortner et al., 1998). Problem-solving, a process by which the patient is taught to identify and explore solutions for specific problems (Nezu et al., 2010), has demonstrated support as a standalone treatment for depression, with several meta-analyses, assessing primarily adult-focused studies, noting a significant effect (Bell & D'Zurilla, 2009; Cuijpers et al., 2007; Malouff et al., 2007). Nonspecific elements of treatment, deemed vital in the context of CBT, are purported to facilitate the implementation of techniques utilized. Recent meta-analyses indicate that relational components have a moderate, though reliable impact on outcome following treatment with CBT (Karver et al., 2006; Keijsers et al., 2000). Group cohesion has, for the most part, been demonstrated to be associated with decreases in depressive symptoms in adult (Budman et al., 1989; Taft et al., 2003), as well as youth samples (Kaufman et al., 2005; Kivlighan & Tarrant, 2001; Shechtman & Katz, 2007).

Few studies have assessed treatments used in combination, dismantling protocols to examine their various components when used collectively. In the sole example of such a study noted, problem-solving and social skills were positively associated with improvements in depressive symptoms; general therapy processes, behavioral activation,

emotional regulation or coping skills, family-orientated components, however, were unrelated to outcome.

While the preceding provides initial substantiation of the impact of individual components, evidence is modest, particularly with regards to depressed youth; the majority, moreover, assess the impact of interventions incorporated seemingly in isolation as opposed to as in combination with other related interventions. At present, exceptionally little research examining the contribution and impact of discrete components on treatment outcome with depressed youth exists.

Hypothesis 2. After controlling for pre-treatment levels of cognitive triad, higher levels of participant cognitive, behavioral, problem-solving, and relational interventions will be positively associated with post-treatment negative cognitive triad scores. That is, higher scores on cognitive interventions (Cognitive Intervention subscale of the CCS-BN), behavioral interventions (Behavioral Intervention Subscale CCS-BN), problem-solving interventions (created Problem-Solving Coding Scale), relational interventions (Empathy subscale of the CCS-BN and HCHP-GCS-II) will be associated with higher scores on the total score of the child's self-report Cognitive Triad Inventory-Child (CTI-C; Kaslow et al., 1992).

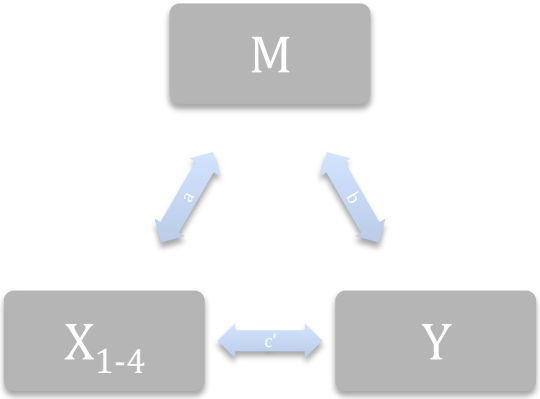
Rationale. In order to ameliorate depressive symptoms, interventions, in accordance with Beck's cognitive theory (1967), must address depressogenic cognitions, such as those embodied by the cognitive triad. Research provides preliminary evidence supporting the claim that cognitive interventions impact depressogenic cognitions (Butler et al., 1980; Gillham et al., 1994; Stark et al., 1987). Behavioral interventions have also

been noted to play a role in the altering of depressogenic cognitions in adult (Jacobson et al., 1996) and adolescent populations (Gaynor & Harris, 2008). Problem-solving beliefs are purported to alter cognitions, appraisals, and expectations concerning the problem, though research concerning this is limited with only one such study conducted (Warmerdam et al., 2010). The therapeutic relationship is also theoretically deemed crucial in the altering of depressogenic cognitions (Beck, 1867). Therapeutic relational factors have been demonstrated to be associated with modifications in maladaptive cognitions in a number of studies (Muran et al., 1995; Rector et al., 1999; Spangler et al., 2004; Watson & Geller, 2005; Whelton et al., 2007). A notable lack of research directly assessing the impact of group cohesion in altering depressogenic exists (Stewart et al., 2007).

Hypothesis 3. After controlling for pre-treatment levels of depression, higher levels of participant negative cognitive triad scores will be negatively associated with post-treatment depression. That is, after controlling for pre-treatment depressive symptoms as assessed by the Schedule for Affective Disorders and Schizophrenia for School Age Children (KSADS-IVR; Ambrosini & Dixon, 2000), higher pre-treatment scores on the Cognitive Triad Inventory-Child (CTI-C; Kaslow et al., 1992) will be associated with lower scores on the total depressive symptoms score of the KSADS-IVR (Ambrosini & Dixon, 2000). It is hypothesized that the CTI-C will mediate the relationship between level of interventions and post-treatment depression. Otherwise stated, the relationship between the various interventions and depression will be mediated by the negative cognitive triad. When all variables are entered into the hypothesized

model, the negative cognitive triad score will have a significant effect on changes in depression. In order to fully establish the effect of the mediator on the outcome, however, the initial variables, namely the levels of cognitive, behavioral, problem-solving, and relational interventions will be included in the model. Otherwise described, the examined relationship appears as the following:

Path *c*, of the effect of X on Y in the unmediated model, represents the total effect.



Path *a* and *b* represent the indirect effects of predictor variables on outcome and path *c'* represents the direct effect of predictor variables on outcome, where c = ab + c', or the total effect of predictor variables on outcome (Bauer, Preacher, & Gil, 2006). The preceding outlines the assessment of a mediation relationship.

Additional tests of mediation will be conducted using the test of joint significance, which requires only that the path from predictor to mediator (path a) and the path from mediator to outcome (path b) must both be statistically significant (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Though this approach does

not provide confidence intervals around the total ab mediation path, it has been found to possess relatively good Type I error rates when one of the mediation paths is zero and power comparable to other similar approaches (MacKinnon et al., 2002).

Rationale. According to Beck's cognitive theory (1967), possession of negative thoughts about the self, world, and future are instrumental in the development and maintenance of depression, a claim that has been supported by research with depressed youth (Kaslow et al., 1992; Stark, Schmidt, & Joiner, 1996). The successful treatment of depression, according to Beck's cognitive theory (1967) occurs only when depressogenic cognitions, such as those represented by the cognitive triad, are targeted and altered. Thus, it can be said that the cognitive triad mediates the relationship between cognitive interventions and depression (Beck et al., 1979).

Research provides initial support for the relationship between decreases in depressogenic cognitions and reductions in depression when cognitive interventions (Butler et al., 1980; Gillham et al., 1994; Stark et al., 1987), behavioral interventions (Gaynor & Harris, 2008; Jacobson et al., 1996)), problem-solving beliefs (Warmerdam et al., 2010), and relational interventions (Spangler et al., 20004) are implemented.

While the previous is suggestive of the accuracy of the role of depressogenic cognitions as mediators in depressive symptom remission, little research has been conducted, particularly with samples of depressed youth, examining discrete treatment components, and assessing change via Beck's cognitive triad. The preceding discussion provides justification for examining the relationship between cognitive, behavioral, problem-solving, and relational components, the cognitive triad, and depression in youth.

CHAPTER THREE

Methods

This study is part of a larger research effort (ACTION), described below.

Participants

The sample used in the current study consisted of 40 females from the CBT-only treatment condition of the larger clinical trial. While the original sample of participants in the CBT-only treatment groups consisted of 55 girls, the data of only 40 participants were used. The data of 6 participants from the CBT only treatment condition were excluded in data analyses due to unforeseen methodological problems. A total of 3 participants were excluded because the school changed the allotted time for therapy from 50 minutes to 15 minutes per meeting which impacted the treatment protocol. In addition, 2 participants were excluded from the group because they were transferred to individual therapy. One participant was excluded due to diagnostic concerns outlined in the exclusionary criteria. Two participants moved during the intervention and therefore had incomplete data. Finally, 1 participant was excluded due to missing outcome data. These participants' ranged in age from 9 to 14 years (M= 10.57; SD=1.28). Participants received a primary diagnosis of Major Depressive Disorder (MDD) (n=33), Dysthymic Disorder (n=4), dual diagnoses of MDD and Dysthymic Disorder (n=2), or Depressive Disorder Not Otherwise Specified (n=1). A significant proportion, moreover, suffered from secondary disorders, with 60% of the female participants receiving a comorbid diagnosis. Participants were enrolled in grades 4 to 7 at two suburban central Texas school districts, with 26 attending elementary school and 14 middle school. Race/Ethnicity as reported by

the participants were 16 White/Hispanic, 16 White/nonHispanic, 7 African-American, and 1 biracial/multiethnic. Demographic data of the sample is presented visually in Tables 1-4.

Exclusion criteria defined by the larger clinical trial from which the data for the proposed study was acquired dictated exclusion of those participants who: 1) presented with a comorbid disorder more severe than their depressive disorder, 2) were suicidal or homicidal, 3) displayed psychotic symptoms, 4) were already receiving therapeutic or pharmacological treatment for their depressive symptoms, 5) possessed a below average IQ (< 85) or a learning disability that would preclude them from completing various measures, or suffered from a serious disability that would inhibit them from regularly attending sessions.

The current study examined cognitive, behavioral, problem-solving, and relational coding scores based on therapy sessions of 40 female participants. Only those female participants included in the CBT-only condition were included in the current study.

Table 1

Participant Demographic Variables (N = 40)

Variable	Frequency	Percent
Age		
9	9	22.5
10	13	32.5
11	7	17.5
12	9	22.5
13	1	2.5
14	1	2.5
Grade		
4	12	30.0
5	14	35.0
6	4	10.0
7	10	25.0
Ethnicity		
White/Hispanic	16	40.0
White/NonHispanic	16	40.0
African-American	7	17.5
Biracial/Multi-Ethnic	1	2.4

Table 2

Participant Depression Diagnosis at Time 1 (N = 40)

Variable	Frequency
Major Depression	33
Dysthymia	4
Major Depression and Dysthymia	2
Depressive Disorder Not Otherwise Specified	1

Table 3

Participant Comorbid Diagnosis at Time 1 (as either second, third, or fourth diagnosis)

Variable	Frequency
Generalized Anxiety Disorder	17
Post Traumatic Stress Disorder	4
Separation Anxiety	3
Social Phobia	1
Specific Phobia	7
Anxiety Not Otherwise Specified	1
Attention Deficit Hyperactivity Disorder	9
Oppositional Defiant Disorder	1
Eating Disorder	1
Parent-Child Relational Problem	4
Other	6

Table 4

Frequency of Attendance for Coded Sessions

Overall Sessions Attended	*Frequency*	
16 Sessions	3	7.5%
17 Sessions	1	2.5%
18 Sessions	6	15.0%
19 Sessions	6	15.0%
20 Sessions	24	60.0%
Coded Sessions Attended	*Frequency*	
7 Sessions	3	7.5%
8 Sessions	1	2.5%
9 Sessions	10	25.0%
10 Sessions	26	65.0%
Group Size	*Frequency*	
2 Members	4	28.5%
3 Members	6	43%
4 Members	4	28.5%

Instrumentation

Only instruments used in the original ACTION clinical trial that are relevant to the current study are discussed.

Measures of depression.

Children's Depression Inventory. The Children's Depression Inventory (CDI; Kovacs, 1981; see Appendix B) is an extensively used self-report measure for the assessment of depression in youth, ages 7 to 17. Utilized in the larger clinical trial for screening purposes, this 27-item measure, which can be administered individually or in a group format, evaluates the existence and severity of depressive symptoms over a two-week period. Three alternatives are offered for each item, resulting in total scores from 0 to 54, with higher scores indicating greater experience of depression. Severity of depression experienced by the child is considered to be significant when scores of 19 or above result based on the child's endorsements (Kovacs, 1981; Smucker, Craighead, Craighead, & Green, 1986). With regards to screening, however, scores of 16 and above are considered to have satisfactory predictive value (Timbremont, Braet, & Dreesen, 2004).

Internal consistency has been shown to range from .71 to .89 for various samples (Kovacs, 1981; Smucker et al., 1986). Test-retest reliability has varied from .38 to .87 (Kovacs, 1981); the lower values in this range may be due to the "state" (rather than a trait) focus on the measure (Kovacs, 1992). Conflicting findings regarding the discriminant validity of the CDI have been reported, with some uncovering a low level of accurate discrimination between diagnoses (e.g., Carey, Faulstich, Gresham, & Ruggerio,

1987) and other research showing accurate diagnosis of depression 86% of the time (Timbremont et al., 2004).

Beck Depression Inventory for Youth. The Beck Depression Inventory for Youth (BDI-Y; Beck et al., 2001; see Appendix B), additionally utilized in the clinical trial for the purposes of screening, is a self-report measure which evaluates the presence and severity of symptoms of depression in youth aged 7 to 14. Comprised of 20 total items assessing feelings, as well as physiological indicators, of sadness, and negative thoughts concerning the self, world, and future, the instrument produces a score ranging from 0 to 60. Internal consistency was found to range from .91 (Beck et al., 2001) to .93 (Stapleton, Sander, & Stark, 2007). The measure has further evinced good construct validity, with correlations with the CDI ranging from .72 to .83 (Beck et al., 2001; Stapleton et al., 2007). The BDI-Y has, moreover, demonstrated adequate discriminant validity, thus capable of differentiating depressed youth from others (Beck et al., 2001).

Diagnostic and Statistical Manual Brief Symptom Interview for Depression. The Diagnostic and Statistical Manual Brief Symptom Interview for Depression (DSM Interview; Stark & Sander, 2002; see Appendix B) is a semi-structured interview designed for use as a screening and monitoring device in the context of the larger clinical trial. The DSM Interview concerns itself with the appraisal of the depressive symptoms and the determination of the presence of a depressive disorder, as defined by DSM-IV criteria. Symptoms are considered present if the child indicates that the particular symptom has caused them distress and has interfered with their functioning for most days in the past two weeks.

The Schedule for Affective Disorders and Schizophrenia for School Age Children. The Schedule for Affective Disorders and Schizophrenia for School Age Children (K-SADS-P IVR; Ambrosini & Dixon, 2000) is a semi-structured diagnostic interview used to assess the presence of a depressive disorder in children and adolescents, aged six to 18. It is administered to both children and their parents and generates a rating that summarizes both the presence and severity of DSM-IV symptoms in six areas: major depression, mania, eating disorder, anxiety disorders, behavioral disorders, substance abuse, and psychotic disorders. Each symptom is assigned a severity rating, based on information obtained from the child and parent interviews, with the diagnosing clinician generating a summary rating based on all gathered information; ratings range from 0 to 4 or 0 to 6, with higher scores indicating increased severity. Symptoms are deemed clinically significant if a rating of above 3 is endorsed on the 0 to 4 scale or greater than 4 on the 0 to 6 scale. Ratings are then used to determine diagnoses in relation the DSM-IV criteria.

As the K-SADS-P IVR was modified recently from it's previous version, the K-SADS III R (Puig-Antich & Ryan, 1986) to be more congruent with the DSM-IV diagnostic criteria, little reliability and internal consistency data are available. Nevertheless, high inter-rater reliability was established for the diagnoses of Major Depression, Dysthymic Disorder, Generalized Anxiety Disorder, Separation Anxiety Disorder, and Oppositional Defiant Disorder (Ambrosini, 2000). For earlier versions of the K-SADS (K-SADS IIIR), high inter-rater reliability (Last & Strauss, 1990), adequate

internal consistency (Ambrosini, Metz, Prabucki, & Lee, 1989), and acceptable test-retest reliability (Apter, Orvaschel, Laseg, Moses, & Tyano, 1989) have been found.

An aggregate depression score incorporating all items within the K-SADS depression interview section can also be determined (Ambrosini, Metz, Bianchi, Rabinovich, & Undie, 1991). This score, which ranges from 17 to 97, with higher scores indicative of greater severity, is calculated by summing the severity ratings of 17 items assessing depressed mood, irritability, diurnal mood variation (morning exclusively), excessive guilt, anhedonia, fatigue and related diurnal variation (morning exclusively), difficulty with concentration, psychomotor agitation and retardation, sleep disturbances, loss of appetite, avoidance behavior, and suicidal ideation. Adequate psychometric support, in the form of internal consistently in the .72 to .89 range (Ambrosini et al., 1991; Chambers et al., 1985), and test-retest reliability at .81 (Chambers et al., 1985), exists. Significant correlation with the Beck Depression Inventory (BDI-Y; Beck et al., 2001), thus demonstrating concurrent validity, was found in a sample of outpatient adolescent females.

A slightly modified depression score, in which the social withdrawal item was excluded due to its elimination in the most recent version of the K-SADS, an item assessing self-esteem borrowed from another section of the interview, diurnal mood and fatigue variations removed, and both indices of anhedonia incorporated, was used as an increasingly developmentally appropriate measure of depression in the current study. The Present Episode summary score was utilized in the current analyses.

Measure of depressogenic cognitions.

Cognitive Triad Inventory for Children. The Cognitive Triad Inventory for Children (CTI-C; Kaslow et al., 1992; see Appendix C), a downward extension of the Cognitive Triad Inventory (CTI; Beckham et al., 1986), is a self-report instrument which assesses the various aspect, namely one's views of the self, world, and future, comprising the cognitive triad (Beck, 1967). The measure, which consists of 36 items grouped in three 12-item subscales, produces a total score, which, when higher, indicates a more positive perspective with regards to the triad, while lower scores signify the presence of more depressogenic cognitions. Adequate internal consistencies across subscales self, world, and future subscales (D'Allessandro & Burton, 2006; Kaslow, et al., 1992), as well as overall reliability, with the total composite scale earning a coefficient alpha of .92 (Zauszniewski, Panitrat, and Youngblut, 1999), exists. It has, further, demonstrated good discriminant validity (Kaslow et al., 1992; Stark et al., 1993), adequate concurrent validity (D'Alessandro & Burton, 2006), and has been found to successfully predict depressive symptoms in children (Stark et al., 1996) and adolescents (Jacobs & Joseph, 1997). The measure, administered along the course of the clinical trial, was utilized as a measure of depressogenic cognitions in the present study.

Measure of interventions.

It is important to note that, while participants in the same group receive or are exposed to similar interventions by the group therapist, each obtained an individual score. This is feasible as an attempt was made to assign scores based on to whom the interventions were directed, whose concerns were addressed in the session, and evidence of communication of use of techniques in session.

Cognitive Interventions Subscale of the CBT Coding Scale for Bulimia Nervosa. A slightly modified version of the Cognitive Interventions subscale of the CBT Coding Scale for Bulimia Nervosa Therapist Scale (CCS-BN; Spangler, 1998; see Appendix D) was employed as a measure of the quality of cognitive interventions in the current study. The scale, developed originally to assess the implementation of CBT interventions in the treatment of Bulimia Nervosa, is a coding system designed to assess within-session therapist and patient processes. The system, moreover, consists of two sections, a therapist and a patient section. The former assesses the quality of the CBT therapist's cognitive, behavioral, structural, and relational interventions as received by the participant and as implemented within the session; the latter section was not used in the current study, due to its exclusive focus on Bulimic Nervosa. The CI subscale, incorporating items from both the Cognitive Therapy Scale (CTS; Beck & Young, 1980) and the Collaborative Study Psychotherapy Rating Scale- Cognitive Behavioral Section (CSPRS; Hollon et al., 1988), consists of 19 items on a 7-point Likert scale, with higher scores indicating improved engagement in the identified technique. The scale, further, was confirmed, via factor analysis, to measure a discrete factor as intended, supporting construct validity of the scale (Spangler et al., 2001). The subscale as demonstrated adequate inter-rater reliability (.69) and high internal consistently ($\alpha = .87$) (Spangler et al., 2001), as is, thus, considered a reliable and valid method of assessing within-session cognitive interventions. Calculated internal consistency of the modified subscale for this sample was $\alpha = .959$.

Behavioral Interventions Subscale of the CBT Coding Scale for Bulimia Nervosa. A slightly modified version of the Behavior Interventions subscale of the CBT Coding Scale for Bulimia Nervosa (CCS-BN; Spangler, 1998; see Appendix D) was employed as a measure of the quality of behavioral interventions in the current study. The scale, which consists of six items, was modified to more accurately capture the complete range of behavioral interventions for depressed youth. Specifically, additional items assessing extent of therapist identification and exploration of maladaptive behaviors, as well as adaptive behaviors were incorporated. A supplementary item included to encapsulate developmentally suitable praise and affirmation by the therapist, as well as the parsing of one item into three assessing skills training, specifically coping, interpersonal, and mood monitoring skills, as implemented by the therapist, were additional alterations made to the original measure. Finally, items assessing completion and review of homework assigned, as well as self-monitoring of mood following engagement in behavior were also added, resulting in a total of 14 items. The measure provides a total score for each participant in the group. Calculated internal consistency of the modified subscale for this sample was $\alpha = .931$.

Problem-Solving Interventions Coding Scale. The Problem-Solving Interventions Coding Scale, based upon the CBT Coding Scale for Bulimia Nervosa (CCS-BN; Spangler, 1998; see Appendix D), was created for the purposes of assessing the quality of those problem-solving interventions incorporated in the ACTION treatment. Specifically, members of the ACTION research team, in conjunction with the primary investigator, created each item for the purposes of assessing this particular

component. Seven items, addressing the five problem-solving steps, described in the following section, were included. The measure provides a total score for each participant in the group. Calculated internal consistency of the modified subscale for this sample was $\alpha = .884$.

Empathy Interventions Subscale of the CBT Coding Scale for Bulimia Nervosa. The Empathy Interventions subscale of the CBT Coding Scale for Bulimia Nervosa Therapist Scale (CCS-BN; Spangler, 1998; see Appendix F) was employed as a measure of the quality of therapist relational behaviors in the current study. The subscale consists of seven items assessing empathy, understanding, warmth, rapport, collaboration, involvement, and interpersonal effectiveness on a 7-point Likert scale, with higher scores indicating improved use of therapist relational interventions directed toward the participant. Based on results of a factor analysis of the overall measure, the Empathy subscale is believed to measure of discrete factor; the subscale, moreover, possesses adequate inter-rater reliability (.71) and high internal consistently (.87) (Spangler, 2001), providing a reliable and valid way to code for therapist relational behaviors. Calculated internal consistency of the subscale for this sample was $\alpha = .887$.

The Harvard Community Health Plan Group Cohesiveness Scale- Second Version. The Harvard Community Health Plan Group Cohesiveness Scale- Second Version (HCHP-GCS-II; Soldz et al., 1987; see Appendix D) was employed in the assessment of the quality of group cohesion. The current version is believed to be a more theoretically and empirically sound version than the original (Budman et al., 1993; Soldz et al., 1987) and consists of the following scales: Unfocused vs. Focused, Withdrawal and

Self-Absorption vs. Interest and Involvement, Mistrust vs. Trust, Facilitative Behavior, and Bonding. The measure is reported to possess adequate psychometric properties, corresponding to those of original version (Budman et al., 1993), thus providing a valid measure of observer-rated group cohesion. This measure provides a total score for each participant in the group and is combined with the Empathy Interventions subscale of the CBT Coding Scale for Bulimia Nervosa Therapist Scale (CCS-BN; Spangler, 1998; see Appendix F) to create a composite score for relational interventions. Calculated internal consistency of the modified subscale for this sample was $\alpha = .919$. The Empathy Interventions Subscale of the CBT Coding Scale for Bulimia Nervosa and the Harvard Community Health Plan Group Cohesiveness Scale- Second Version were combined to create a composite score to assess relational interventions. Calculated internal consistency of the modified subscale for this sample was $\alpha = .912$.

For each participant, scores from each item on each coding subscale was totaled across sessions. Totals were divided by number of sessions attended (of a total of 10 coded) in order to obtain an average. The average was then multiplied by the average number of total sessions attended (i.e. number of sessions attended out of 20). This procedure was repeated with the cognitive, behavioral, problem-solving, and relational coding scores to obtain a weighted average total score for each intervention. Tapes of selected sessions (i.e., 4, 6, 8, 9, 12, 14, 16, 18, and 19) from treatment groups in the CBT-only condition, coded with the use of the previous instruments, were utilized.

Procedure

Ethical considerations. The larger ACTION study adhered to those ethical standards decreed by the American Psychological Association and the University of Texas at Austin. Approval for the clinical trial, from which the data for the proposed study will be collected, was obtained from the Departmental Review Committee within the Department of Educational Psychology, the Institutional Review Board at the University of Texas at Austin, as well as from those school districts where treatment was conducted and from which participants were recruited. Approval for this specific study was obtained from the Departmental Review Committee in the Educational Psychology Department and the Institutional Review Board of the University of Texas.

Depressed sample and data collection. With regards to the larger clinical trial, a multi-gate assessment procedure was utilized to ensure both accurate diagnoses and efficient use of the principal investigator's time (Reynolds, 1986; see Appendix E). Recruitment began with an extensive screening of potential participants using self-report assessments of depression (Stage 1). Screenings occurred in two public school districts, with the processes differing slightly between each. In addition to the CDI, participants in School District 1 were screened using the Cognitive Style Questionnaire for Children (CCSQ; Abela, 2001) whereas those from School District 2 were further assessed using the BDI-Y. Stage 2 consisted of a subsequent assessment with second administration of self-report measures. Further changes were implemented following initial screenings leading to first cohort, however, in order to reduce the number of children inaccurately identified as depressed; specifically, while participants in cohort 1 completed a secondary administration of self-report measures, those in subsequent cohorts (cohort 2-7) were

administered a brief symptom interview. Stage 3 of the recruitment involved a thorough diagnostic interview or in order to accurately determine presence of a depressive disorder. Additional details regarding the recruitment procedures are presented in the following outline.

Following obtaining approval from the selected school districts, potential participants, specifically females in grades 4 through 7 (N=7737) were introduced to the trial via letters directed to caregivers describing the proposed study (see Appendix H). Classroom teachers supervised the distribution and collection of consent forms. Those with submitted consent forms (N=3436) were invited to participate in the screening process. Immediately subsequent to completion of the CDI the instrument was scored; if scores of 16 or above were obtained, for those in the first cohort, the measure was re-administered one week following. For those in subsequent cohorts, obtainment of a score of 16 or above on the CDI or above a 25 on the BDI-Y was followed, rather than a re-administration of the initial self-report measures, by screening via DSM-IV depression symptom interview, conducted by a graduate research assistant determined whether the symptoms were severe enough to consider diagnosis with the use of K-SADS-P IVR (N=772).

Caregivers of participants who again earned scores above the noted cutoff or for whom the DSM interview indicated the potential presence of a depressive disorder, were notified via letter or phone call requesting permission to complete a diagnostic interview (N=456). For those that agreed via consent letter, the K-SADS-IVR was administered to both participant and parent in order to confirm the depressive disorder, If they were,

interviews of the child and at least one parent/guardian were undertaken (N=290). If DSM-IV criteria for the diagnosis of a depressive disorder were met, the caregivers were provided with feedback following the diagnostic interview and the youth were asked to participate in the ACTION study (N=186). For those who provided consent and assent, a pre-treatment assessment battery was administered to both participant and parent and the participant was randomly assigned to an experimental condition (N=151).

Participants were randomly assigned to one of the three following conditions: Cognitive-Behavioral Therapy-only (CBT-only) (N=55), Cognitive-Behavioral Therapy-plus parent training (CBT + parent) (N=49), or Minimal Contact Control group (MCC) (N=47). Girls assigned to active treatment conditions were treated in groups of three to four. Due to various concerns, including moving out of the school district (n=7), non-standard treatment administration (n=6), lack of interest in continued participation (n=4), and required hospitalization (n=1), a total of 18 participants were pulled from the study. As such, the final sample included the following composition: 45 participants in the CBT-only condition, 43 participants in the CBT + parent condition, and 45 in the MCC condition. A similar post-treatment assessment battery was administered following the successful completion of the treatment, provided evidence for the treatment's effect.

Training of measures administrators. Doctoral level students were trained in the administration and scoring of measures, with special focus dedicated to the assessment of suicidal ideation and intent. Measures administrators were required to possess no less than one year of experience on the research team.

Training of interviewers. Advanced doctoral level students (i.e., at a minimum, had been exposed to program coursework in child psychopathology and diagnostic case formulations) were trained, over the period of six months, in the administration of the K-SADS-IVR interview. Training consisted of reviewing tapes of previously conducted interviews (at a minimum, six tapes), with accuracy checks, and live observation of K-SADS-IVR interviews (on at least two occasions), following which supervised practice with volunteers was undertaken (at least two), for which the interviewer received personal feedback. Approximately 50 hours of training was undertaken before interviewers were permitted to independently interview participants. Continued weekly supervision for administration and scoring of K-SADS interviews by the project coordinator and the K-SADS supervisor was provided.

Training of therapists. Treatment in the larger clinical trial was implemented by female doctoral level school psychology students. Over a six-month period, advanced doctoral psychology students, who had completed didactic and practicum courses in CBT, were trained in the implementation of the ACTION CBT treatment. Specifically, after having received didactic training focused on the treatment manual, therapeutic techniques, and practical issues, trainees observed an experienced therapist administer the entire treatment to a group of girls. Following this experience, trainees co-led a group under the supervision of a senior therapist. Individual supervision from both the principal investigator and the co-therapist was provided to therapists-in-training on a weekly basis; bimonthly group supervision meetings also complemented these individual sessions. Once having completed this training, therapists were permitted to lead a group

independently, though while continuing to be present at individual weekly supervision session with the project's principal investigator and bi-monthly group supervision meetings. In all, 150 hours of training occurred prior to the therapist being allowed to independently implement the treatment protocol.

Treatment integrity. Therapy sessions were audio recorded in an effort to determine therapist achievement of treatment objectives, as dictated by the CBT protocol used in the larger clinical trial. Degree of integrity was established by independent raters, namely other therapists trained to administer the treatment, using a coding system developed by the principal investigator. Subsequent analyses indicated that 89% of the objectives were adequately or completely addressed along the course of the treatment.

Treatment protocol. The treatment protocol, ACTION, is a manualized, group CBT treatment for depressed early adolescent females (Stark, Schnoebelen, et al., 2006). Treatment entails 20 group and two individual sessions, approximately 60 minutes in length, and occurs over an 11-week period, with each group consisting of two to five participants. Participants' depressive symptoms are addressed through six core therapeutic components: affective education, goal-setting, coping skills training, problem-solving training, cognitive restructuring, and building a positive sense of self. Skills are imparted via developmentally-appropriate and engaging didactic and experiential methods; treatment is collaborative and the therapist-patient relationship is highly valued and underscored. Each session adheres to a particular structure, modified from adult CBT sessions (J. Beck, 1995), in order to optimize meeting time. Specifically, each session began with an unstructured "chat time," followed by a presentation of the

agenda, with participants involved in its creation with an addition of any items of personal concern. The session proceeded with a goal check-in, with either a reward or collaborative problem-solving engaged in depending on the participant's progress. A review of the previous session and homework ensued, with the therapist always attempting to make connections between material covered and additional lessons presented. Participants, moreover, were encouraged to share positive events from the period between sessions. Therapeutic skill building occurred initially through didactic means, following which the skill in-session was applied to the participant's personal concerns. Generally, sessions two through seven focused on coping skills and other such behavioral interventions, sessions eight through nine on problem solving, sessions 10 through 17 on cognitive restructuring skills, and meetings 18 through 20 on an integration of the preceding, with rehearsal and review of the various skills interspersed throughout. Therapeutic homework was assigned at the termination of each session, with the goal of reinforcing lessons learned and additional practice of skill application between sessions. The session concluded with a review and praise from the therapist, and later from the participants themselves, based on the participant's in-session behavior, with related rewards based on the participants efforts at homework and attendance. The entire treatment was personalized to the participant's needs, as based on the individualized case conceptualization and goals, as identified during individual meetings with participants. See Appendix I for an outline of the session-by-session treatment objectives, activities, and homework assigned. For a thorough review of the ACTION treatment, see the ACTION treatment manual for therapists (Stark, Schnoebelen, et al., 2006).

Training of coders. Therapy tapes were coded by doctoral school psychology students for purposes of earlier conducted studies. During the training period, tapes drawn from the sessions of those participants in the Minimal Contact Control Condition, as they underwent treatment using the ACTION protocol following a wait period, were used. Training began with a review of the manuals and procedures; four tapes were coded and discussed as a group in order to better acquaint the rater with the items on the coding scales and underscore the process of coding. Eight tapes were then coded for purposes of calculating inter-rater reliability, with the preceding being established between the principle investigator of the original clinical trial and each rater. Each coder was approved for independent coding after achieving a minimum interclass correlation coefficient of .70 or greater on each item. Finally, the training period spanned approximately 50 hours.

Coding of tapes. As noted above, behavioral, problem-solving, and cognitive interventions were introduced at specific intervals in the treatment; a selection providing a representative sample of the preceding interventions of the total 20 meetings were chosen for coding. Specifically, half of the sessions, expressly sessions 2, 4, 6, 8, 9, 12, 14, 16, 18, and 19, for each group were reviewed and rated. It should be noted that sessions 1 and 20 of the ACTION treatment were excluded from this consideration due to their rather limited focus. Therapy sessions from treatment groups were randomly assigned to coders. At the conclusion of the coding of the data noted above, 10% of the total sample was utilized in order to calculate inter-rater reliability for the coding system used. The final inter-rater reliability statistics represent the actual differences between

coders; discrepancies were not resolved. Intraclass correlation coefficients for each item in each scale were calculated; the preceding was averaged in order to obtain the ICC for each coding scale. ICCs for coding scales were analyzed previously and are presented here: CCS-BN Cognitive Interventions subscale = .61**,** CCS-BN Behavior Interventions subscale = 61, Problem Solving Interventions Coding Scale = .92, and, for relational coding interventions, CCS-BN Empathy subscale = .81 and HCHP-GCS = .84. ICCs for each scale item are noted in Appendix H.

Summary. Depressive symptoms were assessed using the Schedule for Affective Disorders and Schizophrenia for School Age Children (KSADS-IVR; Ambrosini & Dixon, 2000); pre- and post-treatment scores were used. Depressogenic cognitions were assessed using the Cognitive Triad Inventory for Children (CTI-C; Kaslow et al., 1992); again, pre- and post-treatment scores were used. To improve upon the measurement of cognitive, behavioral, and relational interventions, a modified version of the relevant CCS-BN-TS subscales (Spangler, 1998) and Harvard Community Health Plan Group Cohesiveness Scale-Second Version (HCHP-GCS-II; Soldz et al., 1987) were used; measurement of problem-solving interventions was accomplished through use of an instrument tailored specifically to the ACTION treatment for depression.

CHAPTER FOUR

Statistical Analyses

The current investigation examined the effects of cognitive, behavioral, problem-solving, and relational components on changes in depression following completion of a cognitive behavioral treatment for depression; the current investigation further examined the path through which any demonstrated changes occurred. The use of hierarchical linear modeling is first reviewed. Preliminary analyses are discussed, following which are presented the results for each of the hypotheses, obtained with the use of hierarchical linear modeling. Finally, the rationale for the engagement in exploratory analyses, the specific analyses conducted, and their results are outlined.

Hierarchical linear modeling (HLM) was used to conduct the main analyses. The use of HLM allows for the specification of and estimation of relationships between variables at different levels of a hierarchical, or nested, data structure. The disregard of the nested aspect of data and, for instance, completing analyses at Level 1 (e.g. person-level), ignoring Level 2 (e.g. group level) data, would violate the independence assumption of multiple regression and may result in an inflated Type 1 error rate. Alternatively, considering data at just Level 2, aggregated Level 1 data to create Level 2 variables, would ignore within group variation. Use of hierarchical linear modeling or multilevel analyses was indicated due to the nested structure of the data, that is female participants nested within therapy groups, as well as the presence of two random factors at different levels of the data hierarchy. The participants within each of the groups and the groups themselves were treated as random factors (i.e. variables that represent a

sample of all possible levels that could have been included in the study). The four intervention methods were treated as fixed factors (i.e. variables that represent all levels of interest). Thus, a mixed effects design was needed as fixed factors and random factors appear in the design. The dependent or outcome variables are the post-depression and post-CTI-C scores, depending on the hypothesis being tested. Further, in this design, the first level pertained to the participants; the second level pertained to the therapy groups. Variables for the main analysis exist on the participant level of the data hierarchy. Specifically, for participants, data on quality of intervention methods and group membership exist. The model is a conditional model, as explanatory or predictor variables, namely the intervention methods, exist at the participant level (Level 1). The intervention variables, furthermore, are those on which outcome scores, namely post-treatment K-SADS depression scores, are dependent. The Level 1 independent variables were group-mean centered in order to assess the pure person level effects, unconfounded by possible between level effects. In other words, the group-mean centering permitted the assessment of the within-person variance and not that of the groups. Furthermore, the study can additionally be described as lower level mediation, as the initial causal variables whose effects are believed to be mediated are lower level (Level 1) variables; specifically, the mediation can be termed a 1/1/1 mediation as the independent treatment variables, the mediator, and the depressive outcome scores are all Level 1 variables (Bauer et al., 2006; Kenny, Korchmaros, & Bolger, 2003; Zhang, Zyphur, & Preacher, 2009). Figure 1 presents a model of this 1/1/1 mediation model. Finally, an alpha level of .10 was selected due to the small sample size. The hypotheses put forth by the study, as

well as the models describing each level of analyses, are described in greater detail below.

Preliminary Analyses

Overall Preliminary Analyses. Means, standard deviations, sample sizes, Cronbach's alphas, and correlation coefficients were calculated for all variables in the study and are presented in Table 5. All scales were found to have good internal consistency. Scale intercorrelations for measures used in the main analyses are presented in Table 6. All analyses use the total sample (N=40), which is composed of the depressed sample in the CBT-only condition.

Table 5

Means, Standard Deviations, and Chronbach α for Main Variables (N=40)

Variable	M	S.D.	*α*
Pre-treatment K-SADS Depression Score	42.25	10.79	.91
Post-treatment K-SADS Depression Score	24.58	6.66	.91
Cognitive Intervention Subscale	27.44	8.46	.96
Behavior Intervention Subscale	28.91	7.05	.93
Problem Solving Intervention Subscale	6.68	2.98	.88
Relational Intervention Subscale	59.78	5.70	.92
Pre-treatment CTI-C Total Score	46.15	13.92	.93
Post-treatment CTI-C Total Score	58.38	11.65	.93

Table 6

Pearson Product Correlations Among main Analysis Variables (N = 40)

Variable	1	2	3	4	5	6	7	8
T1 Depression Score	1.00							
T2 Depression Score	-.005	1.00						
Cognitive Intervention	-.10	.08	1.00					
Behavior Intervention	.05	-.21	.65**	1.00				
Problem-Solving Intervention	-.07	.26	.35*	.61**	1.00			
Relational Intervention	.08	-.10	.41**	.61**	.20	1.00		
T1 CTI-C Score	-.16	-.06	.31	.16	-.01	-.15	1.00	
T2 CTI-C Score	-.09	-.35*	.25	.16	.17	.03	.34*	1.00

**Represents significance at the .05 level*
***Represents significance at the .01 level*

In order to consider the inclusion of any potential control variables, a series of analyses was conducted to determine whether K-SADS depression scores differed by any main demographic variables. The correlation between age and K-SADS depression score was nonsignificant ($r = .238$, $p = .139$), indicating no differences in pretreatment depression scores by age. An Analysis of Variance (ANOVA) was utilized to assess any potential differences between ethnicity and pretreatment K-SADS depression scores. Results of the ANOVA were nonsignificant ($F[3, 36] = .042$, $p = .989$), indicating no differences in K-SADS depression scores by ethnicity. ANOVA was also conducted to determine whether pretreatment K-SADS depression scores differed by grade. The results of the ANOVA were nonsignificant ($F[3, 36] = 1.168$, $p = .335$), which indicated that K-SADS depression scores assessed at pretreatment did not differ by grade. ANOVA was again used to determine whether pretreatment K-SADS depression scores differed by cohort. The results of the analysis were significant ($F[5, 34] = 3.907$, $p = .007$) showing that there were differences in pretreatment K-SADS depression scores by cohort (based upon time of entrance into study). Post-hoc analyses using a Tukey LSD correction suggested significant group mean differences in pretreatment K-SADS depression scores between participants in several cohorts, results of which are presented in Table 7. These results can be understood by considering that the study continued within the same school districts for several years, and, that over time, fewer youth were identified as depressed. Moreover, it was noted that, of those that were, the youth in subsequent cohorts presented with milder depression. As analyses run with the inclusion of this variable as a control were not dissimilar to those run otherwise, it was decided not to include the variable

cohort as a control. Additionally, ANOVA was conducted to assess potential differences in participant intervention attendance and pretreatment K-SADS depression scores. Results of the ANOVA were nonsignificant, ($F[4, 35] = .270$, $p = .846$), indicating no differences in pretreatment K-SADS depression scores by intervention sessions attended. Finally, an ANOVA was conducted to determine if any differences between group size and pretreatment K-SADS depression existed. Results of the ANOVA indicated no differences in pretreatment K-SADS depression scores and different group sizes, ($F[2, 37] = 0.339$, $p = .715$).

Table 7

Post-hoc Analyses Results for Pretreatment K-SADS Depression Scores and Cohorts (N=40)

Cohort	Cohort	Mean Difference	Std. Error	Sig.
1	2	-10.943*	4.540	.021
	3	-11.600*	5.046	.028
	4	3.629	4.540	.430
	5	-0.371	4.540	.935
	6	7.450	5.450	.181
2	1	10.943*	4.540	.021
	3	-.657	5.394	.904
	4	14.571*	4.924	.006
	5	10.571*	4.924	.039
	6	18.393*	4.924	.003
3	1	11.600*	5.046	.028
	2	.657	5.394	.904
	4	15.229*	5.394	.008
	5	11.229*	5.394	.045
	6	19.050*	6.180	.004
4	1	-3.629	4.540	.430

Table 7 (continued)

	2	-14.571*	4.924	.006
	3	-15.229*	5.394	.008
	5	-4.000	4.924	.422
	6	3.821	5.774	.513
5	1	0.371	4.540	.935
	2	-10.571*	4.924	.039
	3	-11.229*	5.394	.045
	4	4.000	4.924	.422
	6	7.821	5.774	.184
6	1	-7.450	5.450	.181
	2	-18.393*	5.774	.003
	3	-19.050*	6.180	.004
	4	-3.821	5.774	.513
	5	-7.821	5.774	.184

**Represents significance at the .05 level*

In hopes of determining the need for the inclusion of control variables, further analyses were conducted to determine whether post-treatment K-SADS depression scores differed by any main demographic variables. The correlation between age and post-treatment K-SADS depression score was significant ($r = -.386$, $p = .014$), indicating older age was related to lower post-treatment depression scores. As analyses run with the inclusion of this variable as a control were not dissimilar to those run otherwise, it was decided not to include the variable age as a control. An ANOVA was then used to assess any potential differences between ethnicity and post-treatment K-SADS depression scores. Results of the ANOVA were nonsignificant ($F[3, 36] = .639$, $p = .595$), indicating no differences in post-treatment K-SADS depression scores by ethnicity. ANOVA was also conducted to determine whether post-treatment K-SADS depression scores differed by grade. The results of the ANOVA were nonsignificant ($F[3, 36] = 1.486$, $p = .235$), which indicated that K-SADS depression scores assessed at post-treatment did not differ by grade. ANOVA was further used to determine whether post-treatment K-SADS depression scores differed by cohort. The results of the analysis were nonsignificant ($F[5, 34] = .163$, $p = .975$) showing that there were no differences in post-treatment K-SADS depression scores by cohort. Additionally, ANOVA was conducted to assess potential differences in participant intervention attendance and post-treatment K-SADS depression scores. Results of the ANOVA were nonsignificant, ($F[3, 36] = 1.049$, $p = .383$), indicating no differences in post-treatment K-SADS depression scores by intervention sessions attended. Finally, an ANOVA was conducted to determine if any differences between group size and post-treatment K-SADS depression existed. Results of the

ANOVA indicated no differences in post-treatment K-SADS depression scores and different group sizes, ($F[2, 37] = .755$, $p = .477$).

In summary, pretreatment K-SADS depression scores did not vary by the demographic variables of age, ethnicity, grade, attendance, or group size. Pretreatment K-SADS depression scores, however, differed by group cohort. Therefore, cohort was considered, though not included, as a potential control variable for this study‘s analyses. Post-treatment K-SADS depression scores did not vary by ethnicity, grade, cohort, attendance, or group size. Post-treatment K-SADS depression scores were positively and significantly related to age. Therefore, age was considered, though not included, as a potential control variable for this study‘s analyses. The preceding variables were not included in the final analyses as their inclusion did not result in any significant changes in findings.

Assumptions. In order to ensure compliance with the requirements of hierarchical linear modeling, preliminary analyses were conducted. Generally, the assumptions of hierarchical linear modeling are (a) the within-group residuals, r_{ij}, are normally and independently distributed around the value predicted by the average of the intervention, cognitive triad, or control variables, with a mean of 0 for each predicted value, and a variance constant across groups (σ^2); and (b) the between-school residuals (u_{0j}) are normally and independently distributed around their respective group means, with a mean of zero, and a variance that is constant across groups (τ_{00}). The data were examined for violations of these assumptions of hierarchical linear modeling (Raudenbush & Bryk, 2002).

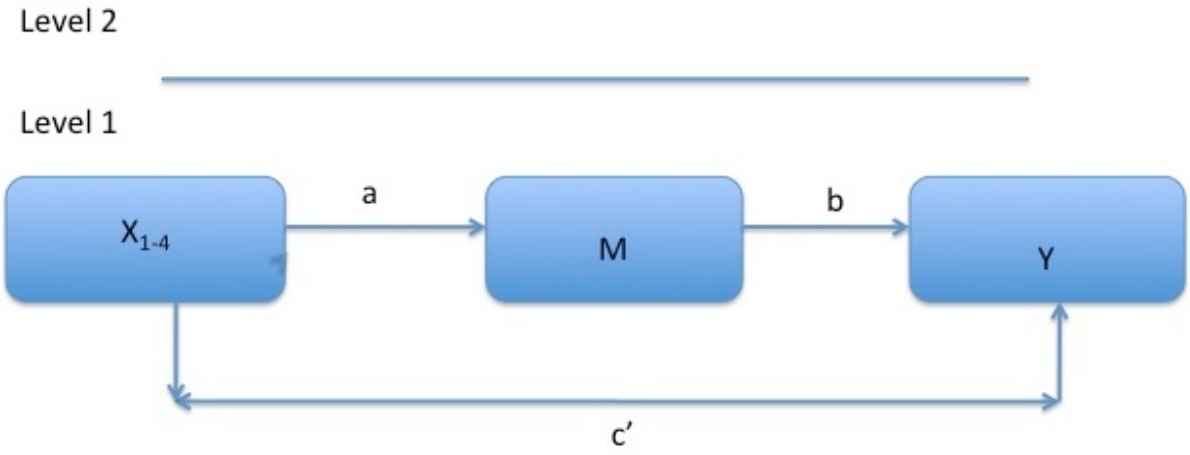
Plots of estimated residuals from the conditional model were examined to look for outliers and violations of these assumptions. The Q-Q plot of standardized residuals for each regression analysis roughly demonstrated a normal curve, which suggested that the errors were normally distributed. Further, histograms of Level 2 data of Level 1variables indicated that several group outliers existed. As such, these group outliers (groups 8, 12, and 14; greater than 2.5 SD away from mean) were excluded from the analyses, thus reducing the total sample size. Finally, equal variance was assessed using the test of homogeneity of variance using HLM. The assumption of equal variance was not demonstrated for all models. Violations of the homogeneity of variance assumption for Level 1 variables can be caused by the exclusion of one or more important Level 1 predictor variables, including various demographic variables or intervention variables assessed at the person level, or a misspecification of the Level 1 model (Raudenbush & Bryk, 2002). The impact of this is often mild though may indicate that the potential misspecification be addressed. This was further considered in development of secondary analyses, with the respecification of models. In summary, the preliminary analyses indicated that the normality of residuals assumption was met, while the homogeneity of variance assumption was not. Further, the preliminary assumption indicated the need for the exclusion of three groups.

Main Analyses

Overview of Statistical Analyses. The current study examined the relationship between the various treatment components, the cognitive triad, and severity of symptoms of depression in a sample of depressed early-adolescent females who have undergone

CBT for depression. Specifically, the first objective of the current study was to investigate whether quality of cognitive, behavioral, problem-solving, and relational interventions are directly related to post-treatment measures of depression. The second objective of the current study was to assess whether modifications in cognitions mediate the relationship between treatment components and improvements in depressive symptoms. An increased understanding of the distinct contributions of the various interventions, as well as the pathway through which treatment components produce change, may potentially increase the power of treatments for child and adolescent depression.

Figure 1. HLM-Based Multilevel Mediation Model: 1/1/1



Note. $X_{1\text{-}4}$ represents the intervention variables (i.e., cognitive, behavioral, problem-solving, and relational variables), M represents the mediator (i.e. post CTI-C scores), and

Y represents the outcome variable (i.e. post-treatment K-SADs depression scores). All variables below the line are at the lower level (i.e., Level 1), or the participant level.

Unconditional Model 1. The unconditional model for Level 1, without explanatory variables, is as follows:

$Y_{ij} = \beta_{oj} + r_{ij}$

Where Y_{ij} represents the post-treatment K-SADS depression score for individual *i* in group *j*, β_{oj} represents the post-treatment K-SADS depression mean for a given group *j*, and r_{ij} is the difference between an individual's post-treatment K-SADS depression score and the mean score for individual *i*'s group *j*.

The unconditional model for Level 2 is as follows:

$\beta_{oj} = \gamma_{00} + u_{0j},$

where β_{oj} represents the post-treatment K-SADS depression mean for group *j*, γ_{00} represents the average of the group post-treatment K-SADS depression scores, and u_{0j}, the Level 2 equation residual, represents the difference between a group's post-treatment K-SADS depression mean (β_{oj}) and the average of these group post-treatment K-SADS depression means (γ_{00}). This model is without explanatory variables and is included to assess the average of the outcome variable (i.e. K-SADS depression score), as well as provide a rationale for the use of HLM.

The pooled within-group variance (σ^2) is 30.52. Group means also vary, as the variance of the intercept (τ_{00}) is 15.09. This variance is statistically significant as the p-value associated with the chi-square test is .005. This indicates that variance within groups exists (i.e. that girls within a group have varying levels of post-treatment

depression) and that placement within a group does have an impact. Finally, the average post-treatment K-SADS depression score is 24.44 ($\gamma_{00)}$). These results are presented in Table 8. The unconditional intraclass coefficient, ρ, or the proportion of the total outcome variance that is explained Level 2 units, is .33. Thus, approximately 33% of the variance of the posttest depression scores is between groups, with the remainder found within groups (i.e. at the participant level). Thus, this nesting implies that a violation of the linear model assumptions of independence of observation. Specifically, this finding indicates that the group to which the participant is assigned is salient. Disregarding this dependency in the data would result in inflated test statistics when observations are positively correlated, thus leading to erroneous conclusions about the relationship between the variables. Summary measures calculated via the fully unconditional model provide further evidence for the use of multilevel modeling with the data presented.

Table 8

Fully Unconditional Model: Post-treatment K-SADS Depression Scores

Fixed Effect	Coefficient	*se*	*t*-ratio	*Df*	*p*-value
Overall Post-treatment Depression Score Average γ_{00}	24.44	1.51	16.129	10	.000
Random Effect	Variance		χ^2		
Between Group u_{0j}	15.09		25. 13	10	.005
Within Group r_{ij}	30.52				

Hypothesis 1. It is hypothesized that, after controlling for pre-treatment levels of depression, participant cognitive, behavioral, problem-solving, and relational scores will be negatively associated with post-treatment depression symptoms. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \beta_{3j}X_{3ij} + \beta_{4j}X_{4ij} + \beta_{5j}X_{5ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment K-SADS depression score for individual i in group j, β_{oj} represents the post-treatment K-SADS depression mean for a given group j, $\beta_{1\text{-}4j}$, assuming use of within-group centering, represent decreases in post-treatment K-SADS depression scores with 1 unit change in intervention variables in a given group, $X_{1\text{-}4ij}$ represent the intervention variables (with intervention 1 = cognitive interventions; 2 = behavioral interventions; 3 = problem-solving interventions; 4 = relational interventions), β_{5j} represents increases in post-treatment K-SADS depression scores with 1 unit change in pre-treatment K-SADS depression scores, X_{5ij} represents pre-treatment K-SADS depression scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or group level, is as follows:

$\beta_{oj} = \gamma_{00} + u_{0j}$

$\beta_{1j} = \gamma_{10}$

$\beta_{2j} = \gamma_{20}$

$\beta_{3j} = \gamma_{30}$

$\beta_{4j} = \gamma_{40}$

$\beta_{5j} = \gamma_{50}$

where β_{oj} represents the post-treatment K-SADS depression score mean for group j, γ_{00}

represents the average post-treatment K-SADS depression mean (i.e. the grand mean), and u_{0j}, the Level 2 equation residual, represents the difference between a given group's post-treatment mean (β_{oj}) and the average of the group's post-treatment means (γ_{00}). $\beta_{1\text{-}4j}$ represent the decreases in average post-treatment K-SADS depression scores with 1 unit change in intervention variables for group *j*, and $\gamma_{1\text{-}40}$ represent the average impact of the coefficients $\beta_{1\text{-}4j}$ across groups. β_{5j} represents decreases in post-treatment K-SADS depression scores with 1 unit change in pre-treatment K-SADS depression scores, and γ_{50} represents the average impact of the coefficient β_{5j} across groups. The models presented for hypothesis 1 are used to test the total effect of the intervention variables on depression (reflected by patch *c* on page 105). The preceding is a conditional model with five explanatory variables at Level 1, or the participant level; as no variables of interest exist at Level 2, or the group level, this equation stays the same. The residuals for the additional Level 2 equations are fixed.

The impact of the intervention variables, including cognitive (γ = .666, SE = .740), t(28) = .900, p = .376, behavioral (γ = -.200, SE = .645), t(28) = -.310, p = .759, problem-solving (γ = 2.515, SE = 1.795), t(28) = 1.401, p = .172, and relational (γ = -.560, SE .399), t(28) = -1.403, p = .171, interventions on post-treatment K-SADS depression outcome was not statistically significant. Otherwise stated, hypothesis 1, that participant cognitive, behavioral, problem-solving, and relational scores would be negatively associated with post-treatment depression symptoms, was not supported. The impact of the control variables, including pretreatment K-SADS depression (γ = -.003, SE = .130), t(28) = -.020, p = .985, on post-treatment K-SADS depression outcome was not

statistically significant. In addition, the predicted post-treatment K-SADS depression score for participants having the average score on the independent variances (γ_{00}) was 24.43. Finally, the within group, or within participant, variance (σ^2) was 32.82, while the variance of the group means (τ_{00}), was 14.32. After taking into account the intervention variables, between-group variance in post-treatment K-SADS depression remained, as the p-value for this conditional variance was .010. These results are presented in Table 9.

Table 9

Model 1: Impact of Intervention Variables on Post-Treatment K-SADS *Depression Scores*

Fixed Effect	Coefficient	*SE*	*t*-ratio	*df*	*p*-value
Intercept γ_{00}	24.43	1.515	16.128	10	.000
Cognitive Intervention γ_{10}	.666	.740	.900	28	.376
Behavioral Intervention γ_{20}	-.200	.645	-.310	28	.759
Problem Solving Interventions γ_{30}	2.515	1.795	1.401	28	.172
Relational Interventions γ_{40}	-.560	.399	1.401	28	.171
Pretreatment KSADS γ_{50}	-0.003	.130	-.020	28	.985

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	14.325	23.365	10	.010
Within Class r_{ij}	32.820			

Unconditional Model 2. The unconditional model for Level 1, without explanatory variables, is as follows:

$Y_{ij} = \beta_{oj} + r_{ij}$

Where Y_{ij} represents the post-treatment cognitive triad score for individual *i* in group *j*, β_{oj} represents the post-treatment cognitive triad mean for a given group *j*, and r_{ij} is the difference between an individual's post-treatment cognitive triad score and the mean score for individual *i*'s group *j*.

The unconditional model for Level 2 is as follows:

$\beta_{oj} = \gamma_{00} + u_{0j}$,

where β_{oj} represents the post-treatment cognitive triad mean for group *j*, γ_{00} represents the average of the group post-treatment cognitive triad scores, and u_{0j}, the Level 2 equation residual, represents the difference between a group's post-treatment cognitive triad mean (β_{oj}) and the average of these group post-treatment cognitive triad means (γ_{00}). This model is without explanatory variables and is included to assess the average of the outcome variable (i.e. CTI-C score), as well as provide a rationale for the use of HLM.

The pooled within-group variance (σ^2) is 113.42. Group means also vary, as the variance of the means (τ_{00}) is 30.13. This variance is statistically significant as the p-value associated with the chi-square test is .053. This model is without explanatory variables and is included to assess the average of the outcome variable (i.e. K-SADS depression score), as well as provide a rationale for the use of HLM. Finally, the average post-treatment depression score is 57.49 (γ_{00}). These results are presented in Table 10. The unconditional intraclass coefficient, ρ, or the proportion of the total outcome

variance that is explained by Level 2 units, is .21. Thus, approximately 21% of the variance of the posttest cognitive triad scores is between groups, with the remainder found within groups (e.g. within participants). Thus, this nesting implies that a violation of the linear model assumption of independence of observation. Specifically, this finding indicates that the group to which the participant is assigned is salient. Disregarding this dependency in the data would result in inflated test statistics when observations are positively correlated, thus leading to erroneous conclusions about the relationship between the variables. Summary measures calculated via the fully unconditional model provide further evidence for the use of multilevel modeling with the data presented.

Table 10

Fully Unconditional Model: Post-treatment Cognitive Triad Scores

Fixed Effect	Coefficient	*se*	*t*-ratio	*df*	*p*-value
Overall Post-treatment Cognitive Triad Score Average γ_{00}	57.48	2.48	23.184	10	.000
Random Effect	**Variance**		χ^2		
Between Group u_{0j}	30.13		18.08	10	.053
Within Group r_{ij}	113.42				

Hypothesis 2. It is hypothesized that, after controlling for pre-treatment levels of cognitive triad, participant cognitive, behavioral, problem-solving, and relational scores will be positively associated with post-treatment cognitive triad scores. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \beta_{3j}X_{3ij} + \beta_{4j}X_{4ij} + \beta_{5j}X_{5ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment cognitive triad score for individual i in group j, β_{oj} represents the post-treatment cognitive triad mean for a given group j, $\beta_{1\text{-}4j}$, assuming use of within-group centering, represent decreases in post-treatment cognitive triad scores with 1 unit change in intervention variables in a given group, $X_{1\text{-}4ij}$ represent the intervention variables (with intervention 1 = cognitive interventions; 2 = behavioral interventions; 3 = problem-solving interventions; 4 = relational interventions), β_{5j} represents increases in post-treatment cognitive triad scores with 1 unit change in pre-treatment cognitive triad scores, X_{5ij} represents pre-cognitive triad scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or the group level, is as follows:

$$\beta_{oj} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

where β_{oj} represents the post-treatment cognitive triad score mean for group j, γ_{00}

represents the average post-treatment cognitive triad mean (i.e. the grand mean), and u_{0j}, the Level 2 equation residual, represents the difference between a given group's post-treatment mean (β_{oj}) and the average of the groups post-treatment means (γ_{00}). $\beta_{1\text{-}4j}$ represent the increases in average post-treatment cognitive triad scores with 1 unit change in intervention variables for group *j*, and $\gamma_{1\text{-}40}$ represent the average impact of the coefficients $\beta_{1\text{-}4j}$ across groups. β_{5j} represents decreases in post-treatment cognitive triad scores with 1 unit change in pre-treatment cognitive triad scores, and γ_{50} represents the average impact of the coefficient β_{5j} across groups. The models for hypothesis 2 are used to test the association between the intervention variables and the mediator (path *a* on p 105). The preceding is a conditional model with five explanatory variables at Level 1, or the participant level; as no variables of interest exist at Level 2, or the group level, this equation stays the same. The residuals for the additional Level 2 equations are fixed.

The impact of the intervention variables, including cognitive (γ = .032, SE = 1.445), t(28) = .022, p = .983, behavioral (γ = .643, SE = 1.615), t(28) = .398, p = .693, problem-solving (γ = .714, SE = 3.904), t(28) = .183, p = .857, and relational (γ = -.295, SE = .840), t(28) = -.351, p = .728, interventions on post-treatment cognitive triad score was not statistically significant. Otherwise stated, hypothesis 2, that participant cognitive, behavioral, problem-solving, and relational scores would be positively associated with post-treatment cognitive triad scores, was not supported. The impact of the control variable pretreatment CTI-C scores (γ = .093, SE = .246), t(28) = .377, p = .709, on post-treatment depression outcome was not statistically significant. In addition, the predicted post-treatment cognitive triad score for participants having the average score on the

independent variables (γ_{00}) was 57.511. Finally, the within group variance (σ^2) was 137.224, while the variance of the group means (τ_{00}), was 23.432. After taking into account the intervention variables, significant between-group variance in post-treatment cognitive triad scores did not remain, as the p-value for this conditional variance was .134. These results are presented in Table 11.

Table 11

Model 2: Impact of Intervention Variables on Post-Treatment Cognitive Triad Scores

Fixed Effect	Coefficient	*SE*	*t*-ratio	*df*	*p*-value
Intercept γ_{00}	57.511	2.497	23.035	10	.000
Cognitive Intervention γ_{10}	.032	1.448	.022	28	.983
Behavioral Intervention γ_{20}	.643	1.615	.398	28	.693
Problem Solving Interventions γ_{30}	.714	3.904	.183	28	.857
Relational Interventions γ_{40}	-.295	.840	-.351	28	.728
Pretreatment CTI-C γ_{50}	0.093	.246	.377	28	.709

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	23.432	14.944	10	.134
Within Class r_{ij}	137.224			

Hypothesis 3. It is hypothesized that, after controlling for pre-treatment levels of K-SADS depression scores, higher levels of participant negative cognitive triad scores will be negatively associated with post-treatment K-SADS depression, when intervention variables are considered. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \beta_{3j}X_{3ij} + \beta_{4j}X_{4ij} + \beta_{5j}X_{5ij} + \beta_{6j}X_{6ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment K-SADS depression score for individual *i* in group *j*, β_{oj} represents the post-treatment K-SADS depression mean for a given group *j*, β_{1j}, assuming use of within-group centering, represents decreases in post-treatment K-SADS depression scores with 1 unit change in post-treatment cognitive triad scores in a given group, X_{1ij} represents the post-treatment cognitive triad score, $\beta_{2\text{-}5j}$, assuming use of within-group centering, represent decreases in post-treatment K-SADS depression scores with 1 unit change in intervention variables in a given group, $X_{2\text{-}5ij}$ represent the intervention variables (with intervention 2 = cognitive interventions; 3 = behavioral interventions; 4 = problem-solving interventions; 5 = relational interventions), β_{6j} represents increases in post-treatment K-SADS depression scores with 1 unit change in pretreatment K-SADS depression scores, X_{6ij} represents pretreatment K-SADS depression scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or the group level, is as follows:

$\beta_{oj} = \gamma_{00} + u_{0j}$

$\beta_{1j} = \gamma_{10}$

$\beta_{2j} = \gamma_{20}$

$\beta_{3j} = \gamma_{30}$

$\beta_{4j} = \gamma_{40}$

$\beta_{5j} = \gamma_{50}$

$\beta_{6j} = \gamma_{60}$

where β_{oj} represents the post-treatment K-SADS depression score mean for group *j*, γ_{00} represents the average post-treatment K-SADS depression mean (i.e. the grand mean), and u_{0j}, the Level 2 equation residual, represents the difference between a given group's post-treatment mean (β_{oj}) and the average of the groups post-treatment means (γ_{00}). β_{1j} represents the decreases in average post-treatment K-SADS depression scores with 1 unit change in post-treatment cognitive triad variables for group *j*, and γ_{10} represents the average impact of the coefficient β_{1j} across groups. $\beta_{2\text{-}5j}$ represent the decreases in average post-treatment K-SADS depression scores with 1 unit change in intervention variables for group *j*, and $\gamma_{2\text{-}50}$ represent the average impact of the coefficients $\beta_{2\text{-}5}$ across groups. β_{6j} represents increases in post-treatment K-SADS depression scores with 1 unit change in pretreatment K-SADS depression scores, and γ_{60} represents the average impact of the coefficient β_{6j} across groups. The models presented for hypothesis 3 are used to estimate path *b* for the figure on page 105. The preceding is a conditional model with six explanatory variables at Level 1, or the participant level; as no variables of interest exist at Level 2, or the group level, this equation stays the same. The residuals for the additional Level 2 equations are fixed.

The impact of the post-treatment cognitive triad scores (γ = -.228, SE = .106), t(27) = -2.149, p = .041, on post-treatment K-SADS depression outcome was statistically significant. Thus, higher scores on CTI-C were related to lower levels of depression post-

treatment. The impact of the cognitive (γ = .552, SE = .677), t(27) = .814, p = .3412, behavioral (γ = .053, SE = .600), t(27) = .099, p = .931, and problem-solving (γ = 2.550, SE = 1.638), t(27) = 1.557, p = .131, interventions on post-treatment K-SADS depression outcome was not statistically significant. The impact of relational (γ = -.629, SE = .366), t(27) = -1.772, p = .087, interventions on post-treatment K-SADS depression outcomes was statistically significant. Thus, higher levels of relational interventions were related to lower levels of depression post-treatment. The impact of the control variable pretreatment K-SADS depression (γ = -.061, SE = .122), t(27) = -.504, p = .618 on post-treatment K-SADS depression outcome was not statistically significant. Otherwise stated, hypothesis 3, that participant negative cognitive triad scores would be negatively associated with post-treatment K-SADS depression, when all intervention variables were included, was partially supported. In addition, the predicted post-treatment K-SADS depression score for participants having the average score on the cognitive triad (γ_{00}), with all other predictors held at their average, was 24.453. Finally, the within group variance (σ^2) was 27.322, while the variance of the group means (τ_{00}), was 16.172. After taking into account the intervention variables, significant between-group variance in post-treatment cognitive triad scores remained, as the p-value for this conditional variance was .002. These results are presented in Table 12. Figure 2 presents a visual model the findings from the main analyses.

Additional tests of mediation, namely the test of joint significance, were not conducted due to lack of statistical significance found in path *a* (MacKinnon et al., 2002).

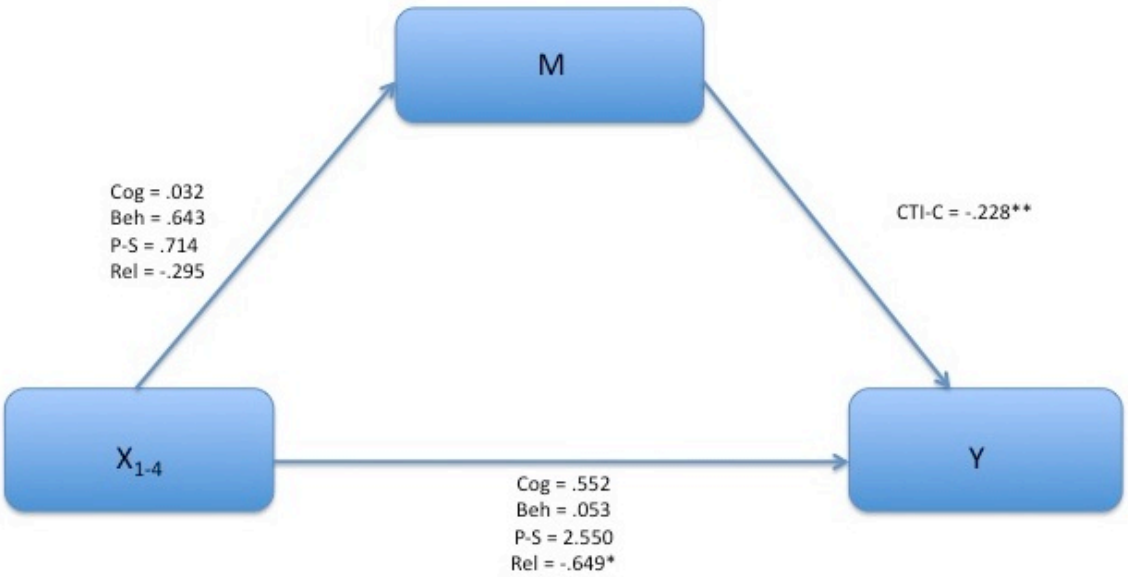
Table 12

Model 3: Impact of Cognitive Triad on Post-Treatment K-SADS Depression Scores

Fixed Effect	Coefficient	*SE*	*t*-ratio	*Df*	*p*-value
Intercept γ_{00}	24.453	1.517	16.123	10	.000
Post-treatment CTI-C γ_{10}	-.228	.106	-2.0149	27	.041
Cognitive Intervention γ_{20}	.552	.677	.814	27	.432
Behavioral Intervention γ_{30}	.053	.600	.088	27	.931
Problem Solving Interventions γ_{40}	2.550	1.638	1.557	27	.131
Relational Interventions γ_{50}	-.649	.366	-1.772	27	.087
Pretreatment KSADs γ_{60}	-.061	.123	-.504	27	.618

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	16.172	28.073	10	.002
Within Class r_{ij}	27.322			

Figure 2. Beta Coefficients for Models in Main Analyses



Note. X_{1-4} represents the intervention variables (i.e., cognitive, behavioral problem-solving, and relational interventions), M represents the mediator (i.e. post CTI-C scores), and Y represents the outcome variable (i.e. post-treatment K-SADs depression scores). * Indicates $p < .10$. ** Indicates $p < .05$.

To summarize, results from the main analyses, for the most part, did not support the proposed hypotheses. Specifically, hypothesis 1 and 2, that participant cognitive, behavioral, problem-solving, and relational scores would be negatively associated with post-treatment depression symptoms and positively associated with post-treatment cognitive triad scores, respectively, were not supported. Hypothesis 3, that participant cognitive triad scores would be negatively associated with post-treatment K-SADS depression, when all intervention variables were included, was partially supported.

Participant cognitive triad scores and relational interventions were significantly associated with post-treatment K-SADS depression scores in the directions predicted, while participant cognitive, behavioral, and problem-solving interventions were not significantly associated with post-treatment K-SADS depression scores.

Secondary Analyses

Rationale. Due to the limited empirical information gleaned from the main analyses, as well as the indication of the potential misspecification of the Level 1 model, secondary analyses were conducted in order to more thoroughly explore the relationship of these variables in the context of CBT for depressed youth.

Several indications, including violations of the homogeneity of variance assumption and large changes to estimated beta coefficients with the inclusion or removal of certain predictor variables, suggested a possible misspecification of the models presented in the main analyses. Foremost amongst these was consideration of the target of the intervention coding scores. A review of the measures suggested that the coding instruments better assessed the degree of therapeutic intervention delivered by the therapist, or the group leader, rather than the amount of intervention obtained, understood, or applied by the participant. Moreover, while coding procedures attempted to account for differences between the participant directly receiving the intervention and participants who simply witnessed the interaction (i.e., by providing higher scores to those engaging directly with the therapist or those presenting for discussion a thought, behavior, or problem directly drawn from her current experience), scores on the intervention variables were often similar for girls within the same group. As such, the

intervention variables were reassigned to the group level, or to Level 2. This was accomplished by aggregating participant level scores to create group mean scores for each intervention variable.

Additional concerns regarding the presence of multi-collinearity prompted further inspection into the similarities of items on the various coding manuals. Considerable overlap between items on coding measures were noted; specifically, these included a correspondence between items on the behavioral and problem-solving intervention scales and the cognitive and relational intervention coding scales. This was additionally supported by the significant correlations between these intervention scale combinations. These overlaps are further explored presently.

With regards to the behavioral and problem-solving intervention scales, problem-solving items were deemed similar to behavioral items as they both were attempting to modify maladaptive behavioral patterns. Specifically, both measures assessed the degree of intervention received by participants in the identification of the problematic situations (items 1 and 2 on both measures), the exploration of alternative and more adaptive behaviors (items 3 and 4 on both measures), and the rehearsal and follow-through of more positive behaviors (items 5, 6, 8, 9, and 10 on the behavioral measure, and items 5 and 6 on the problem-solving measure). Both measures, furthermore, underscored the benefits of positive reinforcement (items 7 and 12 on the behavioral and problem-solving measures, respectively). Finally, behavioral and problem-solving interventions are often consolidated in the context of instructions in CBT (J.S. Beck, 1995).

The support for the consolidation of the cognitive and relational intervention scales,

alternatively, was garnered from theory concerning the role of the therapeutic relationship in cognitive therapy (Beck et al., 1979). Specifically, this included the role of the relational interventions as facilitating engagement in cognitive techniques (i.e., sharing thoughts with therapist or other group participants, more genuinely engaging in restructuring attempts with therapist and group members with whom trust has been established, etc…), as well as an initial context for providing evidence against the participants' negative thoughts about themselves (as evidenced by expressions of support and praise from the therapist or other group members, for instance). As such, the scores were combined to create a weighted Behavior-Problem-Solving Intervention score and a Cognitive-Relational Intervention score, again aggregated and assessed at the group level. Scale intercorrelations for measures used in the main analyses are presented in Table 13.

Table 13

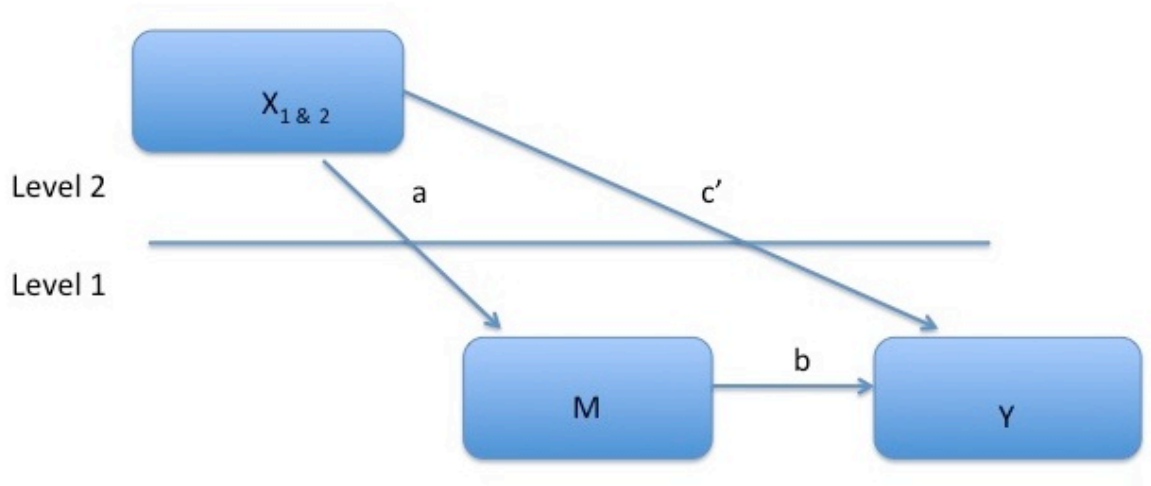
Pearson Product Correlations Among main Analysis Variables (N =34)

Variable	1	2	3	4	5	6
T1 Depression Score	1.00					
T2 Depression Score	-.09	1.00				
Cognitive-Relational Interventions	-.11	.15	1.00			
Behavior-Problem-Solving Interventions	.05	-.29	.95**	1.00		
T1 CTI-C Score	-.18	-.00	.104	.04	1.00	
T2 CTI-C Score	-.19	-.81**	.15	.14	.17	.40* .

**Represents significance at the .05 level*
***Represents significance at the .01 level*

To summarize, several notable differences between the main and secondary analyses exist. With regards to the exploratory models, while the mediator and outcome variables, as assessed by the CTI-C (Kaslow et al., 1992) and the KSADS (Ambrosini & Dixon, 2000), respectively, remain at the participant level, the independent intervention variables are now assessed at Level 2, that of the group. The composite Cognitive-Relational Intervention scale was assessed by the modified Cognitive Interventions and Empathy Intervention subscales of the CCS-BN-TS (Spangler, 1998), as well as the Harvard Community Health Plan Group Cohesiveness Scale-Second Version (HCHP-GCS-II; Soldz et al., 1987), while the Behavioral-Problem-Solving Intervention scale was assessed using the modified Behavioral Interventions subscale of the CCS-BN-TS (Spangler, 1998) and the created Problem-Solving Intervention Scale. The model is again a conditional model, as explanatory or predictor variables, namely the combined, mean aggregated intervention methods, are included, though now at the group level (Level 2). The Level 1 independent variables, or the control variables, as well as the Level 2 variables are grand-mean centered. The mediation analyses are now better termed a 2/1/1 mediation, with the independent treatment variables at Level 2, and the mediator and the depressive outcome scores at Level 1 (Zhang, Zyphur, & Preacher, 2009). Figure 3 presents a model of this 2/1/1 mediation model. Finally, an alpha of .10 will again be utilized due to the small sample size.

Figure 3. HLM-Based Multilevel Mediation Model: 2/1/1



Note. $X_{1\ \&\ 2}$ represents the intervention variables (i.e., Cognitive-Relational and Behavioral-Problem-solving variables), M represents the mediator (i.e. post CTI-C scores), and Y represents the outcome variable (i.e. post K-SADs depression scores). The variables above the line are at Level 2, or the group level; the variables below the line are at Level 1, or the participant level.

Hypothesis 1. It is hypothesized that, after controlling for pre-treatment levels of depression, group cognitive-relational and behavioral-problem-solving scores will be negatively associated with post-treatment depression symptoms. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment K-SADS depression score for individual i in group j, β_{oj} represents the post-treatment K-SADS depression adjusted mean for a given group j, β_{1j}, assuming use of grand-mean centering, represents increases in post-treatment K-SADS depression scores with 1 unit change in pre-treatment K-SADS depression scores (or the Level 1 covariate effect), X_{1ij} represents pre-depression scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or the group level, is as follows:

$$\beta_{oj} = \gamma_{00} + \gamma_{01}W_{1j} + \gamma_{02}W_{2j} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

where β_{oj} represents the post-treatment K-SADS depression score adjusted mean for group j, γ_{00} represents the average post-treatment K-SADS depression mean for groups (i.e. the grand mean) with the average intervention variable scores, γ_{01}, assuming use of grand-mean centering, represents decreases in post-treatment K-SADS depression scores with 1 unit change in cognitive-relational interventions, W_{1j} represents the explanatory variable cognitive-relational interventions, γ_{02} , assuming use of grand-mean centering, represents decreases in post-treatment K-SADS depression scores with 1 unit change in behavioral-problem-solving interventions, W_{2j} represents the explanatory variable behavioral-problem-solving interventions, and u_{0j} represents the Level 2 equation residual. β_{1j} represents the fixed Level 1 covariate effect, γ_{10} represents the average slope of pre-treatment depression to post-treatment K-SADS depression. The preceding is a conditional model with one explanatory variable at Level 1, or the participant level, and two explanatory variables at Level 2, or the group level. The residual for the additional

Level 2 equation is fixed.

The impact of the intervention variables, including mean cognitive-relational (γ = .346, SE = .173), t(8) = 1.995, p = .081, and mean behavioral-problem-solving (γ = -.519, SE = .236), t(8) = -2.195, p = .059, interventions on post-treatment K-SADS depression outcome were statistically significant. Thus, higher scores on the aggregated cognitive-relational intervention scale were related to higher levels of depression post-treatment; additionally, higher scores on the aggregated behavioral-problem-solving interventions scale were related to lower levels of depression post-treatment. In other words, mean cognitive-relational and behavioral-problem-solving interventions are related to group mean post-treatment K-SADS depression scores. Secondary hypothesis 1, that group cognitive-relational and behavioral-problem-solving scores would be negatively associated with post-treatment depression symptoms, was partially supported. In addition, the predicted post-treatment depression score for participants having the average score on the independent variances (γ_{00}) is 24.32. Finally, the within group variance (σ^2) is now 32.78, while the variance of the group means (τ_{00}), is now 6.73. After taking into account the intervention variables, between-group variance in post-treatment K-SADS depression does not remain, as the p-value for this conditional variance is .118. These results are presented in Table 13.

Table 14

Secondary Analysis - Model 1: Impact of Intervention Variables on Post-Treatment K-SADS Depression Scores

Fixed Effect	Coefficient	*SE*	*t*-ratio	*Df*	*p*-value
For Intercept 1, β_o					
Intercept γ_{00}	24.317	1.271	19.132	8	.000
Cognitive-Relational Interventions γ_{01}	.346	.173	1.995	8	.081
Behavioral-Problem-Solving Interventions γ_{02}	-.519	.237	-2.195	8	.059
For Pre-treatment K-SADS					
Intercept γ_{10}	-0.083	.099	-.841	30	.407

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	6.733	12.813	8	.118
Within Class r_{ij}	32.785			

Hypothesis 2. It is hypothesized that, after controlling for pre-treatment levels of cognitive triad, group cognitive-relational and behavioral-problem-solving scores will be positively associated with post-treatment cognitive triad scores. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment cognitive triad score for individual i in group j, β_{oj} represents the post-treatment cognitive triad adjusted mean for a given group j, β_{1j}, assuming use of grand-mean centering, represents increases in post-treatment cognitive triad scores with 1 unit change in pre-treatment cognitive triad scores, X_{1ij} represents pre-cognitive triad scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or the group level, is as follows:

$$\beta_{oj} = \gamma_{00} + \gamma_{01}W_{1j} + \gamma_{02}W_{2j} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

where β_{oj} represents the post-treatment cognitive triad score adjusted mean for group j, γ_{00} represents the average post-treatment cognitive triad mean (i.e. the grand mean) with the average intervention variable scores, γ_{01}, assuming use of grand-mean centering, represents decreases in post-treatment cognitive triad scores with 1 unit change in cognitive-relational interventions, W_{1j} represents the explanatory variable cognitive-relational interventions, γ_{02}, assuming use of grand-mean centering, represents decreases in post-treatment cognitive triad scores with 1 unit change in behavioral-problem-solving interventions, W_{2j} represents the explanatory variable behavioral-problem-solving interventions, and u_{0j} represents the Level 2 equation residual. β_{1j} represents the fixed

Level 1 covariate effect, γ_{10} represents the average slope of pre-treatment cognitive triad to post-treatment cognitive triad. The preceding is a conditional model with one explanatory variable at Level 1, or the participant level, and two explanatory variables at Level 2, or the group level. The residual for the additional Level 2 equation is fixed.

The impact of the intervention variables, including cognitive-relational (γ = -.022, SE = .303), t(8) = -.072, p = .945, and behavioral-problem-solving (γ = .309, SE = .413), t(8) = .748, p = .476 interventions on post-treatment cognitive triad score was not statistically significant. Otherwise stated, secondary hypothesis 2, that group cognitive-relational and behavioral-problem-solving scores would be positively associated with post-treatment cognitive triad scores, was not supported. In addition, the predicted post-treatment cognitive triad score for participants having the average score on the independent variances (γ_{00}) is 57.791. Finally, the within group variance (σ^2) is now 118.726, while the variance of the group means (τ_{00}), is now 15.206. After taking into account the intervention variables, significant between-group variance in post-treatment cognitive triad scores does not remain, as the p-value for this conditional variance is .215. These results are presented in Table 14.

Table 15

Secondary Analysis - Model 2: Impact of Intervention Variables on Post-Treatment Cognitive Triad

Fixed Effect	Coefficient	*SE*	*t*-ratio	*Df*	*p*-value
For Intercept 1, β_o					
Intercept γ_{00}	57.791	2.238	25.824	8	.000
Cognitive-Relational Interventions γ_{01}	-.022	.303	-.072	8	.945
Behavioral-Problem-Solving Interventions γ_{02}	.309	.413	.748	8	.476
For Pre-treatment CTI-C					
Intercept γ_{10}	0.274	.153	1.790	30	.083

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	15.206	10.767	8	.215
Within Class r_{ij}	118.726			

Hypothesis 3. It is hypothesized that, after controlling for pre-treatment levels of depression, higher levels of participant negative cognitive triad scores will be negatively associated with post-treatment depression, when intervention variables are considered. The model for Level 1, or the participant level, is as follows:

$$Y_{ij} = \beta_{oj} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + r_{ij}.$$

where Y_{ij} represents the post-treatment K-SADS depression score for individual i in group j, β_{oj} represents the post-treatment K-SADS depression adjusted mean for a given group j, β_{1j}, assuming use of grand-mean centering, represents decreases in post-treatment K-SADS depression scores with 1 unit change in post-treatment cognitive triad scores in a given group, X_{1ij} represents the post-treatment cognitive triad score, β_2 represents increases in post-treatment K-SADS depression scores with 1 unit change in pretreatment K-SADS depression scores, X_{2ij} represents pretreatment K-SADS depression scores, and r_{ij} represents the Level 1 equation residual.

The model for Level 2, or the group level, is as follows:

$$\beta_{oj} = \gamma_{00} + \gamma_{01}W_{1j} + \gamma_{02}W_{2j} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

where β_{oj} represents the post-treatment K-SADS depression score adjusted mean for group j, γ_{00} represents the average post-treatment K-SADS depression mean (i.e. the grand mean) with the average intervention variable scores, γ_{01}, assuming use of grand-mean centering, represents increases in post-treatment K-SADS depression scores with 1 unit change in cognitive-relational interventions, W_{1j} represents the explanatory variable

cognitive-relational interventions, γ_{02} , assuming use of grand-mean centering, represents increases in post-treatment K-SADS depression scores with 1 unit change in behavioral-problem-solving interventions, W_{2j} represents the explanatory variable behavioral-problem-solving interventions, and u_{0j} represents the Level 2 equation residual. β_{1j} represents the decreases in average post-treatment K-SADS depression scores with 1 unit change in post-treatment cognitive triad variables for group *j*, and γ_{10} represents the average post-treatment cognitive triad score. β_{2j} represents the fixed Level 1 covariate effect, γ_{20} represents the average slope of pretreatment K-SADS depression scores to post-treatment depression scores. The preceding is a conditional model with two explanatory variables at Level 1, or the participant level, and two explanatory variables at Level 2, or the group level. The residuals for the additional Level 2 equations are fixed.

Per Zhang, Zypher, and Preacher (2009), the Level 1 mediator was grand mean centered and the aggregated group mediator was added to the Level 2 model in order to reduce potential confounding mediation-effect estimates. When this Level 2 mediator, aggregated at the group level, was added to the equation, however, no change was noted in the overall results. As such, the model remained as noted above.

The impact of the post-treatment cognitive triad scores (γ = -.268, SE = .812), t(29) = -3.298, p = .003, on post-treatment K-SADS depression outcome was statistically significant. Thus, higher scores on post-treatment cognitive triad scores, were related to lower levels of depression post-treatment. The impact of the cognitive-relational (γ = .362, SE = .124), t(8) = 2.922, p = .020, and behavioral-problem-solving (γ = -.454, SE = .171), t(8) = -2.657, p = .029, interventions on post-treatment K-SADS depression

outcome were statistically significant. Thus, higher scores on the aggregated cognitive-relational intervention scale were related to higher levels of depression post-treatment; additionally, higher scores on the aggregated behavioral-problem-solving interventions scale were related to lower levels of depression post-treatment. Otherwise stated, secondary hypothesis 3, that higher levels of participant negative cognitive triad scores would be negatively associated with post-treatment depression, when intervention variables are considered, was supported. In addition, the predicted post-treatment K-SADS depression score for participants having the average score on the cognitive triad (γ_{00}) is 24.330. Finally, the within group variance (σ^2) is now 0.078, while the variance of the group means (τ_{00}), is now 28.309. After taking into account the intervention variables, significant between-group variance in post-treatment cognitive triad scores did not remain, as the p-value for this conditional variance is > .500. These results are presented in Table 15. Figure 4 presents a visual model of the findings from the secondary analyses.

Additional tests of mediation, namely the test of joint significance, again, could not be conducted due to lack of statistical significance found in path *a* (MacKinnon et al., 2002).

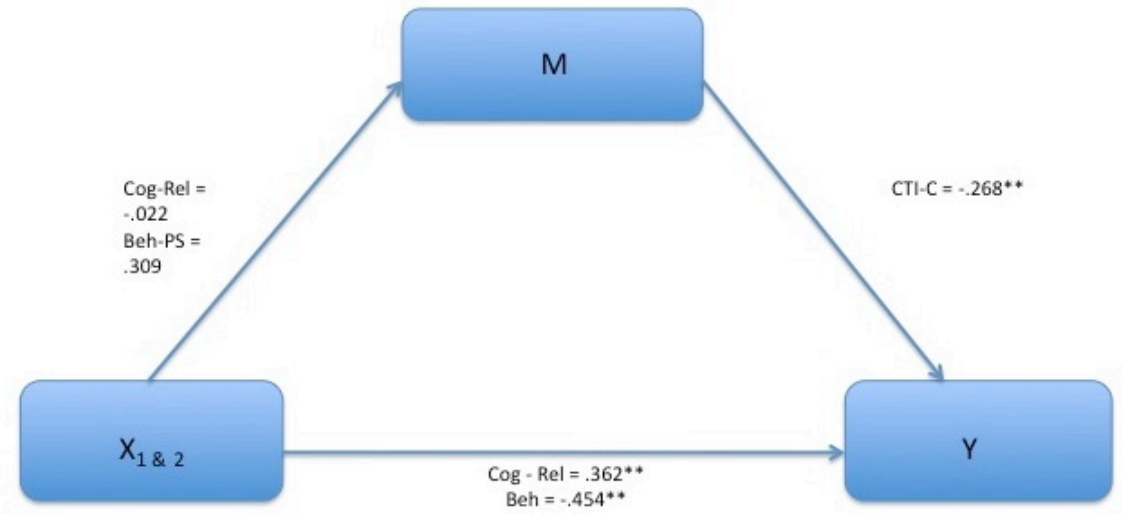
Table 16

Secondary Analysis - Model 3: Impact of Cognitive Triad on Post-Treatment K-SADS Depression Scores

Fixed Effect	Coefficient	*SE*	*t*-ratio	*Df*	*p*-value
For Intercept 1, β_o					
Intercept γ_{00}	24.330	.932	26.092	8	.000
Cognitive-Relational Interventions γ_{01}	.362	.124	2.922	8	.020
Behavioral-Problem-Solving Interventions γ_{02}	-.454	.171	-2.657	8	.029
For Pre-treatment K-SADS					
Intercept γ_{10}	-0.155	.086	-1.798	29	.082
For Post-treatment CTI-C					
Intercept γ_{10}	-0.268	.081	-3.298	29	.003

Random Effect	Variance	χ^2		*p*-value
Between Class u_{0j}	.078	7.066	8	>.500
Within Class r_{ij}	28.309			

Figure 4. Beta Coefficients for Models in Secondary Analyses



Note. $X_{1\ \&\ 2}$ represents the intervention variables (i.e., cognitive-relational and behavioral-problem-solving interventions), M represents the mediator (i.e. post CTI-C scores), and Y represents the outcome variable (i.e. post K-SADs depression scores). * Indicates $p < .10$. ** Indicates $p < .05$.

To summarize, several indications suggested to a possible misspecification of the models presented in the main analyses. As such, secondary analyses, with intervention variables modified to include composite cognitive-relational scores and behavioral-problem solving scores assessed at the group level, were run. Secondary hypothesis 1, that group cognitive-relational and behavioral-problem-solving scores would be negatively associated with post-treatment depression symptoms, was partially supported. Secondary hypothesis 2, that group cognitive-relational and behavioral-problem-solving scores would be positively associated with post-treatment cognitive triad scores, was not supported. Secondary hypothesis 3, that participant cognitive triad scores would be

negatively associated with post-treatment depression, when intervention variables are considered, was, for the most part, supported. Specifically, all variables were significantly associated with post-treatment depression outcome; the relationship of cognitive-relational interventions with outcome depression, however, was in a direction opposite of what was predicted by the secondary hypothesis. In other words, while higher scores on the aggregated behavioral-problem-solving interventions scale were related to lower levels of depression post-treatment, higher scores on the aggregated cognitive-relational intervention scale were related to higher levels of depression post-treatment.

CHAPTER FIVE

Discussion

Depression is a significant mental health concern in youth (Lewinsohn & Clarke, 1999). Due to the abundance of comordibities and negative sequelae associated with childhood depression, effective treatment is essential (Agnold & Rutter, 1992; Puig-Antich et al., 1993; Rhode et al., 1991). The development and maintenance of depression has been attributed to the child's possessions of negative beliefs about the self, world, and future (Beck, 1967). Several studies provide have provided support for this cognitive vulnerability to depression (Hammen & Zupan, 1984; Jaenicke et al., 1987); thus, therapy is charged with the alteration of this cognitive triad, with the goal of reducing the related depressive symptoms (Beck et al., 1979).

CBT, a treatment comprised of cognitive, behavioral, problem-solving, and relational components, is an empirically supported intervention for the treatment of youth depression (David-Ferdon & Kaslow, 2008; Weersing & Weisz, 2002). While the efficacy of CBT has been demonstrated, less is known about the treatment-specific effects responsible for positive clinical outcomes. Investigating whether cognitive, behavioral, problem-solving, and relational interventions incorporated in CBT for the treatment of youth depression addresses a current limitation in existing research and is thus needed.

A more complete understanding of the effectiveness of CBT would encompass a thorough understanding of the mechanisms through which the treatment's techniques exert their impact (Shirk & Karver, 2006). Specifically, an understanding of the role of

depressogenic cognitions in the treatment of depression using CBT techniques would be of value. Currently, a dearth of knowledge in these areas exists and additional research is warranted in order to clarify existing ambiguities. As such, the current study had the following two goals: 1) to examine the relationship between the various treatment components and post-treatment depression; and 2) to assess whether alterations in cognitions, namely those encompassed by the cognitive triad, mediate the relationship between treatment components and improvements in post-treatment depression.

Overview of Findings

By examining the impact of group-delivered interventions on both depressogenic thinking and depressive symptomatology, this study extends knowledge about effective treatment of depressed female youth. Findings from this study also present additional research questions that warrant further consideration. Prior to reviewing the findings from this study, it is important to note that a proportion of the variance in post-treatment depression and post-treatment cognitive triad scores was found to be between groups, thus supporting an analysis at the group level and the use of hierarchical linear modeling to assess the models proposed. In other words, the groups to which the participants belonged had some impact on treatment outcome; as such, the assessment of the impact of the inclusion of these groups, as permitted with the use of HLM, was indicated.

Several major findings were observed; they are organized here by theme for discussion. The first of these is the impact of treatment interventions, specifically the combined behavioral-problem-solving interventions and cognitive-relational interventions, assessed at the group level, on post-treatment depression. Group-

aggregated behavioral-problem-solving interventions were found to be negatively associated with post-treatment depression. In other words, increased exposure of the treatment group to behavioral and problem-solving interventions was related to decreased individual experience of depression at post-treatment. Group-aggregated cognitive-relational interventions, in contrast, were found to be positively associated with post-treatment depression, a direction discrepant from what was originally predicted. Thus, higher quality behavioral-problem-solving interventions were related to a reduction in depressive symptoms at post-treatment while higher quality of cognitive-relational interventions were related to higher levels of depressive symptoms at post-treatment.

Next, treatment interventions, namely group-aggregated behavioral-problem-solving and cognitive-relational, were not found to be related to depressogenic thinking. A significant and negative association between depressogenic thinking, the mediator, and post-treatment depression, however, was found. Otherwise stated, depressogenic cognitions, assessed at the participant level, were linked to post-treatment participant experiences of depression, with higher levels of depressive cognitions associated with higher levels of post-treatment depressive symptoms. In other words, participants' cognitions about themselves, their world, and future were linked to their experience of depression, with girls who possessed more positive thoughts in these realms experiencing less depressive symptoms. Nonetheless, due to the absence of a significant *a* path, or that of the relationship between the treatment interventions and the mediator (i.e. depressogenic thinking), mediation analyses were not conducted.

Findings from the current study contribute valuable information to the existing literature about treatment effectiveness for childhood depression. A more detailed review of findings from the current study, including their fit with the proposed hypotheses and integration of these findings with previous research, will be followed by an acknowledgement of the study's limitations, a description of theoretical, research, and clinical implications of the findings, and suggestions for future research.

Treatment interventions and depression outcome. The hypothesis that increased levels of participants' cognitive, behavioral, problem-solving, and relational treatment interventions would be associated with lowered depression scores at post-treatment was partially supported. The initially proposed relationship between treatment components and post-treatment depression was not significant. Modifications made to the model based on theoretical underpinnings of the treatment, namely, the combination of certain treatment components into combined scores, as well as considerations of the coding instruments, namely, the conversion of treatment components codings from the participant to an aggregated score assessed at the group level, resulted in altered, and noteworthy, findings. Specifically, due to several indications of misspecification of the model (namely that the coding instruments appeared to better assess the degree of therapeutic intervention delivered by the therapist rather than the amount of intervention obtained by the participant) and multi-collinearity (namely, that considerable overlap between items on certain coding measures was noted), prompted the changes from four intervention variables assessed at the participant level to two combined intervention variables assessed at the group variable. The preceding is believed to provide a more

theoretically and methodologically sound way of assessing the variables of interest. Specifically, treatment groups, rather than participants, who received increased levels of behavioral interventions, in which problem-solving interventions were now included, were related to lower post-treatment depression scores. However, treatment groups who received increased levels of combined cognitive and relational interventions, were related to higher post-treatment depression scores. In the context of these groups, then, it appears that higher quality behavioral and problem-solving interventions, as assessed by the particular coding scales employed in this study, had a beneficial influence on treatment outcomes, while an increase in the quality of cognitive and relational interventions did not, and were instead associated with poorer outcome.

The latter relationship, which was in direction dissimilar to what was originally hypothesized, can be understood in several ways. Firstly, the preceding can be elucidated by considering that therapists were instructed to direct higher levels of cognitive interventions toward participants with more severe and persistent depressive symptoms. Specifically, both cognitive and relational interventions, which supported the success of the former, occurred later in treatment. Cognitive interventions were introduced later in the course of treatment, following the foundation set by behavioral, including problem-solving, interventions. Relational interventions, furthermore, increased as time progressed, with relationships between therapist and participants and participant and other participants building and increasing their impact on quality of the cognitive interventions received by the group. These statements can be supported by a review of the current data, in which it was noted that higher scores, indicating greater quality of

cognitive and relational interventions, were found in later sessions in treatment. This can be further supported by the observation that higher quality behavioral and problem-solving interventions were noted earlier, rather than later, in treatment. Finally, based on a review of the monitoring-depression data, it was also observed that the greatest decreases in symptoms of depression occurred during the initial stage of therapy, which, again, coincided with the delivery of behavioral and problem-solving interventions. Thus, cognitive and relational interventions were employed to a greater degree in the second half of treatment, during which depressive symptoms, which had dropped during the first half of treatment, remained constant. Therefore, it seems that cognitive and relational interventions were seemingly more responsible for maintaining treatment gains following an initial drop in depressive symptoms. It appears that the coding system may have responded to this inaccurately by noting increases in the cognitive and relational treatment interventions, associating this with poorer treatment outcome. However, not addressed in this were the severity and persistence of depression throughout treatment, not the consideration of the maintenance of treatment gains. This latter aspect was seemingly ignored by the coding system in its current state.

Another attempt at deciphering initial findings leads to the consideration that the initial dose of behavioral, including problem-solving interventions, promotes the most lasting change with regards to their depression. Specifically, it is possible that, through behavioral activation and other such behavioral interventions, occurred throughout the instruction and application of behavioral and problem-solving interventions, that the child becomes primed for the more meaningful engagement in cognitive interventions. This

final piece, then, may support the longer-term change and continued maintenance of their symptom alleviation. It is additionally possible that the coding instrument was not best designed to detect the distinct interventions, as attempted by this study. Moreover, the potential synergistic impact that the treatment as a whole has on the individual may be not properly captured by the currently utilized coding measures.

These findings are somewhat convergent with previous findings. Specifically, with regards to behavioral and problem-solving interventions, empirical findings, though primarily conducted with adult samples and with interventions used in isolation, provide positive support for these interventions in the treatment of depression (Bell & D'Zurilla, 2009; Coffman et al., 2007; Cuijpers et al., 2007; Dimidjian and colleagues, 2006). In this regard, this study's findings are consistent with earlier studies, though here assessing a group, rather than individual, intervention and contributing the unique element of consideration of influence at the level of the group, both with regards to the delivery and assessment of the treatment.

Of note were mixed findings from those studies employing cognitive and relational interventions with adult and youth samples, providing a question as to the role of cognitive and relational interventions with depressed children (Hayes et al., 1996; Jaycox et al., 1994; Kaufman et al., 2005; Kivlighan and Tarrant, 2001). The findings from the current study failed to clarify existing ambiguities regarding the role of cognitive and relational interventions in the treatment of depressed youth. Additional research exploring those hypotheses proffered above, as well as research regarding the extended impact of cognitive, and related relational interventions on depression outcomes

at follow-up would be of value. This is especially advisable considering previous research findings regarding the role of cognitive interventions as protective factors in preventing recurrence of depressive symptoms following treatment (Dobson et al., 2008). Nonetheless, this study's findings provide a noteworthy contribution by exploring the impact of combinations of treatment components delivered at the group level on post-treatment depression in youth.

Treatment interventions and depressogenic thinking. The hypothesis that increased levels of participants' cognitive, behavioral, problem-solving, and relational treatment interventions would be associated with increased cognitive triad scores at post-treatment was not supported. Specifically, there was no significant relationship found between intervention variables, either individually assessed at the participant level or combined in behavioral-problem-solving interventions and cognitive-relational interventions aggregated at the group level, and participant depressogenic thinking. This could indicate the absence of a relationship between treatment intervention variables and participants' cognitive triad. However, insufficient power due to inadequate sample size *n*, the number of participants per group, and *j*, the number of groups, may have prevented the detection of significance in this model (Raudenbush & Bryk, 2002). Instrumentation concerns related to the assessment of the intervention variables could also be a factor of interest and should be further considered in future assessments of intervention variables.

Of primary significance, with regards to the integration with previous findings, is the dearth of research with regards to the relationship between treatment interventions and depressogenic cognitions (Shirk & Karver, 2006). Existing research, focused on the

impact of cognitive and relational interventions' on depressogenic thinking, has provided inconsistent results, with some studies plagued with small sample sizes and inadequate differentiation between treatment interventions (Butler et al., 1980; Fine et al., 1991). Research examining the relationship between behavioral and problem-solving interventions and depressogenic cognitions has provided more consistent support for this link, though studies remained few in quantity and were mainly conducted with exclusively adult samples (Gaynor & Harris, 2008; Jacobson et al., 1996; Warmerdam et al., 2010).

As noted above, this lack of positive findings could indicate the absence of a relationship; however, as other studies assessed other facets of depressogenic thinking, including dysfunctional attitudes (Warmerdam et al. 2010), automatic thoughts (Gaynor & Harris, 2008) and attributional style (Jacobson et al., 1996), this difference may have accounted for some differences in findings. Limitations of this study that have ostensibly impacted others include methodological and design concerns (i.e. small sample sizes and inadequate differentiation between treatment interventions). Future research should address these previous limitations, additionally exploring other aspects of depressogenic cognitions.

Depressogenic thinking and depression outcome. The hypothesis that higher levels of participants' negative cognitive triad scores, when intervention variables were taken into consideration, would be associated with lowered depression scores at post-treatment, was supported. Thus, participant depressogenic thinking was associated with post-treatment depression, when considering both the participant level and group-

aggregated intervention scores. Otherwise stated, higher participant cognitive triad scores (and, thus, reduced depressogenic thinking) were related to lowered participant post-treatment depression in the current study.

Previous evidence has supported the role for the specificity of the cognitive triad in depression (Kaslow et al., 1992; Stark et al., 1993), as well as the role of CBT as a general treatment in producing changes in depressogenic thinking (Garratt et al., 2007). The findings from the current study mirrored previously conducted studies assessing the relationship between depressogenic cognitions and depression, particularly in the context of treatment with CBT, providing additional support for this claim. This study, however, attempted to parse the impact of the CBT treatment into the various interventions in order to assess their specific impact on depressogenic cognitions, as discussed above, though was unsuccessful in this attempt. As such, mediation analyses, namely the test of joint significance, were not conducted due to lack of statistical significance found in path *a*, as assessed by Model 2 (MacKinnon et al., 2002). The current study was thus unable to provide support for the mediation hypothesis previously proposed. Additional research assessing the relationship between treatment components, depressogenic cognitions, and depression outcome is required to address this enduring and essential question (Shirk & Karver, 2006).

Limitations

Several limitations should be taken into account when considering the results of the current study. First, a significant limitation of this study was its small sample size. Specifically, the study utilized participants from the CBT-only condition of the larger

ACTION treatment study, of which only 40 participants, grouped in treatment teams of two to four individuals for a total of 14 groups, were appropriate for inclusion. This limitation potentially impacted the statistical power to detect statistical significance in the analyses conducted, if one existed in the sample.

With further regards to the analyses, the inclusion of a third level, that of the therapist, may have been advantageous. This is due to the differing skill levels of the therapists', both in their delivery of the particular interventions and in their ability to cope with elements likely to deter from the successful delivery of the treatment, including behavioral issues, for instance, in those groups encompassed of participants with comorbid ADHD. Research has demonstrated that the skill of the therapist delivering the intervention has a significant role in determining the success of the treatment (Anderson, Ogles, Patterson, Lambert, & Vermeersch, 2009). The inclusion of the therapists into the analyses may have provided an improved, and more theoretically sound analyses of the results.

A three level analyses, that of time points within participants within treatment groups, may have also proved beneficial. Specifically, the inclusion of this additional variable may have allowed the better assessment of an additional hypothesis of interest, namely that higher quality cognitive interventions promoted a more long-term change associated with depressive symptoms. As such, the exclusion of assessed follow-up depression data presents another limitation of the study. This decision was based upon concerns regarding sample size due to substantial attrition. Nonetheless, future studies

would be better served by including this potential third level, namely additional follow-up data as time points.

The current study was also limited by its lack of inclusion of a comparison group. A worthwhile comparison would be to contrast this treatment to one in which interventions were introduced at different times. For instance, a comparison of treatments in which cognitive interventions were included earlier in treatment to studies in which behavioral and problem-solving interventions were so would be advantageous. This would address the earlier proffered hypothesis concerning the order of inclusion of treatment interventions and their impact of this study's findings.

While a strength of the study is its inclusion of a sample of individuals less often studied in the context of depression, the results may be limited as they do not account for potential differences due to gender or developmental age. Nonetheless, given the prevalence of depression in preadolescent females and consequence of youth-onset depression, findings specifically applicable for this group of individuals may prove useful.

Concerns regarding the measurement of interventions represent several limitations of this study. Most notable of these limitations is the measurement of the quality of the delivery of the interventions received by the group as opposed to the level of skill in the intervention attained or applied by the participant. The identification and addition of measures of participant understanding and application of skills learned would provide an improved and more accurate way of assessing the quality of the CBT interventions (Hollon & Kriss, 1984). To somewhat address this limitation, the level at which the

assessments were measured were altered from that of the participant to that of the group. Nonetheless, though based on the theory underlying the treatment, the grouping of the intervention techniques, namely behavioral and problem-solving techniques, as well as cognitive and relational techniques, though ostensibly theoretically sound, has only some support in the literature and remains mostly unexplored to date.

An additional limitation related to measurement of the intervention variables relates to the coding of the interventions. This process proved particularly challenging for a number of reasons. Cognitive interventions, in particular, were more nuanced in their presentation and, as such, were increasingly challenging to rate, especially to those more novice in their training. In contrast, behavioral and problem-solving interventions were more evident in the therapy tapes and may have, thus, proved easier to code. The cognitive interventions manual, moreover, was rather lengthy and detailed, thus potentially challenging the rater even further. The inter-rater reliability for the cognitive interventions coding measure, as such, while deemed acceptable for the purposes of this study, was lower than the rest. Generally, it remains unclear whether the codings themselves were directly assessing the particular interventions, some combination of interventions, or, rather, a common underlying factor common to CBT treatment for depression. In other words, the degree to which overlap existed in the distinct coding intervention scales is uncertain. Taking this into account, it may be that this particular manner of coding may not be the most appropriate manner in which to assess the quality of the distinct intervention variables as intended by this study.

With regards to measurement, sessions were coded by rating the highest quality delivered instance of a given intervention. The number of times an intervention was delivered was overlooked, a considerable omission considering the developmental level of the ages of the participants and the probable need for frequent repetition of instruction. It is feasible that an intervention conducted at a lower level, though done so numerous times, may have been as or even more successful than one delivered with considerable skill. Lower level, though more frequently implemented interventions, however, were not measured due to the coding procedure chosen. Again, some assessment of the participants' response to the intervention would have helped clarify this question.

A further potential concern with the study may have been the partial coding of the overall treatment. Despite the high number of sessions coded (10 of the total 20 sessions), the sample of tapes coded may not have been representative of how the interventions were actually implemented in the treatment. As such, coding the entire set of sessions, though labor intensive, may have provided the additional information necessary to obtain a more accurate picture of the treatment delivered to the participants. On a similar vein, individual sessions were not coded and opportunities to capture the effectiveness of the use of interventions in this context were not taken. However, the number of sessions coded remains the largest of treatment sessions for a youth intervention conducted, to date, and represents a satisfactory initial attempt at gathering answers to the questions posed by the study.

Implications

Despite the aforementioned limitations, the results of the current study have important theoretical, research, and clinical implications.

Theoretical Implications. With regards to its theoretical implications, the current study provides support for the use of behavioral and problem-solving interventions for the treatment of youth depression. These interventions were both deemed as effective ingredients in this group-treatment for depressed preadolescent females, aligned with previous research based upon theory of the treatment (Bell & D'Zurilla, 2009; Coffman et al., 2007; Cuijpers et al., 2007; Dimidjian and colleagues, 2006). The current study, however, in contrast to that proposed by theory of CBT treatment (Beck, 1967; Beck et al., 1979), did not ostensibly support cognitive and relational interventions for the treatment of youth depression. It would be of interest to assess whether the impact of these particular interventions remained in the directions indicated over time or whether different patterns would be noted. Findings from the current study, additionally, did not indicate a relationship between these interventions and depressogenic cognitions, another finding inconsistent with the theory on which the current study was founded. While findings from the current study indicated a relationship between depressogenic cognitions and post-treatment depression, mediation analyses were unable to be undertaken due to a lack of significance in the *a* path, as noted above.

The study was an attempt to address some of the questions posed regarding the underlying theory behind CBT treatment for youth depression. While findings from this study both supported and failed to support the theory behind the treatment, it nonetheless provides useful information to an area of research that remains in its infancy. Future

research replicating these findings with youth populations is needed. Addressing some of the limitations noted above would improve the quality of future research on the theoretical aspects of the treatment that demand further exploration. Particularly, conducting a study with a larger sample size, assessment of participant understanding and generalization of interventions used, less complex and time-consuming coding instruments, an improved coding scale that allow for the more precise assessment of the intervention techniques, among others, would address some crucial limitations and thus provide a more unobstructed understanding of the theoretical aspects of interest with regards to the mechanisms of change in cognitive-behavioral treatment of depression youth.

Research Implications. The current study provides important information with regards to research methodology and directions for design of future research. First, the current study highlights the need for the inclusion of the treatment group as a level of analyses in the context of group-delivered therapy treatments. Results from the current study indicated variance at the group level, thus supporting the use of multilevel modeling in the analyses of the data. A further contribution was the current's study consideration of the grouping of treatment interventions and how various interventions in the context of CBT treatments are related to one another.

As noted previously, future research that includes another level of analysis, considering the impact of the therapist on the participants' post-treatment depression, might be of use. As was seen in this study, future studies should consider the use of alternate methods of assessing treatment interventions, namely participants'

understanding and application of the various cognitive, behavioral, and problem-solving skills, as well as their experience of the relational aspects of the intervention. Such studies should also consider the development and use of alternate intervention coding scales that, perhaps, more distinctively capture the diverse treatment components in the context of CBT treatment for childhood depression. Finally, future studies should go beyond the post-treatment data to examine follow-up data, specifically with the goal of exploring the role of cognitive and relational interventions in the maintenance of treatment gains.

Clinical Implications. Clinical applications derived from the findings of the current study are also abundant, as are the avenues for future research it indicates. The current study provides important information as it relates to the successful treatment of childhood depression. Specifically, it underscores behavioral and problem-solving interventions as efficacious treatment interventions with use in this population. This particular finding has important clinical implications for youth suffering from depression.

Questions remain, however, with regard to cognitive and relational interventions. Additional research to clarify the role of the use of cognitive interventions with this youth at this developmental level is essential, as results would be useful for the clinical practitioner. Indications toward potential developmental adjustments for younger children in CBT protocols for depression in order to improve the effectiveness of cognitive interventions with youth would have great clinical significance and should thus be further explored. Future studies should also expand the population of study in order to make findings more generalizable to male youth. Finally, a more thorough exploration of all

interventions for use with this population, including the consideration of a parent training component as a separate intervention used in the context of CBT for depression, might prove valuable.

Conclusions

The current study sought to advance the literature on mechanisms of change in the treatment of depression in preadolescent females by attending to two general areas lacking in the current literature. Firstly, this study sought to explore the relationship between treatment components in the context of a group-delivered CBT treatment for childhood depression and reduction in depressive symptoms. The study then sought to assess whether changes in depressogenic cognitions, specifically those related to the cognitive triad, mediated the relationship between interventions and post-treatment depression. The current study explored the preceding by assessing the relationship between group-aggregated behavioral-problem-solving and cognitive-relational treatment interventions, participant depressogenic cognitions, and post-treatment depression, measured at the participant level. Findings from the study add to the existing literature on the treatment of youth depression, particularly what specifically contributes to changes seen in post-treatment depression and how such changes are actualized. Additionally, this study introduced new questions to prompt further research into this area of study.

A significant proportion of variance in post-treatment depression and post-treatment depressogenic cognitions was found to be between groups. This finding supported the use of multilevel modeling to analyze the data of the 40 participants from the CBT-only condition. Group-aggregated behavioral-problem-solving interventions

were found to be negatively related to post-treatment depression; in other words, greater behavioral and problem-solving interventions delivered at the group level was related to improved depression following treatment. Group-aggregated cognitive-relational interventions, however, were positively associated with post-treatment depression, a direction opposite to what was initially hypothesized. Otherwise stated, increased levels of cognitive and relational interventions received by the group were related to higher post-treatment depression scores. Several explanations were presented to elucidate this seemingly anomalous finding. Further research, particularly into the order of introduction of treatment components and the longer-term impact of treatment effects, is required to clarify these findings.

Unlike originally hypothesized, treatment interventions, namely group-aggregated behavioral-problem-solving and cognitive-relational interventions, were not found to be significantly related to depressogenic thinking, that is the participant cognitive triad. Concerns related to small sample size and intervention measurement could have contributed to an absence of findings. Further research is required to clarify the nature of the relationship between these variables.

Finally, depressogenic cognitions were found to be negatively associated with post-treatment depression. Specifically, improved, or less depressogenic, cognitions held by participants were related to improved experiences of depression, both assessed at the participant level, at post-treatment. Despite this noteworthy finding, in the direction originally predicted based upon previous empirical studies and theoretical underpinnings, mediation analyses were not conducted due to the absence of a significant *a* path, that of

the relationship between group-aggregated treatment interventions and depressogenic cognitions. Further investigations, addressing the limitations of this study, are required to clarify the relationship between the predictor, mediator, and outcome variables in order to best comprehend this effective treatment for youth depression and to produce more streamlined and targeted interventions for this population.

The current study added to the extant literature concerning the exploration of the active ingredients in the treatment of depressed youth by identifying treatment interventions, delivered in the context of a group treatment, linked to improvements post-treatment depression. Findings from this study provide some guidance to future studies in terms of design, methodology, and statistical analyses, as well as directions for future research needed to clarify these vital questions. Given the importance of this area of research and the need demonstrated by the target population, it is hoped that continued research into this area of study is pursued and continued attempts to address the questions posed in this study are made in an effort to advance knowledge concerning the mechanisms of change in the context of CBT treatments for youth depression.

APPENDICES

Appendix A: DSM-IV Criteria for Depressive Disorders

DSM-IV Criteria for Major Depressive Disorder

A. Presence of one or more Major Depressive Episodes (to be considered separate episodes, there must be an interval of two consecutive months in which criteria are not met for a Major Depressive Episode).
B. Major Depressive Episode is not better accounted for by Schizoaffective Disorder and is not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.
C. There has never been a Manic Episode, Mixed Episode, or Hypomanic Episode.

DSM-IV Criteria for Major Depressive Episode

A. Five (or more) of the following symptoms must be present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood, or (2) loss of interest or pleasure.
    1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note: in children and adolescents, can be irritable mood**.
    2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).
    3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **Note: in children, consider failure to make expected weight gains**.
    4. Insomnia or hypersomnia nearly every day.
    5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
    6. Fatigue or loss of energy nearly every day.
    7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
    8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
    9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
B. The symptoms do not meet criteria for a Mixed Episode.
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than two months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

DSM-IV Criteria for Dysthymic Disorder

A. Depressed mood for most of the day, for more days than not, as indicated either by subjective account of observation by others, for at least two years. **Note: In children and adolescents, mood can be irritable and duration must be at least one year.**
B. Presence, while depressed, of two (or more) of the following:
    1. Poor appetite or overeating
    2. Insomnia or hypersomnia
    3. Low energy or fatigue
    4. Low self-esteem
    5. Poor concentration or difficulty making decisions
    6. Feelings of hopelessness
C. During the two-year period (one year for children or adolescents) of the disturbance, the person has never been without the symptoms in Criteria A and B for more than two months at a time.
D. No Major Depressive Episode has been present during the first two years of the disturbance.
E. There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode, and criteria have never been met for Cyclothymic Disorder.
F. The disturbance does not occur exclusively during the course of a chronic Psychotic Disorder, such as Schizophrenia or Delusional Disorder.
G. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
H. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

DSM-IV Criteria for Depressive Disorder Not Otherwise Specified

A. A mood disturbance, defined as follows:
    1. At least two (but less than five) of the following symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (a) or (b):
        a. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note: in children and adolescents, can be irritable mood**.

b. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).
c. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **Note: in children, consider failure to make expected weight gains**.
d. Insomnia or hypersomnia nearly every day.
e. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
f. Fatigue or loss of energy nearly every day.
g. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
h. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
i. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

2. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
3. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
4. The symptoms are not better accounted for by Bereavement.

B. There has never been a Major Depressive Episode, and criteria are not met for Dysthymic Disorder.
C. There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode, and criteria are not met for Cyclothymic Disorder.
D. The mood disturbance does not occur exclusively during Schizophrenia, Schizophreniform Disorder, Schizoaffective Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.

Appendix B: Measures of Depression

Children's Depression Inventory
(CDI)

Kids sometimes have different feelings and ideas.

This form lists the feelings and ideas in groups. From each group of three sentences, pick one that describes you **best** for the past two weeks. After you pick a sentence from the first group, go on to the next group.

There is no right answer or wrong answer. Just pick the sentence that best describes the way you been recently. Put a mark like this X next to your answer. Put the mark in the box next to the sentence you pick.

1. I am sad once in a while.
   I am sad many times.
   I am sad all the time.

2. Nothing will ever work out for me.
   I am not sure if things will work out for me.
   Things will work out for me O.K.

3. I do most things O.K.
   I do many things wrong.
   I do everything wrong.

4. I have fun in many things.
   I have fun in some things.
   Nothing is fun at all.

5. I am bad all the time.
   I am bad many times.
   I am bad once in a while.

6. I think about bad things happening to me once in a while.
   I worry that bad things will happen to me.
   I am sure that terrible things will happen to me.

7. I hate myself.
   I do not like myself.
   I like myself.

8. All bad things are my fault.
   Many bad things are my fault.
   Bad things are not usually my fault.

9. I do not think about killing myself.
   I think about killing myself but I would not do it.
   I want to kill myself

10. I feel like crying every day.
    I feel like crying many days.
    I feel like crying once in a while.

11. Things bother me all the time.
    Things bother me many times.
    Things bother me once in a while.

12. I like being with people.
    I do not like being with people many times.
    I do not want to be with people at all.

13. I cannot make up my mind about things.
    It is hard to make up my mind about things.
    I make up my mind about things easily.

14. I look O.K.
    There are some bad things about my looks.
    I look ugly.

15. I have to push myself all the time to do my schoolwork.
    I have to push myself many times to do my schoolwork.
    Doing schoolwork is not a big problem.

16. I have trouble sleeping every night.
    I have trouble sleeping many nights.
    I sleep pretty well.

17. I am tired once in a while.
    I am tired many days.
    I am tired all the time.

18. Most days I do not feel like eating.
    Many days I do not feel like eating.
    I eat pretty well.

19. I do not worry about aches and pains.
    I worry about aches and pains many times.
    I worry about aches and pains all the time.

20. I do not feel alone.
    I feel alone many times.
    I feel alone all the time.

21. I never have fun at school.
    I have fun at school only once in a while.
    I have fun at school many times.

22. I have plenty of friends.
    I have some friends but I wish I had more.
    I do not have any friends.

23. My schoolwork is alright.
    My schoolwork is not as good as before.
    I do very badly in subjects I used to be good in.

24. I can never be as good as other kids.
    I can be as good as other kids if I want to.
    I am just as good as other kids.

25. Nobody really loves me.
    I am not sure if anybody loves me.
    I am sure that somebody loves me.

26. I usually do what I am told.
    I do not do what I am told most of the times.
    I never do what I am told.

27. I get along with people.
    I get into fights many times.
    I get into fights all the time.

Beck Depression Inventory for Youth
(BDI-Y)

Here is a list of things that happen to people and that people think or feel. Read each sentence carefully, and circle the one word (Never, Sometimes, Often, or Always) that tells about you best, especially in the last two weeks. THERE ARE NO RIGHT OR WRONG ANSWERS.

1. I think that my life is bad.	Never	Sometimes	Often	Always
2. I have trouble doing things	Never	Sometimes	Often	Always
3. I feel that I am a bad person.	Never	Sometimes	Often	Always
4. I wish I were dead.	Never	Sometimes	Often	Always
5. I have trouble sleeping.	Never	Sometimes	Often	Always
6. I feel no one loves me.	Never	Sometimes	Often	Always
7. I think bad things happen because of me	Never	Sometimes	Often	Always
8. I feel lonely.	Never	Sometimes	Often	Always
9. My stomach hurts.	Never	Sometimes	Often	Always
10. I feel like bad things happen to me.	Never	Sometimes	Often	Always
11. I feel like I am stupid.	Never	Sometimes	Often	Always
12. I feel sorry for myself.	Never	Sometimes	Often	Always
13. I think I do things badly.	Never	Sometimes	Often	Always
14. I feel bad about what I do.	Never	Sometimes	Often	Always
15. I hate myself.	Never	Sometimes	Often	Always
16. I want to be alone.	Never	Sometimes	Often	Always
17. I feel like crying.	Never	Sometimes	Often	Always
18. I feel sad.	Never	Sometimes	Often	Always
19. I feel empty inside.	Never	Sometimes	Often	Always
20. I think my life will be bad.	Never	Sometimes	Often	Always

Diagnostic and Statistical Manual Brief Symptom Interview for Depression (DSM-Interview)

Symptoms: Ask about symptoms being present most days for THE LAST TWO WEEKS, INCLUDING TODAY.	**Symptom IS present (√)**	**Symptom NOT present (√)**
1. Have you been feeling sad, unhappy, blue, or down in the dumps for a lot of the day?	❐	❐
2. Have you been feeling irritable, cranky, or easily annoyed for a lot of the day	❐	❐
3. Have you been less interested in doing things like hobbies or sports?	❐	❐
4. Have you been enjoying hobbies or interests less that you did in the past?	❐	❐
5. Have you noticed a change in your appetite (eating more or less than usual)? Has your weight changed or do your clothes fit differently?	❐	❐
6. Have you had any trouble with your sleep, such as falling asleep, waking up at night, or waking too early?	❐	❐
7. Have you been having trouble with your sleep, in that you are sleeping a lot more than usual lately?	❐	❐
8. Do you feel like you still need sleep or rest, even if you got a full night's sleep?	❐	❐
9. Do you feel like you have no energy, or not as much energy as usual?	❐	❐
10. Do you feel restless or fidgety, that you have a hard time sitting still?	❐	❐
11. Have you felt slowed down, like you are moving in slow motion or your movements are not as quick as usual?	❐	❐
12. Have you had trouble concentrating or paying attention, like your mind is "in a fog?" Or trouble making decisions?	❐	❐
13. Have you felt guilty about things lately?	❐	❐
14. Have you felt hopeless, like things won't work out for you, or that you will always feel bad?	❐	❐
15. Have you felt worthless, inadequate, or like you are no good lately?	❐	❐
16. Have you had thoughts of death or dying?	❐	❐
17. Have you had thoughts of wanting to hurt yourself? (or someone else)	❐	❐
18. Have you done anything to hurt yourself, such as make a mark on your skin?	❐	❐
TOTAL "PRESENT" Items 1-18		

Appendix C: Measures of Depressogenic Cognitions

Cognitive Triad Inventory for Children
(CTI-C)

Instructions: Circle the answer which best describes your opinion. Choose only one answer for each idea. Answer the items for what you are thinking RIGHT NOW. Remember fill this out for how you feel today.

1. I do well at many different things.	Yes	Maybe	No
2. Schoolwork is no fun.	Yes	Maybe	No
3. Most people are friendly and helpful.	Yes	Maybe	No
4. Nothing is likely to work out for me.	Yes	Maybe	No
5. I am a failure.	Yes	Maybe	No
6. I like to think about the good things that will happen for me in the future.	Yes	Maybe	No
7. I do my schoolwork okay.	Yes	Maybe	No
8. The people I know help me when I need it.	Yes	Maybe	No
9. I think that things will be going very well for me a few years from now.	Yes	Maybe	No
10. I have messed up almost all the best friendships I have ever had.	Yes	Maybe	No
11. Lots of fun things will happen for me in the future.	Yes	Maybe	No
12. The things I do every day are fun.	Yes	Maybe	No
13. I can't do anything right.	Yes	Maybe	No
14. People like me.	Yes	Maybe	No
15. There is nothing left in my life to look forward to	Yes	Maybe	No
16. My problems and worries will never go away.	Yes	Maybe	No
17. I am as good as other people I know	Yes	Maybe	No
18. The world is a very mean place.	Yes	Maybe	No
19. There is no reason for me to think that things will get better for me.	Yes	Maybe	No
20. The important people in my life are helpful and nice to me.	Yes	Maybe	No
21. I hate myself	Yes	Maybe	No
22. I will solve my problems.	Yes	Maybe	No
23. Bad things happen to me a lot.	Yes	Maybe	No
24. I have a friend who is nice and helpful to me.	Yes	Maybe	No
25. I can do a lot of things well.	Yes	Maybe	No
26. My future is too bad to think about.	Yes	Maybe	No
27. My family doesn't care what happens to me.	Yes	Maybe	No
28. Things will work out okay for me in the future.	Yes	Maybe	No
29. I feel guilty for a lot of things.	Yes	Maybe	No

30. No matter what I do, other people make it hard for me to get what I need.	Yes	Maybe	No
31. I am a good person.	Yes	Maybe	No
32. There is nothing to look forward to as I get older.	Yes	Maybe	No
33. I like myself.	Yes	Maybe	No
34. I am faced with many difficulties.	Yes	Maybe	No
35. I have problems with my personality.	Yes	Maybe	No
36. I think that I will be happy as I get older.	Yes	Maybe	No

Appendix D: Measures of Interventions

Cognitive Interventions Coding Manual

SPECIFIC GUIDELINES FOR RATING ITEMS

NOTE:

1) IF a child is not the target of the intervention, but is exposed to the intervention by merely observing the therapist implementing an intervention which meets criteria for a "2" or higher, rate a 2. This applies to all interventions **except for** Reporting Key Cognitions, Focusing on Key Cognitions, Empiricism, Didactic Persuasion, Exploring Personal Meaning, Exploring Underlying Assumptions, Development of Underlying Assumptions, and Application of Cognitive Techniques.

2) Use the following guidelines pertaining to quality of thought targeted when rating items:

a. **Do not rate in any section** IF:

i. Purely hypothetical thoughts are used as examples during the course of didactic teaching of cognitive restructuring skills. A thought is considered "purely hypothetical" if it has no link to the child's negative schemas identified through the conceptualization or has not been elicited from the child.

b. **Drop rating by 1** IF:

i. Cognitive interventions are applied to the child's own thoughts in response to a purely hypothetical SITUATION (not linked to current problems).

ii. cognitive interventions are applied to thoughts created by therapist, but are clearly linked to the child's negative schemas identified through the conceptualization.

c. **Do NOT drop by 1** IF

i. The therapist elicited the thought from the child regarding a problematic situation or negative affect (this includes offering tentative thoughts to which the child subsequently admits to having or bringing up a thought that the child had admitted to having in a previous session).

T: so when your mom yells at you, are you thinking "she doesn't love me?"

OR

T: so when you have that thought, "I have to perfect," what could you say to talk back to the MM? (where the thought "I have to perfect" had been elicited from the child in a previous session/earlier part of session).

ii. IF the hypothetical situation is clearly a simulation of a real problem the child experiencing, given that the child's real thoughts are targeted. For example, if the child experiences negative thoughts when mother yells at her, a hypothetical situation presented by the therapist that involves mother yelling at child (e.g., "let's say your mother yells at you when you bring your report card home…what would you think

then?”), do not drop rating by 1 as the hypothetical situation is clearly linked to the child’s problem.

These guidelines apply to all items marked with “*”.

1. FOCUSING ON KEY COGNITIONS*+:
   Did the therapist elicit specific **(positive or negative)** thoughts, assumptions, and images, of meanings? **Note**: this item assesses the extent to which the therapist elicits and “goes after” specific cognitions in a **focused** manner. The term “focused” pertains to the degree of incisiveness with which the therapist targets the child’s **central cognitions**. “Central cognitions” are those related to the child’s problems/issues (past, current, recurrent, future) and/or underlying schemas (as indicated by the conceptualization).
   ***(See drop guidelines)**
   +(See default guidelines)

   0 Tx did not attempt.
   1
   2 Tx used appropriate techniques to elicit cognitions; however, therapist had difficulty finding a focus, or focused on cognitions that were irrelevant to the girl’s key problems.
   3
   4 Tx focused on specific cognitions relevant to the target problems. However, Tx could have focused on more central cognitions that offered greater promise for progress.
   5
   6 Tx very skillfully focused on key thoughts, assumptions, etc. that were most relevant to the problem area and that offered considerable promise for progress.

The purpose of this item is to measure the extent to which specific thoughts, assumptions, images are elicited are relevant to the client’s problems (**i.e., those related to the self, world, future, or cognitions regarding lovability/unlovability, helplessness/efficacy, worthiness/unworthiness**) rather than in a “hit or miss” fashion. The therapists’ rationale for focusing on a thought should be clear, relevant, and focused.

2. RELATIONSHIP OF THOUGHTS AND FEELINGS OR BEHAVIORS*+
   Did the therapist encourage the client to relate affective states or behaviors that the client had experienced, is experiencing, (OR will experience in the future) to the client’s ongoing thoughts AND/OR the extent to which the therapist encouraged the client to link cognitions experienced in the past/present/future to affective states or behaviors.
   ***(See drop guidelines)**
   +(See default guidelines)

0 Not at all

1

2 Therapist links child's oversimplified, vague thoughts and vague emotions. (**Rate a 1** if this quality of intervention is observed only once).
C: I had bad thoughts about or acting bad toward my friends.
T: SO when you're having bad thoughts about your friends, what kind of feelings or behaviors are you having? Bad or good?
C: Bad.

OR

C: I had bad feelings about my friends/I was acting bad with my friends
T: So when you're having bad feelings or behaviors, what's going on with your thoughts? Are you having bad or good thoughts?
C: Bad.

3 The therapist meets criteria for rating 2 **and** contrasts the thought and feeling or behavior with its inverse. **OR** therapist links vague thought (e.g., "bad thoughts") to a more specific feeling (e.g., sad) or behavior (e.g., isolating); **OR** links specific thought ("no one loves me) to a vague feeling or behavior (e.g., "feeling/acting bad")
C: I had bad thoughts about toward my friends.
T: SO when you're having bad thoughts about your friends, what kind of feelings or behaviors are you having? Bad or good?
C: Bad.
T: But when you look through your bright lenses, what kind of thoughts would you have?
C: good.
T: then how would that make you feel?
C: good!

4 Tx goes beyond linking over-simplified negative thoughts to positive thoughts; Tx uses more specific thoughts and specific feelings or behaviors of the child to illustrate the cognition-affect or - behavior link.
C: I was thinking bad thoughts.
T: What kind of bad thoughts?
C: I was thinking I'm never, ever going to have friends.
T: So, if you're thinking a negative thought like you're never, ever going have friends, how are you likely to feel or behave?…
C: Well, I'd probably feel or act bad…
T: What kind of a bad feeling or behavior would it be?...
C: Umm….maybe sad…/umm…maybe I would stay at the nurses office and cry a lot
T: That's sounds right, I know I sure would feel sad or act that way if I thought that!

OR

C: I was feeling or acting bad.

T: What kind of bad feeling or behavior?
C: Sad or crying and staying at the nurses office allot
T: Well, if you're feeling sad or crying and staying in the nurse's office a lot, I'm wondering why you might be feeling that way…do you remember what causes our feelings or behaviors?
C: What we're thinking!
T: That's right! So, if you're feeling sad or crying and staying at the nurses office allot what might you be thinking then…
C: Um…negative thoughts?
T: Yes, but what kinds of negative thoughts would you have?
C: I probably would be thinking….maybe, I'll never make friends?
T: Great! That's an awesome example!

5 The therapist meets criteria for rating 4 **and** contrasts the specifically worded/defined or situation-specific thought/feeling with its inverse.
T: So, if you're thinking a negative thought like you're never, ever going have friends, how are you likely to feel?…
C: Well, I'd probably feel or act bad…
T: What kind of a bad feeling or behavior would it be?...
C: Umm….maybe sad or cry a lot and stay at the nurses office …
T: But, if you put your bright lenses on, and thought something like, I may not have many friends now, but I can make friends, how would you feel or act?
C: Good!
T: What kind of good feeling or behavior?
C: Relieved, maybe happy or I would stop crying and go out and play

OR

T: So, when you were at recess and no one played with you, you said that you were feeling bad or acting bad…I wonder what kind of thoughts you were having?
C: Negative thoughts…dark lenses thoughts!
T: OK, good! So what about if you put on your bright lenses the next time you're at recess, instead of your dark lenses…what kind of feeling or behavior would you have then?
C: better, probably good!

6 Tx goes beyond simply linking specific thoughts to feelings or behaviors or grounding the thoughts and feelings or behaviors to specific situations/issues/problems in the client's personal life by using gradations of affect/behavior/cognition (e.g., mood meter, how much do you believe the thought), and by contrasting these detailed thoughts and feelings or behaviors with their inverse.
T: So, when you were at recess and no one played with you, you said that you were feeling sad or crying and staying at the nurses office a lot…what would you say your mood was on the mood meter or how much you cried/stayed at the nurses office?

C: totally and completely down! Or was crying most of the day and staying at the nurses office as long as I could!
T: Totally and completely down? I'm so sorry you felt that way or cried and stayed at the nurse's office so much…do you remember what causes our feelings or behaviors?
C: our thoughts…
T: that's right! So when you were feeling completely and totally down when no one played with you at recess or when you were crying and staying at the nurse's office so long, I wonder what thoughts you were having?
C: dark lenses…muck monster thoughts!
T: Right again! So, let's see, what were thinking then?
C: That I'll never, ever have friends.
T: Wow, I can see how that thought would make you feel sad or cry a lot and stay away from people - no wonder you were totally and completely down or staying at the nurses office a lot and crying most of the time. well, if you had your bright lenses on at recess when no one was playing with you and you thought something like, they just think I don't want to play with them, I'll ask to join in, how would that make you feel or behave?
C: Good, better…
T: Let's see what your mood meter rating would be or how much would you be crying and staying at the nurse's office---
C: Instead of "totally completely down", I'd be at "doing great"! or I would stop crying and play with the other kids in my class!
T: great job! Do you see how your thinking about a situation affects how you feel or behave?

The purpose of this item is to measure the extent to which the therapist attempts to help the client realize the relationship that exists between her thoughts and her feelings. This may be accomplished by:

(1) Exploring instances in which the client experienced affect to determine what the client's thoughts were in those instances, or
(2) Encouraging the client to pay attention to what thoughts she/he has when she experiences significant affective states in the future.
(3) Encouraging the client to attend to how thoughts affect feelings, and/or how feelings are caused by thoughts.

As part of this effort, the therapist may have remarked that she has found that thoughts and feelings tend to co-vary for people. This item should not be rated highly, however, unless the therapist used the client's own experience in the past OR is using an experience currently occurring in session OR encouraged the client to monitor her own

experience in the future, as a means of checking to see if thoughts and feelings co-vary for the client.

NOTE: Do not rate this item higher than a "4" unless the therapist helps the child differentiate beyond having "good/bad/positive/negative" thoughts and having "good/bad/positive/negative" feelings. For instance, the therapist should distinguish between different emotions (sad vs. happy; calm vs. anxious) or help the child identify gradations of affect (e.g., using the mood meter) OR gradations of belief in a thought (e.g., "how much do you believe this thought").

3) REPORTING KEY COGNITIONS

Did the therapist ask the client to report specific thoughts (positive or negative) that the client experienced either in the session OR in a situation which occurred prior to the session? A thought is still considered "reported" if the therapist tentatively supplies a thought to the child, to which the child subsequently admits to having. This item pertains to ALL KEY COGNITIONS, including those elicited during the course of cognitive restructuring techniques. "Key cognitions" refers to thoughts related to:

1. core schemas (unlovable/loveable, helpless/efficacious, worthy/unworthy; self, world, future) including automatic thoughts, intermediate beliefs.
2. distorted information processing including cognitive errors and depressogenic attribution style (including internal, stable, global attributions for negative events).

Note:

a) Key cognitions may come up in session in a variety of ways (e.g., therapist may inadvertently elicit key cognitions, child may independently provide the therapist with key cognitions). This item, however, pertains to the therapist's **overt** attempts to elicit key cognitions from the child regarding problematic emotions, behaviors, or situations.

b) the therapist may uncover several levels of cognition regarding one particular thought; count each request for the specific thought corresponding to each level of cognition. Do not count each request for a specific thought to which the client is unable to respond or further elaborate.

****PLEASE KEEP A FREQUENCY COUNT FOR EACH CHILD; DO NOT USE RATINGS 1-6****

0 Not at all

1

T: so what were you thinking when your friend didn't call?
C: something bad must've happened. (count = 1 attempt)
T: could you tell me more about that?
C: just, something bad must've happened…you know? (count = 1)

OR

T: so where you thinking, "something bad happened?" when your friend didn't call?
C: yes. (count = 1 attempt)
T: could you tell me more about that?
C: just, something bad must've happened…you know? (count = 1)
T: so, something bad must've happened…was there something more specific you were thinking?
C: something bad like she must be mad at me for something. (count = 2)
T: she got mad at you…
C: yeah, like she must be mad at me because I'm always hurting her feelings…(count = 3)
T: you're always hurting her feelings?
C: yeah. (count =3)
T: tell me more about that…
C: yeah, I'm always hurting her feelings…I'm always the one to blame! (count =4)
T: anything else?
C: no. (count =4)
T: well, tell me, what do you mean by you're the only one to blame?
C: Yeah, I'm the only one that makes her mad (count =5)
T: oh, wow, I can see why you were feeling so down!…anything else more specific you can think of?
C: Just, I'm the only one in her life that upsets her like that (count =5)
T: why are you always to blame and the only person who makes her mad?
C: I'm just a really bad person. (count =6)

The purpose of this item is to measure the <u>frequency</u> with which the therapist attempts to elicit the client's specific thoughts. These can be specific thoughts the client (1) was currently experiencing in the session; (2) experienced earlier in the session; or (3) experienced in a situation which occurred anytime prior to the session.

<u>Example</u>

T: so you ended up at home rather than going to that party as you planned. Do you remember what you were thinking?
C: I remember feeling like I just didn't have the energy.
T: so you felt like you didn't have the energy…what thoughts went along with that feeling?
C: I guess I was thinking that I wasn't going to be able to get the energy to get myself there.
T: Ok, I wonder if you might be able to remember the specific thoughts you had as you were thinking about whether or not to go to the party. Do you remember what those were?

C: I remember thinking that it would take so much energy to shower and dress up that it wasn't worth it.
T: do you remember what other thoughts you had?
C: that I wouldn't know anyone at this party and would be bored. Everyone else would have someone to talk to.

Important Distinctions for Item #3
With Item #18 RECORDING THOUGHTS.

Attempts by the therapist to spontaneously elicit the client's cognitions are measured in item #2 whereas cognitions which the client recorded prior to the session and then discussed in the session should be considered in rating item #3. IF, in the process of reviewing cognitions the client has recorded, the therapist asked the client to generate other thoughts, both items #3 and #18 should be rated greater than "0".

4) EXPLORING PERSONAL MEANING

Did the therapist probe for cognitions **(BOTH positive and negative)** to explore the personal meaning (i.e., schemas) related to a thought, situation, event, list of "evidence" etc.? This involves exploring both the **BREADTH (i.e., extent to which the therapist expands upon the meaning of original thought reported) and DEPTH** (e.g., progression from automatic thoughts, intermediate beliefs, core schemas) of cognitions.

Note:
a) consider the extent to which the therapist explored meaning surrounding the self, world, future, or themes regarding lovability/ unlovability, helplessness/efficacy, and worthiness/unworthiness).
b) Although the therapist will frequently use the term, "what does that mean about…," do not limit ratings to interventions including this phrase.
c) exploration can occur **in conjunction with** or **as part of** another restructuring technique, including self-map activity.

0 Not at all
1 Tells child meaning in a brief/superficial manner, with no discussion/exploration or follow-up.
C: So after we argued about the TV I thought, "he better not tell mom!"
T: so you were thinking something like "he's an annoying, bratty, tattle tale"
2 Some exploration of the client's personal meaning system: surface level exploration of automatic thoughts (positive and negative), situation, event, etc…
C: So after we argued about the TV I thought, "he better not tell mom!"
T: So what would that mean to you, if he did tell your mom?
C: that he's an annoying, bratty, tattletale!

OR

C: So after we argued about the TV I thought, "he better not tell mom!"
T: and if he did tell mom, then what?
C: then he'd tell mom and I'd be mad at him even more for being an annoying, bratty, tattle-tale!

OR

C: so after we argued about the TV, he let choose the program I wanted.
T: well, what did that mean to you/about you?
C: that he's being nice.

3 Therapist explores with child meaning surrounding a particular construct regarding self, world, future through listing traits/characteristics (e.g., traits for an area on self map, how mother shows she cares, what a good future for her would be, etc.)

Note: **Rate as a 3** even if the child lists a core schema (e.g., I'm a good person) as a trait for and area of the self map , as the child is merely thinking the thought "I'm a good person" rather than building the actual schema by concluding she is a good person from a set of information.

4 Considerable exploration of the client's personal meaning system: deeper level exploration, revealing some rules/conditional beliefs (If…then) or a cognition about self/world/future in a specific area (e.g., self as student, teachers, future as a student).

Rate a 3 if therapist conducted considerable exploration but did not elicit/examine intermediate beliefs **OR** the therapist elicited/examined intermediate beliefs but little/no follow up/exploration.

C: So after we argued about the TV, I thought, "he better not tell mom!"
T: So what would that meant if he did tell your mom?
C: that he's an annoying, bratty, tattletale!
T: What does it mean that he's a tattletale? What does it mean to you?
C: That if there's something between him and me, he'll look out only for himself and my parents will always believe him over me!

OR

C: so after we argued about the TV, he let me choose the program I wanted.
T: well, what did that mean to you? About you?
C: that he's being nice because he chose my wants over his.

5

6 Extensive exploration of the client's personal meaning system which included revealing or examining core beliefs (positive or negative). **Rate a 5** if therapist conducted extensive exploration but did not elicit/examine core beliefs **OR** the therapist elicited/examined core beliefs but little/no follow up/exploration.

(continuation of same dialogue in item 4)
C: …That if there's something between him and me, he'll look out only for himself and my parents always believe him over me!

T: So what do you think that means about you?
C: no one really cares about me, what I want/need – no one really loves me! They might say they do, but they really don't!
T: does that mean anything about you?
C: yeah, that I'm not lovable, I'm not worth it.
T: so what else does that mean that they say they love you but really don't?
C: that they lie, they just say things…
T: hmm, I'm wondering what that means about them that they lie and just say things?
C: that they are fake and I can't really trust them!
T: when you go on believing that you family lies and just says things, that they are fake and not trustworthy how are feeling from day to day?
C: I feel so sad….and so angry sometimes!
T: and when you believe that you are not lovable, not worth it…how does that affect your mood?
C: I feel like…a nothing, I feel empty…sad!

OR

(continuation from second dialogue in item 4)
C: that he's being nice because he chose my wants over his.
T: what could that mean, that he chose his wants over yours?
C: he's a good brother, a good person.
T: what would that mean about you?
C: that he loves me?
T: what else?
C that he likes to please me/people?
T: anything else?
C: maybe I'm lovable too.
OR --
C: no, he just likes being nice to people (therapist then goes into restructuring technique of what's another way of looking at it/what's the evidence)

The purpose of this item is to measure the extent to which the therapist explores the personal meaning system surrounding the automatic thought(s) reported by the client. A "personal meaning system" refers to an idiosyncratic associative network of beliefs, most or all of which are likely to occur once they are "triggered" by certain negative or positive thoughts, events, and situations. The therapist is likely to explore this personal meaning system by asking the client (sometimes repeatedly) to report beliefs that to her are implied by the initial automatic thought.

In order for this item to receive a high rating, the therapist must also have attempted to help the client assess the impact on the client's affect of the beliefs in the client's personal meaning system.

Example

The following example should receive a high rating on this item because the therapist helped the client explore her personal meaning system associated with the thought, "really screwed that up." The therapist also helped the client see the impact of this set of beliefs on the client's affect:
T: what were your thoughts at the time?
C: well I thought, "I really screwed that up. I should have known better."
T: so you had that thought, "I really screwed that up. I should have known better" What did that thought mean to you?
C: Well, I did it again! I blew it! Even when I try hard, I screw up!
T: if you tried hard and still screwed up, what does that mean?
C: it means I'm a loser, I can't make things go right no matter how hard I try!
T: That sound pretty discouraging. Well, I'm wondering what it means to you that you are a loser?
C: well, it means that I'm not good enough and so no one will ever love me – a loser!
T: What about the thought, "I can't make things go right no matter how hard I try!"…what do you think that means about you?
C: It means nothing I do makes a difference…I'm helpless!
T: When you think I'm not good enough so no one will love me, how does it make you feel?
C: I feel really down, ashamed even.
T: when you believe that you are helpless how does that affect your mood?
C: It makes me feel weak -- despair!
T: I wonder if most people wouldn't feel weak/despairing if they believed they were helpless and down/ashamed if they thought they weren't good enough and won't be loved ? It seems only natural that you feel that way, since these beliefs pop up when you make mistakes.

Important distinctions for item #4
With Item # 5 EXPLORING UNDERLYING ASSUMPTIONS

In the process of exploring the clients' personal meaning system, the therapist may have arrived at one or more of the client's underlying assumptions. In such cases, both item #4 and item #5 should receive ratings greater than "0". If the therapist helped the client to explore her underlying assumptions without arriving at them as a result of exploring the client's personal meaning system, item #5 should receive a rating of greater than "0" but item #4 should be rated "0". IF the therapist and client explored the client's personal meaning system but did not identify and explore the client's underlying assumptions then item #4 should receive a rating of greater than "0" but item #4 should be rated "0".

5) EXPLORING UNDERLYING ASSUMPTIONS

Did the therapist explore with the client a general belief **(positive or negative)** that underlies many of the client's specific negative thoughts, behaviors, and affect **across separate scenarios/incidents** (of thoughts, behavior, affect)? **Note:** the therapist must tie a **PATTERN** of thinking, feeling, or behavior (which involves discussion of more than one incident of the thought, affect, behavior) to a belief that underlies the specific manifestations across different situations (see examples below).

0 Not at all

1 Mention of an underlying assumption with no exploration.
T: let's use the TJ question on your thought that you're going to fail when things get difficult for you.
(Note: if the therapist targeted a thought tied to **one** specific situation that has/is/will occur e.g., "when things get difficult for you on the TAKS next Tuesday), it would not be rated for this item. The therapist must use a pattern of thinking, feeling, behaving that is observed in a type of situation (e.g., tests in general, challenging tasks in general, etc.)

2 Some mention of underlying assumptions: very superficial exploration limited to a specific situation in client's life (e.g., taking tests at school); therapist primarily dominating (not much exploration)
C: So when I couldn't figure out the last problem, I thought that I was going to fail my test…just like that time when I took the TAKS last year!
T: Gee, it seems like when things get difficult for you on your school tests, you think that you think are going to fail it.

3

4 Considerable discussion of client's underlying assumptions: more extensive discussion including thoughts manifested in a broader area of client's life (e.g., instead of test-taking situations, broadens to school-related situations) comprising the pattern and a more generalized assumption that underlies the (broader) situation.
C: So when I couldn't figure out the last problem I thought that I was going to fail my test…just like the TAKS last year!
T: Gee, that sounds similar to a situation you talked about the last chat time…do you remember what that was?
C: umm..Oh! You mean when I messed up the spelling on the title of my science fair project and I thought I was going to get an F?
T: Yup! It seems like you believe that if you make a mistake at school, you'll fail class, get a bad grade, or stay behind a year – fail as student. Does that seem right to you?

5

6 Extensive discussion of client's underlying assumptions: very extensive discussion including thoughts manifested across a range of areas in the client's life (e.g., school, home, friends) comprising the pattern, and the

generalized assumption that underlies many of the problems in general functioning (social, academic, etc.)
C: So when I couldn't figure out the last problem I thought I was going to fail my test…just like the TAKS last year!
T: wow, that sounds similar to many situations you've brought up before…like yesterday's chat time...do you remember?
C: umm..Oh! You mean when I messed up the spelling on the title of my science fair project and I thought I was going to get an F?
T: Yup! And do you remember that issue you brought up about your best friend in your practice?
C: that when I forgot her birthday that I was not a good friend?
T: Yes, even that time when you yelled at your mom for no reason, you thought you weren't a good daughter and we used the thought judge questions to talk back to the muck monster?
C: Yeah…
T: Well, do you see how these thoughts are very similar?...that if you're imperfect/make a mistake, you've completely failed? Does that sound right to you?
C: I guess, I never thought of it like that before…
T: well, let's use the thought judge questions to see if this belief that affects you in so many ways is true or not!

The purpose of this item is to determine the extent to which the therapist helps the client identify and explore her underlying assumptions. Underlying assumptions are basic, general beliefs that underlie and form a basis for the client's automatic negative thoughts (i.e., thoughts which occur frequently, often without the client's awareness). Underlying assumptions typically give rise to many different automatic thoughts, all of which have a common theme which is expressed by the underlying assumption. These assumptions are usually unarticulated rules that determine how the client perceives and interprets: (1) events around her, and (2) her own behavior. As such, underlying assumptions provide a key to understanding how the client views the world.

Examples

Although there is no finite, predetermined set of underlying assumptions, the following are some examples of underlying assumptions a client might hold:

(1) I have to be perfect in order to be happy
(2) If I make a mistake, it means I am inept
(3) My value as person depends on what others think of me
(4) It is not possible to disagree with someone and still like that person
(5) Everything in the world should be fair

The following example should receive a rating of greater than "0" on this item because the therapist helped the client to identify an underlying assumption:
T: so despite the fact you're upset with her you don't plan to tell her because he don't want to start a fight?
C: yeah, it's just not worth it.
T: you said that before about other situations in which you've not wanted to talk to someone who you are upset with or when someone owes you something. Have you noticed that?
C: its' true that I hate to ask people who owe me money to pay me back…usually I'd rather just not push it.
T: not wanting to push it seems like a common reaction you have to issues like this, even if it means that you don't let people know when they make you mad or when they've forgotten to repay you. What makes it so that you don't want to push it?
C: I don't want to get people mad at me and having them not like me.
T: Does it seem like unless you're agreeable all the time and don't push it, people won't like you?

Important Distinctions for item #5
With Item #4 EXPLORING PERSONAL MEANING

6) DEVELOPMENT OF UNDERLYING ASSUMPTIONS
Did the therapist explore with the client the origin or context surrounding the development of underlying beliefs?

0 Not at all
1
2 Some mention of origins or development of underlying assumption(s): superficial exploration where historical events and beliefs are mentioned in vague, peripheral, general (not tied specifically to child's personal history) manner.
C: yeah, so when my mom got sick the other day, I got so scared!
T: sounds like your mom getting sick might have reminded you of something….sometimes when kids' lose people close to them, these kinds of things bring up old memories…no wonder you felt scared!
3
4 Considerable discussion of origins/development of underlying assumption(s): more in-depth exploration of belief in conjunction with historical events and current difficulties; beliefs are tied to specific personal experiences. Greater interchange between therapist and client.
C: yeah, so when my mom got sick the other day, I got so scared!
T: Well, do you remember what your muck monster thoughts might have been in that situation?
C: when I saw my mom hacking up a lung, I thought, Oh, no….not again!

T: Was there anything else? What was it that you were hoping would not happen again?
C: Well, I was thinking of seeing grandma coughing like that and how she ended up in the hospital the next day…and died a week later.
T: What did that mean to you…your grandma getting sick, going to the hospital, and passing away so soon after?
C: that people I love will leave out of nowhere and I have no control over it…
T: Well, I can see how you would believe that, your grandma was young and healthy then, she got sick and very quickly passed away—it was all so shocking, unexpected, and something out of your control…
C: yeah…
T: so when you saw your mom coughing, it brought up those old memories and that muck monster belief that she might leave out of nowhere and that you have no control over it…does that sound right?
C: yeah! Exactly -- I got so scared!!!
T: well, no wonder!

5

6 Extensive discussion of origins/development of underlying assumption(s): in-depth exploration of belief in conjunction with historical events and current difficulties; beliefs are tied to specific personal experiences. In addition, **BOTH** elements of origin and maintenance of the belief should be covered in the discussion.
(continuation of discussion from item 4)
T: so when you saw your mom coughing, it brought up those old memories and that muck monster belief that she might leave out of nowhere and that you have no control over it…does that sound right?
C: yeah! Exactly -- I got so scared!!!
T: well, no wonder! The situation seemed similar in some ways to when your grandma suddenly got sick then passed away…her coughing may have triggered that…does that sound right?
C: yeah…that coughing sound…my grandma had pneumonia.
T: well, I'm wondering if there were some other things that you experienced after your grandma got sick and passed away that kept the muck monster talking to you? Things that were similar, that the muck monster used to convince you that your loved ones would leave you out of nowhere and that you have no control over it?
C: Well, I saw on the news about that flu thing…how many people caught this flu and suddenly died…I was afraid my mom would catch it…and then my neighbor's daughter got hit by a car and busted her head open – she died too.
T: Wow, sounds like you had a lot of experience with people getting sick/hurt suddenly, then dying…it sounds like your grandma's death really hit you since you were so close to her…the muck monster started saying

> to you that loved ones will leave you out of nowhere and you have no control over it…then, you saw other people's loved ones getting sick suddenly or getting badly hurt and dying so quickly – out of nowhere, you had no control over these things…the muck monster just got louder and louder…so wow! No wonder when you mom started hacking up a lung the muck monster yelled to you that she would leave you out of nowhere and you had no control over it! No wonder you were so scared!!!!

The purpose of this item is to measure the extent to which the therapist explores the client's history to help uncover distressing events within which faulty beliefs arose and examine how they have been maintained.

Example

C: Sometimes I feel like I'm not lovable, like no one loves me.
T: can you tell me about the last time you had that thought?
C: yeah. I think it was yesterday, when my mom told me I had to sleep in my own room.
T: I wonder what it was about that that made you think you were unlovable?
C: well, she was pushing me away, it felt like she was leaving me, all alone, all by myself.
T: hmm…well, it sounds like you feel abandoned when she does that. What else about that situation made you think you were unlovable?
C: well, if she really loved me, she wouldn't leave me. People who love you don't ever leave you.
T: was there another time that somebody left that made you feel abandoned, and believe that you were unloved or unlovable?
C: uh, I don't know.
T: sometimes when people close to them pass away, they think that they were abandoned or that they were not loved by that person. Does that sound like it matches you? I don't want to put words in your mouth, it's OK to say if it doesn't.
C: yeah, I remember when my dad died. I missed him so much. The only reason why he would leave is if he didn't love me. If he loved me, he would still be here. Even my sister says that.
T: what does she say?
C: that he didn't love me and that's why he died. If I acted better, he would've loved me more and stuck around.
T: how often does your sister tell you those things?
C: every once in a while, when she's mad. But it really gets to me when she does say it., I know down deep inside it's true.
T: wow, I can really see now how when your mom makes you sleep in your own room the muck monster tells it's because she doesn't love you, and you're not lovable. It seems kind of like when your dad died – it seems like she's leaving you, just like you think your dad left you. And your died dad how long ago…the muck monster's been lying to you so long! And it doesn't help that your sister keeps reminding you over and over again too!

7) RECOGNIZING COGNITIVE ERRORS*+

Did the therapist help the client to identify specific types of cognitive distortions or errors (e.g., all-or-none thinking, overgeneralization) that were present in the client's thinking? **Note:** although the use of metaphors such as **"dark lenses"** and **"bead/candy"** have an element of distancing, code only under "recognizing cognitive errors", as the main purpose of these interventions is to highlight/teach distortions to children in a concrete manner

***(See drop guidelines.)**

+(See default guidelines)

0 Not at all

1 (Rate 1 if the therapist vaguely hints at the presence of some type of cognitive error)

C: When I made that mistake on that drawing, I was thinking that the whole thing was messed up.

T: Oh, so you were thinking the WHOLE THING was messed up...?

OR

C: I was thinking my mom doesn't love me because she hardly spends fun time with me, hardly cooks for me or helps me with homework.

T: you had that thought just based on that?

2 Some highlighting of the cognitive error; the therapist helps client see how the event is being distorted by highlighting in a basic, superficial manner some aspect of the reality of the actual situation and the way in which the perception is distorted, without further exploration.

C: When I made that mistake on that drawing, I was thinking that the whole thing was messed up.

T: Oh, so you when you made that ONE mistake on the drawing, the WHOLE THING was messed up...?

OR

C: I was thinking my mom doesn't love me because she hardly spends fun time with me, hardly cooks for me or helps me with homework.

T: Oh, so you were thinking ONLY about how she spends her time at home cooking, helping with homework, or doing fun things with you.

OR

T: Were you looking through your bright lenses or dark lenses?

OR

T: where you focusing on the bead or candy?

3 Explores cognitive error somewhat, but does not conduct considerable discussion.

C: When I made that mistake on that drawing, I was thinking that the whole thing was messed up.

T: Oh, so you when you made that ONE mistake on the drawing, the WHOLE THING was messed up...?

C: yeah…
T: so why'd you come to that conclusion from that one mistake?
C: because it wasn't perfect anymore.

OR

T: Were you looking through your bright lenses or dark lenses/focusing on the bead?
C: dark lenses/focusing on the bead.
T: in what way?
C: I guess I was looking through my dark lenses/focusing on he bead when I only saw the mistake?

4 Considerable <u>discussion</u> of the cognitive error; the therapist more thoroughly helps the client see how perception is being distorted in relation to the reality of the actual situation.

C: when I made that mistake on that problem, I was thinking that I always mess up.
T: Oh, so you when you made that ONE mistake on the test, were thinking you ALWAYS mess up...?
C: yeah…
T: so from that one mistake, you thought that you never do anything right? Does that sound right?
C: yup…
T: so, one mistake, and poof! the whole thing is messed up?
C: uh, huh…
T: what about all the other parts that were beautifully drawn?
C: so…that mistake ruins it…it's not perfect anymore.
T: aha, so unless you do something perfectly, it's automatically messed up?
C: yeah, I'd have to start all over cause it's ruined.

OR

C: I was thinking my mom doesn't love me because she hardly spends fun time with me, hardly cooks for me or helps me with homework.
T: Oh, so you were thinking ONLY about how she spends her time at home cooking, helping with homework, or doing fun things with you.
C: well…
T: Are there other things she does that you are not paying attention to?
C: hmm…
T: is that ALL that your mom does?
C: well, those are the only ones that matter to me.
T: I understand that those things are important to you…but is it possible that you may be leaving out some things she does that actually shows how much she loves you?

OR

T: so by looking at only what how she spends her time at home cooking, helping with homework, or doing fun things with you, are you looking through your dark lenses or bright lenses/focusing on the bead or candy?
C: well…
T: are you looking at everything or just a small (negative) part?
C: uh…
T: is that all your mom does? Pretend you had your bright lenses on/focusing on the candy…what else could you notice?
C: well, that's all that really matters to me anyway.
T: I understand that those things are important to you…but is it possible that you may be focusing only on the bead/looking through your dark lenses and missing some things she does that actually shows how much she loves you?

5

6 Extensive discussion of cognitive error; in addition to criteria for rating 4, the therapist also helps the child see limitations the distortion places on cognition: how the error can affect perception across situations in the clients life. (continuation from Item 4)
C: …yeah, I'd have to start all over cause it's ruined.
T: well, so it looks like when you make a mistake, the muck monster tells you that unless you do things perfectly, it's messed up. If you make one mistake, the whole thing is ruined. It's all or nothing.
C: yeah, I guess…
T: well, do you see how if you think that things you do have to be all good or they're all bad leaves no room for in-betweens, like being good overall with some minor mistakes or flaws? You're seeing things you do as only all good or all bad with NOTHING in between.
C: oh…
T: how is that way of thinking similar to other situations that come up for you? Do you remember your practice from the other day…the issue with your mom?
C: oh yeah, I thought that by yelling at her for nothing meant that I was a bad daughter…
T: so you thought unless you behaved perfectly as a daughter, you were messed up as a daughter. And also that science fair project—
C: --oh! When I messed up the title and thought I was going to fail?
T: Exactly, you thought one mistake ruined the entire project. In those other situations you were also thinking that unless you did things perfectly, you messed up. You could not see that the rest of your science project was excellent, and that your teacher would overlook that tiny spelling error when giving your grade; you forgot or didn't see all the times that you did wonderful things for your mother, that you are overall an awesome daughter, but that you're human too and sometimes get irritable.

OR

(Continuation from rating 4, second example)
C: I guess…
T: do see how when you only look for *certain* things to prove she loves you, you may not be getting the whole picture of mom and how much she really does love you.
C: oh…
T: is that similar to other situations that have come up before?
C: like when I thought my brother was a jerk because he always tells on me?
T: exactly! In that situation, how were you only seeing part of the picture and not the whole?
C: well, I was really only thinking about how he always gets me in trouble by tattling…
T: were there other things that you were not looking at or missing?
C: well, that day he did let me use his computer…
T: exactly, when you look at this part of the picture, he may not seem as much of a jerk as if you had only paid attention to his tattling
C: you're right!

OR

(continuation from rating 4, third example)
C: I guess
T: do you see how when you only look through your dark lenses/focus on the bead, you may not be getting the whole picture of mom and how much she really does love you.
C: oh.
T: is that similar to other situations that have come up before?
C: like when I thought my brother was a jerk because he always tells on me?
T: exactly! In that situation, how were you only looking through your dark lenses/focusing on the bead?
C: well, I was really only thinking about how he always gets me in trouble by tattling…
T: were there other things that you were not looking at or missing that you would have noticed if you had your bright lenses on/were focusing on candy?
C: well, that day he did let me use his computer…
T: exactly, when you look through your bright lenses/focus on the candy, you can notice these good things about your brother and he may not seem as much of a jerk as if you had only paid attention to his tattling
C: you're right!
T: the world is full of positive and negatives, it's your choice whether to look through your bright/dark lenses or focus on the bead/candy.

The purpose of this item is to measure the extent to which the therapist helps the client recognize and identify cognitive errors present in her thinking. The focus of the item is the extent to which the therapist assisted the client with identifying in what characteristic way her thoughts are distorted, NOT merely that a distortion is present. Cognitive errors are defined as characteristic errors in information processing or aberrant (unreasonable) ways of thinking about the world. The therapist **need not have assigned a specific label to a cognitive error**, but must have helped the client to recognize or identify it as such.

Example

Some types of cognitive errors are:

(1) Magnification or Minimization (over or underestimating the significance or magnitude of an event)
(2) Disqualifying the positive (dismissing the positive aspects of a situation)
(3) Overgeneralizing (applying a rule or belief based on only one observation to other situations whether or not they are similar)
(4) Personalizing (assuming personal responsibility for negative events)
(5) Catastrophizing (assuming the worst)
(6) Dichotomous thinking (considering only extremes and not gradations in between)
(7) Predicting without sufficient evidence (assuming something will happen simply because the possibility exists or because it has occurred in the past)
(8) Arbitrary inference (drawing conclusions that are not supported by the facts)
(9) Selective abstraction (basing conclusions on only one aspect of the available information and ignoring contradictory evidence)

The following example should receive a rating of greater than "0" on this item because the therapist helped the client to recognize a specific type of cognitive error (dichotomous thinking (which is present in her thinking).

T: so you did your presentation go?
C: very bad! I was awful!
T: How do you know it went "bad"?
C: I stumbled over my words a couple of times and my poster fell down. It wasn't the best presentation I've given.
T: I believe that you have given presentations where your poster didn't fall down and your talk was smoother, but you said you were awful. What else was wrong with your presentation?
C: nothing really…I got through everything I wanted to say. What a miracle when you think of how bad I presented it.
T: you said this wasn't the best you've given, was it the worst?

C: no, I've done worse, a lot worse. Sometimes I haven't even said everything I wanted to.
T: yet you say this presentation went very bad. It sounds like unless your presentation would have gone very well, you were likely to end up thinking it went poorly. Do you see how that kind of "black and white" thinking doesn't leave room for the possibility that it was not great or bad, but somewhere in between?

8) DISTANCING BELIEFS*+

Did the therapist encourage the client to view her thoughts as cognitions which may or may not be true rather than as established facts? This item pertains to specific interventions **above and beyond the general empirical approach that underlies all CBT processes.** Methods that use metaphors (e.g., Muck Monster) or that ask the client to apply feedback she would give to someone else to herself (e.g., What would you tell your best friend) are some examples. Encouraging the child to view the negative thought as testable hypothesis (possibly true or false rather than automatically false) is also key to effective implementation (higher scores). **Note:** although use of metaphors such as **"dark lenses"** or **"bead/candy"** have an element of distancing, **rate only under "recognizing cognitive errors,"** as the main purpose of these interventions are to highlight/teach cognitive errors to children in a concrete manner.

***(See drop guidelines).**
+(See default guidelines)

0 Not at all
1
2 Some: In a superficial manner, the therapist discourages the child from viewing the negative thought as automatically true (using metaphor or specific perspective taking technique – MM or what would you tell your best friend). No further exploration is evident.
C: so I was thinking that I never do things right!
T: that sure sounds like a MM thought!
OR
T: Is that something you would tell your best friend?
3
4 Considerably: Actively encourages the child to distance from the negative thought (e.g., using MM metaphor, what would you tell a best friend), although there is a strong assumption/bias by the therapist that the negative thought is automatically false (i.e., the therapist encourages the child to view the negative thought as false, but does not encourage the child to consider that it may be a true).
C: so when she didn't smile at me, I was thinking that didn't like me.
T:hmm….that sounds like it's a Muck Monster (MM) thought.
C: yah. I guess…I'm pretty sure that she hates me.
T: Well, does the MM tell you lies or the truth?

C: lies!
T: right! So do you listen to the MM or do you talk back to him?
C: talk back!
T: good! How do you think you could talk back to the MM when he tells you lies like my mom hates me? Let's practice…
C: so when she punished me, I was thinking that she hates me.
T:hmm….do you think that might be a Muck Monster (MM) thought?
C: yeah..maybe…she really does hate me though, I feel it in my gut.
T: You sound so convinced…your thought that she hates you could be true we don't know for sure…could it also be the MM talking?
C: well, I guess the MM could be talking

5

6 Extensively: therapist encourages the child to distance from the negative thought by actively using role plays (talking back to the Muck Monster, giving feedback to Best Friend) that incorporate a more objective interpretation of the situation (i.e., more realistic view that synthesizes both negative/positive information).

Rate a 5 if the therapist met criteria for item 4 and used some role play OR was more objective in discussion but did not use role play.
C: so when she punished me, I was thinking that she hates me.
T:hmm….do you think that might be a Muck Monster (MM) thought?
C: yeah..maybe…she really does hate me though, I feel it in my gut.
T: You sound so convinced…your thought that she hates you could be true we don't know for sure…could it also be the MM talking?
C: well, I guess the MM could be talking
T: let's practice talking back to the MM (or what you would tell your best friend)…
MM: your mom punished you, that means she hates you!
C: no she doesn't!
MM: why else would she punish you…she hates you!
C: she loves me!
MM: if she loves you, why would she punish you?
C: she can love me and still punish me…
MM: how so?
C: she punishes me because she wants me to learn from mistakes!
MM: so?
C: she loves me and wants me to learn and be better.

OR

Role play involves child talking back to MM incorporating evidence against AND evidence for the negative thought or "new thoughts' following "What's another way of looking at it?" TJ Question intervention that reflect a more objective/realistic view of the situation.

The purpose of this item is to measure the extent to which the therapist urges or challenges the client to consider her thoughts and beliefs as testable hypothesis about the world rather than as proven facts through specific techniques that assist the client with gaining perspective or objectivity regarding own thoughts.

Example

The following example should receive a rating of greater than "0" on this item because the therapist encouraged the client to consider her thoughts as testable hypothesis rather than facts:

C: If my friend knew ACTION was "counseling" she'd dump me.
T: what makes you think that?
C: C'mon, would you want someone crazy as your friend?
T: you sound pretty convinced that your friend would want to dump you if she found out you were getting counseling. Is there any chance that she might not act as negatively as you think?
C: I dunno. I guess she might not, she's been nicer before and surprised me in the way she acted.
T: so there's at least some chance that she wouldn't want to dump you if she found out ACTION was counseling.
C: Yeah, I guess she might not.
T: Do you see how thinking of it in that way is different from what you were saying at first? By leaving open the possibility that she might not dump you, you are recognizing that you don't know for sure what she'll do, although you have some idea about what she'll do that we may want to test out. Do you think it might be a muck monster thought?

Important Distinctions for Item #9
With Item #10 EXAMINE AVAILABLE EVIDENCE
Item #11 TESTING BELIEFS PROSPECTIVELY

Whereas #9 item is intended to measure efforts by the therapist to get the client to view her beliefs as testable hypothesis, items #10 and #11 are intended to measure efforts to apply, gather, or review evidence regarding the validity of the client's belief. Thus the therapist behavior measured in this item, when it occurs, is usually a precursor to actually applying empirical evidence to test the client's beliefs. It is possible for the therapist to engage the client in testing her beliefs without first encouraging her to view them as testable hypothesis rather than established facts. In such cases, item #10 and item #11 should receive rating of greater than "0" but item #9 should be rated "0". In other words, merely the testing of the client's beliefs (while it might imply they are hypotheses rather than facts) does not justify a rating of greater than "0" on item #9.

9) EXAMINE AVAILABLE EVIDENCE*+

Did the therapist help the client to use currently available evidence or information (including the client's prior experiences) to test the validity of the client's negative cognitions or to support positive cognitions/beliefs/schemas?

***(See drop guidelines).**
+(See default guidelines)

0 Not at all

1

2 Some: therapist merely contrasts positive information that spontaneously comes up in session with a negative cognition (i.e., may not explicitly use the word "evidence"; see example below) OR highlights positive information that spontaneously comes up in session to support a positive cognition/belief.

C: so when I was cooking dinner and my brother came in and said he was tired of eating spaghetti, I thought that he was a jerk and never appreciates what I do…I felt so mad at him.

T: but it sounds like you were working hard to meet the needs of your family…how does that fit with (or) is that evidence against MM thought that you are a bad daughter? Do you remember how the MM was telling you that you were a bad daughter because you yelled at your mom for no reason?

3 **Rate a 3** if the therapist helps child identify positive traits on self map **only IF** therapist explicitly frames positive traits as evidence for the positive aspect of self or against negative self belief.

4 Considerably: Therapists only elicits/identifies **either** evidence against **OR** evidence for the belief (biased analysis).

OR

the therapist **fairly** consistently and purposefully uses information that comes up in session as evidence to challenge negative cognitions that are central to the client's problems. (E.g., the therapist highlights a fair number of times peers act in friendly, caring manner as evidence against the cognition that she is unlovable.)

T: Hey, Jessica, did you notice that Joann asked if you were feeling OK when you walked in the room? Do you think that could be evidence against the thought that you are unlovable? Would she act that way toward you if you were unlovable?

T: (later in session) Wow, Jessica, you mean your family planned a surprise birthday party for you? How does that fit with the idea that you are unlovable? Is that evidence against that MM thought?

OR

T: Well, Jessica, let's look at the evidence against the thought that you are unlovable. (therapist and client develop list of evidence)

C: wow, that's a long list!

T: What is your new conclusion? Your new thought? Do you still believe you're unlovable?
C: No, I'm lovable! Lots of people love me.

5

6 Extensively: Prior to examining evidence, the therapist helps the client assess the degree of belief in the thought and mood level prior to and after the intervention. The therapist helps the client come up with as many thoughts for and against the thought. Each piece of evidence is weighted, and summed. Using the evidence for and against the thought, the therapist helps the client come up with a new, more realistic thought and corresponding mood level.

Rate a 5 if both evidence for and against the thought is examined and a new thought is identified but does not meet criteria for rating of 6 in some manner (e.g., does not rate mood, does not weigh evidence, new thought overly positive/not realistic, etc.)

OR

The therapist **very** consistently and purposefully uses information that comes up in session as evidence to challenge negative cognitions that are central to the client's problems (E.g., schemas of unlovability, worthlessness, helplessness). This must occur throughout the session for nearly all therapeutic opportunities to be rated a 6. (e.g., throughout the session, the therapist highlights most every time peers act in friendly, caring manner as evidence against the cognition that she is unlovable as well as other information that comes up during chat time, practice, behaviors in group, etc.) The corresponding mood level obtained" for positive conclusion/thought as well as the maladaptive thought being challenged.

T: Well, Jessica, let's use the thought judge question "what's the evidence" to test the thought you are unlovable. But first, how much do you believe that negative thought.
C: a 110%!
T: And what's your mood like since you believe 110% that you're unlovable?
C: totally and completely down! (therapist and client develop extensive list of evidence for and against the negative thought)
T: next, let's weigh each piece of evidence for and against the thought….how much weight would you give this piece of evidence, from 1-10? (therapist and client go through each piece of evidence for/against thought in this manner)
T: OK, now add up all the evidence for the negative thought and all the evidence against the negative thought.
C: 10 for the negative thought, and 65 against the negative thought!!!
T: Wow! Great job! Now, how much do you believe that thought that you are unlovable?

C: uh…0%!
T: Great job! What would your new thought be?
C: I am lovable!
T: so even if not everyone in the world likes you and your family doesn't show they love you 100% of the time, you are still a loveable person. How does that sound?
C: Sounds good to me!

The purpose of this item is to measure the extent to which the therapist helps the client to use evidence from: (1) the client's past experience, or (2) her knowledge of the way the world works, to test the validity of the client's beliefs.

Example

The following example would receive a rating of greater than "0" on this item because the therapist encouraged the client to use currently available evidence to determine whether her belief was true.

C: my friends are so tired of being with me and talking to me. I'm such a drag.
T: how do you know they're tired of you?
C: oh, I don't know. I would be tired of me. I'm not fun to hang out with anymore.
T: let's take a minute and see what evidence you might have that your friends don't want to be with you. How do you know? What signs are there?
C: nobody's called me lately.
T: have your friends been going out without you that you know of?
C: I guess that they haven't been going out as a group that much lately because people have been going on vacation and things with their families. They did go out once without me though.
T: How do you know that?
C: I didn't find out until later because I was out of town at my grandma's house a few days and didn't get home til later that night.
T: would your friends have been able to get in touch with you if they tried?
C: no, nobody was home and my cell was broken.
T: it sounds like there are other possible reasons for why you haven't received invitations lately to hang out with your friends besides your original thought that they are tired of being with you. Which explanation do you think is the reason for them not calling? They are tired of you or your cell phone is broken and you were out of town?

Important Distinctions for item #10
With Item #11 TESTING BELIEFS PROSPECTIVELY

Whereas this item is intended to measure the consideration of existing evidence or information regarding the validity of the client's beliefs, item #11 is intended to measure the gathering of new information regarding the client's beliefs. Evidence obtained as part

of homework from the previous session should be considered in rating item #11 and should not be considered in rating this item. However if the therapist and client discuss evidence or information which the client gathered in the past (or from earlier sessions) this should be considered in rating item #10 and should not be consider in rating item #11.

(see also DISTANCING BELIEFS, ADAPTIVE/FUNCTIONAL VALUE OF BELIEFS, and DIDACTIC PERSUASION).

10) TESTING BELIEFS PROSPECTIVELY*+

Did the therapist encourage the client to 1) engage in specific behaviors for the purpose of testing the validity of her cognitions OR 2) make explicit predictions about external events so that the outcomes of those events could serve as tests of those predictions OR 3) review the outcome of previously devised prospective tests?

Note:

a) rate this item only if the above therapist behaviors are associated with some type of behavioral experiment (therapist directs child to test validity of cognitions by engaging in some behavior in the future for the purposes of gathering new information)

b) the therapist may encourage the child to gather information to support/test **positive** beliefs as well as to challenge negative beliefs (e.g., noting strengths over the next week).

***(See drop guidelines)**

+(See default guidelines)

0 Not at all

1

2 Some: the therapist makes superficial/incomplete attempts at making explicit predictions about events **and** at encouraging the client to engage in specific behaviors to test the validity of beliefs/predictions **OR** at reviewing the outcome of previously devised tests.

T: so what do you think will happen at recess?

C: I'm going to get picked on. I hate recess, I always get picked on, and that's why I don't go.

T: well, at recess, go out to the playground and notice whether you get picked on or not.

OR

T: so what happened at recess yesterday?

C: nothing. (Therapist does not explore what "nothing" means).

T: well great, so how true do you think it is that at recess you'll get picked on?

3

4 Considerably: the therapist helps the client make adequately detailed, explicit predictions about the events **and** at encouraging the client to engage in specific behaviors to test the validity of beliefs/predictions **OR** at reviewing the outcome of previously devised tests

T: so what do you think will happen if you go out and play at recess?
C: I'm going to get picked on.
T: Could you tell me more about that?
C: I'm going to get picked on by Charlie. I won't be able to do anything about it. It'll happen day after day after day…
T: Well, I see…let's do a little experiment to see if that thought – you can't keep Charlie and his friends from picking on you—is true or not. What do you usually do when he picks on you?
C: nothing.
T: Everyday at recess, how about if you do something different like ignore him, tell the teacher, telling him to stop when Charlie picks on you. Then we'll regroup and see how true that your prediction is. How does that sound? (Note: The therapist may ask the client to gather evidence against this prediction by keeping track of all the times the prediction does not occur in the Catch the Positives Diary)

OR

T: so, did you do our experiment? What happened yesterday?
C: nothing!
T: tell me more about that…
C: well, he stopped picking on me!
T: Great! How do you think that happened?
C: well, instead of doing nothing, I just finally told him to stop in his face and he stopped!
T: Well, how does that fit with your prediction that you would be helpless to get Charlie to stop picking on you at recess?
C: It's wasn't true, I did stop him!

5

6 Extensively: therapist thoroughly explores and makes explicit the client's predictions which include the identification of an underlying belief **AND** develops the plans to test beliefs in manner that maximizes chances for success (encourages engagement in specific behaviors, specifying times to engage in behaviors/monitor predictions, use of coping skills, makes a very specific assignment for Catch the Positives Diary that goes beyond asking the client to write in it) **OR**, thoroughly reviews outcomes of previously devised tests or Catch the Positives Diary assignment, including the formulation of a new thought/belief to counter the negative belief/prediction.

T: so what do you think will happen if you go out and play at recess?
C: I'm going to get picked on.
T: Could you tell me more about that?

C: I'm going to get picked on by Charlie. I won't be able to do anything about it. It'll happen day after day after day…
T: …and?
C: and I'll be helpless…
T: So you believe that you are helpless and therefore when you go out to recess, you won't ever be able to stop Charlie from picking on you?
C: yes…

AND

T: Well, I see why you don't go out to recess now if you believe that thought!…let's do a little experiment to see if that belief is true or not. What do you usually do when he picks on you?
C: nothing.
T: What do you mean by nothing?
C: well, I usually put my head down, turn around and go back inside.
T: Everyday at recess until the next time we meet, how about if you try a different plan from your problem-solving list when Charlie and his friends pick on you. Instead of putting your head down and going back inside when he picks on you, what could you do instead?
C: I could ignore him, I could tell the teacher, I could tell him to stop
T: And when you tell him to stop, I wonder how you'll do that? If you yell at him, do you think that would work? Or do you think telling him calmly but confidently would work better?
C:I think looking him in the eye and being confident/calm would work better.
T: Great, you have your times to try the experiment, you have what you're going to do instead of putting your head down and going back inside. Notice what Charlie does when you try these things. Then we'll regroup and see how true that thought is the next time we meet. How does that sound?
C: I think I might get too scared to try these things.
T: well, what can you do to help yourself calm? What action skill?
C: Coping skills? (therapist and child come up with coping skills to use)

OR

T: So, did you do our experiment? Tell me what happened on each day - Tuesday and Wednesday?
C: Well, instead of doing nothing, I did a couple of the plans we came up with. On Tuesday I told the teacher, but that made things worse, he picked on me in class after recess too. But on Wednesday, I finally told him to his face to stop and he looked shocked and stopped! I used my deep breathing to help me stay calm and confident.
T: Well, how does that fit with your prediction that you couldn't to get Charlie to stop picking on you at recess?
C: It doesn't! I can do something about it, I don't have to worry about going to recess anymore.

T: did it change automatically?
C: No, things didn't work at first, but I kept trying and found something that works…
T: are you helpless then?
C: I am not helpless, I took the action steps to change things, I didn't quit and kept trying-- I have control over myself and what happens!

The purpose of this item is to determine the extent to which the therapist encourages the client to:

(1) Engage in prospective hypothesis testing to evaluate the validity of a belief, OR
(2) Verbalize her predictions and arrange a test of those predictions so that the therapist and client will be able to determine their accuracy. A test may involve the client's deliberate engagement in specific behaviors for the purpose of determining the actual consequences, but such behavioral experiments need not occur, so long as a search for additional new information is involved, OR
(3) Review the outcome of a test of the client's beliefs which the therapist and client devised in a previous session. In rating this item only consider references to evidence which has just been gathered.

Examples

The following is an example of a therapist strategy that would be rated greater than "0" on this item:

The therapist elicited the client's statements regarding what the client expected to happen or believed to be true, and then made plans with the client for gathering additional observations that would speak to the validity of that hypothesis.

The following examples should receive ratings of greater than "0" on this item because in each case the therapist encouraged the client to seek new information which could be used to assess the validity of the client's beliefs:

(a) The client reported her belief that no one would want to be friends with her because she was not part of the popular crowd. The therapist helped her to come up with a way to test the belief by polling a number of her classmates if they would consider being friends with someone who wasn't part of the "cool crowd".
(b) The client predicted that her father would be unreasonable and would not listen to her requests for a sleep-over. The therapist and client discussed how the client might best approach her father (e.g., by presenting her desires in a reasonable fashion, or by having the father talk about his concerns and working out

compromises). The therapist then urged the client to test out her prediction by talking to her father.

(c) The client believed that her mother thought she was a "bad daughter" because she goes to visit her father over the summer, leaving her mother alone. The therapist helped the client to develop a plan to test out that belief by asking her mother (if the therapist was sure that this was a sound recommendation) for her opinion.

The following example should receive a rating of greater than "0" on this item because the therapist and client spent time during the session discussing the outcome of a test which they had designed previously.

T: I'm eager to hear about your plan to test out your belief that your mom thought you were a bad daughter because you visit your dad over the summer and leave your mom by herself at home.
C: I asked my mom and asked her to tell me the truth about it. We had a talk.
T: What did she say?
C: She said she didn't blame me for wanting to be with my dad, but did say she misses me when I'm gone.
T: Did what she say surprise you?
C: Yeah, I guess she wasn't happy about me leaving, but she didn't think I was a bad daughter for leaving.

Important Distinctions for item #11
See items DISTANCING BELIEFS, EXAMINE AVAILABLE EVIDENCE

11) SEARCHING FOR ALTERNATE EXPLANATIONS*+

Did the therapist help the client to consider alternative explanations for events besides the client's initial explanations for those events?

Note:

a) this **may in certain (not all) cases** include the "new thought" or evidence (against the negative thought) from "what's the evidence" intervention.; "bright lenses" or "focusing on candy" thought; what would you tell the MM or best friend. Also, note **possible overlap with item 16 (Substituting Positive Thoughts)**

b) the therapist does not need to specifically say, "What's another way of looking at it?" to rate this item. Rate item if the therapist helped the client come up with new interpretations of the event.

***(See drop guidelines.)**
+(See default guidelines)

0 Not at all
1

2 Some: superficial reference to alternative views of the situation or therapist dominates discussion with limited encouragement of child's generation of ideas (i.e., gives answers) or limited exploration of what the child produced (e.g., ignores, minimizes contribution by shifting to own ideas instead of helping the child build upon her own initial idea).
T: So what's another way to look it? When your teacher calls your mom when you don't turn in your homework, what could you think instead of, "she hates me"?
C: that she's mad?
T: she probably called because she's concerned.

3

4 Considerably: adequate exploration of alternative views of the situation with therapist encouraging the child to come up with own ideas or builds upon child's contributions as much as possible **and** a new thought is generated to counter the original negative interpretation.
T: So what's another way to look at it? When your teacher calls your mom when you don't turn in your HW, would could you think instead of, "she hates me"?
C: I don't know, she really hates me.
T: Well, I see how stuck in the muck you are right now…why else would a teacher call home when a student doesn't turn in their homework?
C: Um..they want to get the kid in trouble!
T: Tell me more…
C: they want to get the kid in trouble so the mom can punish her at home too!
T: Well, why is it important for the mom to know besides to get punished?
C: Umm…well I guess so the mom can keep her in line…
T: so the mom can help her do her homework
C: I guess.
T: So the teacher may call home to help get the mom involved so the kid will do homework better – not necessarily because she hates her…why else would the teacher go through all that trouble?
C: maybe she cares?
T: sure! What else…(therapist and client come up with more explanations in a similar manner)
T: So instead of automatically thinking "she hates me" when your teacher calls home about your homework, what could you think instead?
C: that she cares, she's concerned, she wants to do a good job…
T: great job!

5

6 Extensively: therapist meets criteria for rating of 4 but also evaluates the corresponding mood with the old thought before the intervention and with new thoughts after the intervention. **In addition**, the new thought is also more realistic rather than overly-positive and the therapist obtains a mood

rating prior to and after the intervention and degree of belief in old thought and new thought is obtained.
T: So let's use "what's another way of looking at it?"…but first let's rate your mood with that thought you have when Ms. Smith calls home when you don't do your homework: "She hate's me…"
C: pretty crummy…
T: (therapist implements intervention as described in rating 4 example)
T: OK, now, with your new thought, "Ms. Smith probably gets frustrated with me, but when she calls my mom when I don't do my homework it doesn't mean she hates me…it's probably because she is concerned about my schoolwork and wants to do a good job," what is your mood rating?
C: good.
T: wow! Great job, you went from pretty crummy to good from looking at it in another way!

The purpose of this item is to measure the extent to which the therapist encourages the client to consider possible explanations for an event other than the explanation the client generates in her initial response to the event. This item should receive a low rating if the therapist encouraged the client to consider alternative explanations, but the therapist did not help the client to generate those explanations (e.g., gave the answers, did not explore beyond what the child said on her own). The term "event" should be interpreted broadly in rating this item. That is, not only does "event" refer to a specific physical occurrence, but can also include a client's response to another's behavior or her cognitions or beliefs.

Example

The following example should receive a rating of greater than "0" on this item because the therapist encouraged the client to question whether her initial explanation for an event adequately explained it and urged the client to consider others.

C: I guess I'm not talented enough to be in the talent show.
T: how do you know that?
C: well, I didn't get in!
T: did you get a chance to talk to Ms. Smith to see why that was?
C: no.
T: Let's use a Thought Judge Question: what's another way of looking at it? Do you think that there could be other things involved…like the number of kids who tried out that could have made it so that you didn't get in the talent show?
C: maybe.
T: what other things besides not being talented enough do you think might have contributed to you not getting in?

The example below should also receive a rating of greater than "0" on this item because the client's belief that she was a "fool" in an event that warranted consideration of alternative explanations

T: so you found out after a while that Cassandra was spreading rumors about you.
C: yes, I was such a fool for believing her when she said she wasn't.
T: you actually asked her and she said she wasn't spreading rumors about you?
C: I asked her many, many times, I knew something was up, because every time I asked, she would laugh. I'm such a sucker! I should have known it was her.
T: It sounds like you did an awesome job checking out your belief that she was spreading rumors about you. I wonder if we can use a Thought Judge question here: what's another way of looking at your believing her, besides being a sucker? What do you think?
C: well, she kept lying to me, and I kept believing her!
T: did you have any reason not to? Did she lie a lot before?
C: no, never.
T: so it might not be so much that you are a sucker, but that she deliberately lied to you, and you were trusting, based on what you knew about her.

12) REALISTIC CONSEQUENCES:*+

Did the therapist work with the client to determine what the realistic consequences would be if the client's negative thought or belief proved to be true? **Note:** the therapist may use the phrase "so what if it were true, "so what if it happened," or "what's the worst, best, most realistic outcome?"

***(See drop guidelines.)**
+(See default guidelines)

0 Not at all
1
2 Some: the therapist makes some reference to the fact that the implications **OR** likelihood of the anticipated consequences of the belief are not as dire as the client believes. There is limited/superficial/unfocused follow up. (**rate a 1** if there is no follow up/exploration, the therapist merely hint/mentions that the thought is unlikely or the consequences are not as dire as predicted: e.g., "That's not very likely to happen, right? "So what if she's not your friend anymore? You can make new friends, right?") **Rate a 3** if this quality of intervention is observed for more than one issue discussed in session.

C: I think that everyone at school will hate me if I be myself.
T: So what if that proves to be true?
C: I dunno. I won't have anyone to hang out with at school!
T: How bad would that be? I bet your sister doesn't hate you, you won't be alone at home…

OR

C: I think that everyone at school will hate me if I be myself.

T: How likely do you think it is that everyone will hate you?
C: 100%
T: will all the teachers hate you? Will the principal hate you?
C: yeah but they're adults, they don't count.
T: That's still not everyone.

3

4 Considerably: therapist thoroughly examines the implications OR likelihood of the anticipated consequences of the belief. **Rate a 5** if this quality of intervention is observed for more than one issue discussed in session.

C: I think that everyone at school will hate me if I be myself.
T: What do you mean by "being yourself"
C: If I be a nerd and join math club instead of cheerleading.
T: what do you mean by "everyone"
C: all my friends.
T: so what if the friends you have now end up hating you for being yourself?
C: well, I won't have anyone to hang out with.
T: do you think it would be worth giving up who you really are for "friends who'd hang out with you only if you're doing what they do?
C: maybe…
T: would you truly be happy doing things you don't like day in and day out just to keep friends who are not really your friends – since they wouldn't respect your decision to do things you love?
C: no.
T: do you think you may actually make friends who share common interests and can respect what you love to do?
C: yeah…
T: then the worst that could happen is not really that bad…
C: that's right!

OR

C: I think that everyone at school will hate me if I be myself.
T: What do you mean by "be yourself"
C: If I be join math club instead of cheerleading.
T: what do you mean by "everyone"
C: all my friends.
T: what's the likelihood of all your friends hating you if you join the math club instead of cheerleading?
C: 100%
T: really? Would they hate you? That's a pretty strong word.
C: well, they wouldn't hang out with me.
T: just because you're in the math club?
C: well, I guess they would think it was weird…nerdy…

T: just because they think its weird/nerdy does that mean they'll ice you out for good?
C: well, I guess they might make fun of me…
T: do you think that might get old? And are you a different person just because you're in the math club?
C: no…I'm the same person…I'd act the same around them…
T: so it sounds like they may think it's out of character, may have fun teasing you for awhile, but they won't hate you or ice you out just because of that – you're still the fun kid they know…
T: so how likely do you think it is that they'll hate you and not hang out with you anymore if you join the math club instead of cheerleading?
C: 0%, well maybe 5%, Shelly may not be cool with it but most of my friends will be….after they give me hard time of course!

5

6 Extensively: therapist conducts thorough examination of possible implications of the negative belief **AND** explicit discussion of the likelihood of those negative outcomes (meets criteria for rating of 4). **In addition**, the therapist helps the client to explicitly formulate a new, more realistic thought to counter the original negative cognition **and** conducts mood rating before and after the intervention.
T: how is your mood when you believe that everyone will hate you for being yourself?
C: worse than totally and completely down! (conducts both interventions from BOTH rating 4 examples)
T: then the worst that could happen is not really that bad…
C: that's right!
T: so what's a new thought you could think instead of everyone will hate me if I be myself?
C: I dunno. I guess all my friends probably won't hate me and ice me out for joining the math club…they'll just give me hard time but still hang out with me because I'm still the same person. And even if it did come true, I would be happier, because I'd be doing things I love and be able to make new, true friends who will respect and share my interests.
T: Wow, great job! What's your new mood rating when you think that thought instead of the old thought?
C: A 10! Super!

The purpose of this item is to measure the extent to which the therapist helped or encouraged the client to examine the likely consequences or implications that would follow if one or more of the client's beliefs were true. In rating this item, the rater should also consider the therapist's attempts to help the client examine the likelihood of the consequences which the client already presumes will follow from her beliefs.

Example

The following example should receive a rating of greater than "0" on this item because the therapist helped the client examine the likely consequence of her belief that she's too "clumsy".

C: I can't play volleyball with my friends because I'm too clumsy.
T: do they say that or are you saying that?
C: I am.
T: Well, let's assume that's true, that you're too clumsy. What would that mean if you played anyway?
C: I'd make mistakes.
T: Then what would happen?
C: Everyone would laugh at me.
T: Is that true? Would your friends laugh at you?
C: well, no…
T: what else might happen?
C: I might lose the game for our side.
T: And if you did, what would happen?
C: not much, I guess my friends wouldn't take it that seriously, they're cool.

13) ADAPTIVE/FUNCTIONAL VALUE OF BELIEFS*+

Did the therapist guide the client to consider whether or not maintaining the specific thought/belief is adaptive for the client (regardless of whether or not it's accurate)? To what extent did the therapist attempt to demonstrate the lack of functional value of the belief **for the specific purpose** of helping the client recognize that the cognition/belief has no adaptive value for the client (to what extent did the therapist help the client see that it is not worth it to hold on to the cognition)?

*(See drop guidelines)

+(See default guidelines)

0 Not at all

1

2 Some: Therapist superficially discusses the adaptive/functional value of thoughts/beliefs with very little explicit encouragement to give up negative thought.

C: when I don't get good grades like my brother, I just think I'm a bad daughter!

T: so when you believe you're a bad daughter, how are things going to be for you?

C: pretty awful.

T: hmm…that doesn't sound fun.

3

4 Considerably: Therapist conducts collaborative discussion of adaptive/functional value of thoughts/beliefs and encourages child to let go of the negative thought. Involves some connection between thought, affect, behavior, and consequences of behavior.

C: when I don't get good grades like my brother, I just think I'm a bad daughter!

T: so when you believe you're a bad daughter, what are you feeling?

C: I dunno.

T: are you happy?

C: No! I'm very sad, ashamed.

T: what's it like to be sad/ ashamed all the time?

C: well, I don't want to be around anyone, I don't want to do anything.

T: what happens when you don't want to be around anyone or don't do anything?

C: I get sadder, angry.

T: wow, so it sounds like when you think these thoughts, it makes you sad and ashamed and act in ways that make you feel worse – more sad/angry, even.

C: yeah…it makes things worse and worse.

T: so do you think it's worth it to keep thinking you're a bad daughter?

5

6 Extensively: includes discussion of links between thoughts, affect, behavior, and consequences of behavior (e.g., quality of relationship, grades, etc.) **and** contrasts this with the adaptive/functional value of a more positive thought/belief (regardless of accuracy).

T: so you believe that you're a bad daughter because you're not getting the grades your brother is.

C: yeah. I try as hard as I can to get A's like him, but my mom and dad keep telling me that I'm not working hard enough.

T: when you're with your parents and you think about how you're not working hard enough on your grades, how does that make you feel?

C: I feel sad inside, and I feel angry!

T: why's that?

C: Because I keep getting compared to him! They should know that we're not the same person.

T: When you feel sad and angry at those times, how does it affect the way you act toward your parents?

C: It's not a pretty! I start getting really crabby and snap at them, then they snap back and it turns into a big fight sometimes. Then I go in my room and watch TV the rest of the night.

T: it sounds like your belief that you're a bad daughter really gets in the way of you being able to enjoy your time with your parents and also gets in the way of your study time.

C: Yeah, you're right. It makes things worse.

T: is it really worth it then, to keep thinking those thoughts? What does thinking thoughts really do for you?
C: it doesn't do anything, it makes things worse, and worse, and worse!
T: what if , on the other hand, you thought you're still a good daughter even though you don't get the grades your brother does?
C: well, tell that to my parents.
T: Just try to think that thought…how would things be for you then?
C: well, I guess I would feel better…
T: Like how?
C: Like I wouldn't feel as sad or angry…
T: and if you get a low grade and your parents tell you you're not working hard enough, what would that be like?
C: I guess I'd get irritated, not as mad…I might try harder.
T: how would that affect your relationship with your parents?
C: We'd fight less, I guess. I might get better grades even.
T: you might enjoy your time more, do more schoolwork, and get better grades how would you feel then?
C: even better, happy even!
T: so which thought works better for you? Thinking "I'm a bad daughter" or I'm still a good daughter even though I don't get the grades my brother does?
C: the second one of course!

The purpose of this item is to measure the extent to which the therapist helps the client consider whether or not it is adaptive or functional for the client to maintain a particular belief. Where or not a belief is accurate is not necessarily of consequence in deciding its adaptive/functional value. Thus the rater should not consider discussions of the accuracy of a belief in rating this item.

Important Distinctions for item #14
With Item #10 EXAMINE AVAILABLE EVIDENCE

The therapist and client in the above example might have gone on to discuss whether or not the client's belief that she is a bad daughter is accurate. Although this would not detract from the rating given to this item, discussion of the accuracy should be rated in item #10; only that part of the discussion which was focused on consideration of the adaptive/functional value of the belief (as was the case in the above example), should be considered by the rater in rating item #14.

14) EMPIRICISM
Did the Tx help girl to see new perspectives and draw own conclusions through empiricism ("guided discovery," hypothesis-testing) rather than debate? **Note**: an important component of CBT is "challenging" negative cognitions. This is to be distinguished from debating, persuasion, lecturing. While the CBT therapist has

the ultimate goal of deconstructing negative schemas and constructing positive schemas, the CBT therapist does so in a collaborative process of hypothesis testing. The therapist helps the child to suspend the belief that her cognitions are automatically true and instead, encourages the child to gather and examine evidence for/against the belief and/or shows her that other more feasible/functional hypothesis exist (alternative explanations). This is different from supplying answers or using some means of force to get the client to believe a more positive/functional thought.

Example of Persuasion:

T: so what were you thinking then?
C: that I am a bad daughter.
T: Well, I don't think you are a bad daughter, girls, do you think Ashley's bad daughter (other girls reply "no!")
C: see? No one here thinks you are a bad daughter, so what do you think now?

Example of Debate

C: I was thinking I'm a bad daughter.
T: well, you're not a bad daughter because you do chores, and bad daughters don't help out at home.
C: yeah, but sometimes I don't do my chores.
T: well, nobody does their chores all the time, so that can't make you a bad daughter.

Example of Lecturing
C: I was thinking I'm a bad daughter
T: well, there is no such thing as a bad daughter, or a bad person. Everyone has faults, everyone is human.

Example of Guided Discovery and Hypothesis Testing
C: I was thinking I'm a bad daughter.
T: hmm, well, let's see…could that be the MM talking? Let's look at the evidence to see if that's true or not. (guides child to discover evidence for/against belief)

OR

T: hmm, well let's see…what might be another way of looking at it instead of "I'm a bad daughter"?
C: I act bad sometimes, but I'm a good daughter overall (encourages new more feasible/functional hypothesis/belief)

0 Tx relied primarily on debate, persuasion or "lecturing." Therapist seemed to be "cross examining" the patient, putting the patient on the defensive, or forcing his/her point of view on the patient.

1
2 Tx relied too heavily on persuasion or debate, rather than "guided discovery" and "empiricism." However, therapist's style was supportive enough that patient did not seem to feel attacked or defensive.
3
4 Tx, for the most part, helped patient see new perspectives through the empirical approach ("guided discovery," hypothesis-testing) rather than through debate. Used questioning appropriately.
5
6 Tx was especially adept at using empirical approach during the session, helping patient draw his/her own conclusions. Achieved an excellent balance between skillful questioning and other modes of intervention.

The purpose of this item is to measure the extent to which therapists uses exploration and questioning (guided discovery) to help clients see new perspectives rather than resorting to lecturing or debating. The therapist guides the client to gather information to test validity of thoughts and beliefs through hypothesis testing, empiricism, setting up experiments, inductive questioning, weighing advantages and disadvantages.
At some points, it is appropriate to provide information, explain, confront, etc. rather than question. The main distinction is whether the therapist is **guiding** or **persuading** the client.

Example

The therapist uses guided discovery to help the client explore maladaptive consequences of holding the assumption that one should always live up to one's potential:

C: I guess I believe that I should always live up to my potential.
T: why is that?
C: otherwise I'd be wasting time.
T: but what is the long-range goal in living up to your potential?
C: I've never really thought about that. I've always just assumed I should. That's what I'm told.
T: Are there any positive things you give up by always having to live up to your potential?
C: I guess it's hard for me to relax and by happy with things I do.
T: what about living up to your potential to relax and be happy? Is that important?
C: I guess I never really thought of that way.
T: Maybe we can work on giving you permission to not work up to your potential ALL the time.

Important Distinction for Item #7
With ALL OTHER ITEMS

It is important to distinguish the technique of guided discovery that is used in conjunction with other techniques, as in this case, another technique used is ADAPTIVE FUNCTION OF BELIEF

15) DIDACTIC PERSUASION

Did the therapist use didactic persuasion to urge the client to change her beliefs?

0 Not at all: empirical approach or guided discovery was used throughout session to help patient draw her own conclusions. No instances of lecturing, debate, giving answers.

C: I am a bad person.
T: Well, how do you know?
C: I don't know. I just know.
T: has anyone told you you're bad person?
C: my mom says it all the time.
T: well, what makes you think you're a bad person?
C: I don't know.
T: what makes a bad person bad?
C: they talk back and get an attitude.
T: Do good people talk back and get an attitude sometimes?
C: I don't know.
T: Who's a good person you know? Do they get an attitude?
C: yeah.
T: so does that mean you're a bad person just because you talk back?
C: well…no.
T: what's a new thought you could have?
C: Just because I talk back and get attitude, doesn't mean I'm a bad person I'm a good person, I just talk back sometimes.

1

2 Some: the therapist generally helped patient see new perspectives through the empirical approach. Very little reliance on debate, lecturing, giving answers. Answers are supplied only after considerable questioning/hints are attempted.

(discussion from example 0 continued…)
T: so does that mean you're a bad person, just because you talk back?
C: well…no.
T: what's a new thought you could have?
C umm, I don't know really.
T: It doesn't mean you're a bad person. Good people talk back/have attitude too sometimes.

3 Considerably Tx relied heavily on persuasion and debate, giving answers (without attempts at guided discovery/Socratic method).

C: I am a bad person.

T: Well, I doubt that's very likely…you probably have bad behaviors, but you're good inside, right?
C: yeah, I guess.

4

5 Extensively Tx relied primarily on debate, persuasion, "lecturing," giving answers. Sense of forcefulness or coercion (e.g., withholding rewards).
C: I am a bad person.
T: you're not a bad person.
C: yes I am…
T: no, you're not, don't be a silly girl! You're not a bad person because no one is really all bad, people are born good. They just have bad behavior.
C: Not me, I'm a bad person. Period. My mom told me so.
T: Well, your mom doesn't know everything.
C: Yes she does.
T: we're supposed to be finding positive thoughts to replace the negative thoughts. You won't get your bead unless you say a positive thought!
C: Ok, I'm a good person.

6

The purpose of this item is to measure the extent to which the therapist relies on verbal persuasion (i.e., persuasive arguments, authoritative influence, appeals to rationality, etc.) as a means of trying to produce change in the client's beliefs.

Example

The following example should receive a rating greater than "0" on this item because the therapist tired to "talk the client" out of her belief rather than encourage her to consider evidence for or against the accuracy of her belief.

C: I just feel like my mom doesn't care about me when she acts like that.
T: doesn't it seem unreasonable to you that she doesn't care about you? To me, you're selling her short!
C: Maybe, but I'd never yell at my kids like that and say those things. I don't even yell at my dog like that.
T: Maybe you wouldn't but she's not you. Is it OK for you to compare her to you? It sounds like you have rules for how people should act when they care about someone that is not like "real life."
C: You don't think it's OK for me to say to her I didn't like her yelling and saying those nasty things to me?
T: I can understand that you didn't like it, but you seem to think that when people are with others they care about, they shouldn't act that way. In my experience, people who care about each other do yell and say mean things to each other. I think you'd be happier

with your mom if you didn't think that people who care about each other don't yell or say hurtful things to each other.

Important Distinctions for item #15
With Item #10 EXAMINE AVAILABLE EVIDENCE
Item #11 TESTING BELIEFS PROSPECTIVELY

Items #10 and #11 are intended to measure attempts by the therapist to get the client to gather (if necessary) and apply empirical evidence to test the validity of her beliefs whereas this item is intended to measure the sue of verbal persuasion to convince the client to change her beliefs. Review evidence which the client has gathered, or helping the client to use existing empirical evidence in questioning her beliefs should not be considered in rating this item. It is possible, however, for the therapist to help the client apply empirical evidence (which would result in rating item #10 and/or #11 greater than "0") and also use verbal persuasion to urge the client to change her beliefs (which would result in rating #15 greater than "0" also).

16) SUBSTITUTING POSITIVE THOUGHTS TO IMPROVE MOOD OR BEHAVIOR*+

Did the therapist encourage the client to substitute a more positive cognition for another (whether or not the substitute cognition was more accurate or realistic), **solely because the client would feel better/behave more adaptively if she thought another way?** This item requires that a negative thought be replaced; instances where the therapist helps the child to generate positive thoughts without reference to a negative thought are not rated. **BOTH** less realistic/accurate and more realistic/accurate thoughts are considered in rating this item.

***(See drop guidelines.)**
+(See default guidelines)

0 Not at all
1
2 Some: attempts to replace any type of thought in response to child's own thoughts (e.g., not related to actual thought, could be replacing thought of a teddy bear, visualizing a relaxing scene) (solely to improve mood).
C: I was thinking my mom is never coming back from her airplane trip…
T: So when you think that thought, what's a happy thought you could think to make yourself feel better?
C: I could think of my teddy bear, Mr. Fuzzy.
3
4 Considerably: attempts to replace positive thoughts more connected to the child's negative thought (solely to improve mood). Multiple positive thoughts of this nature are generated for the negative thought **OR** many negative thoughts are replaced with positive thoughts of this nature.

C: I was thinking my mom is never coming back from her airplane trip…
T: so when you think that thought, what's another thought you could have to make yourself feel better?
C: she will come back!

5

6 Extensively: meets criteria for item 4, but positive thoughts are more detailed and elaborate. Multiple positive thoughts of this nature are generated for one negative thought **OR** many negative thoughts are each replaced with a positive thought of this nature.
C: I was thinking my mom is never coming back from her airplane trip…
T: so when you think that thought, what's another thought you could have to make yourself feel better?
C: she will come back!
T: why?
C: because God won't let the plane crash…
T: how's that?
C: because I pray every night and God hears my prayers.
T: so you could think, my mom will come back because God won't let it happen, I say my prayers every night and he hears them.

The purpose of this item is to measure the extent to which the therapist attempts to encourage the client to substitute more positive thoughts for those the client is currently thinking, irrespective of their accuracy. Although the substitute thought may have been more accurate than the client's original thought, this item should be rated greater than "0" if the therapist encouraged the client to adopt the substitute thought because it was more positive.

Example

The following example should receive a rating greater than "0" on this item because the therapist encouraged the client to think something more positive than his original thought (without discussing its accuracy).
T: You must end up feeling pretty sad when you get down on yourself and think you're a failure…
C: I do. I feel just awful.
T: Why don't you think that you do well in lots of things. You're less likely to get down on yourself if you keep that in mind.

17) PRACTICING "RATIONAL RESPONSES"*+
Did the therapist and client practice possible rational responses to the client's negative thoughts or beliefs?
Note:
a) this goes beyond replacing negative thoughts with positive thoughts; it involves an element of rehearsing/practicing more adaptive thoughts in response to a

negative thought, mood, OR behavior (e.g., when you're thinking…what could you think instead?; when you're feeling…what could you think?; when you're acting…what could you think?)

***(See drop guidelines.)**
+(See default guidelines)

0 Not at all

1

2 Some: therapist encourages superficial/limited countering of the child's own negative though, mood, or behavior with a more positive thought. **Rate a 1** if the child is encouraged in an abstract manner (e.g., "when the MM says you are bad, you need to talk back to him and shut him up!") or unrealistic, irrelevant, superficial thoughts are used (T: When the MM says that your mom is not coming back from her airplane trip what can you say? C: I don't care, you're the stupid MM, you're lying!"
C: I was thinking that everyone in the world hates me.
T: Well, what could you say to the muck monster when he starts saying that?
C: Not everyone in the world hates me! My family loves me.
OR
C: I was feeling really sad OR crying when my mom was yelling at me.
T: well, what could you say to the MM or what could you think when you start feeling sad OR crying when your mom yells at you?
C: just because she's yelling doesn't mean she doesn't love me.

3

4 Considerably: therapist sets up a rehearsal with the client and implements considerable opportunities for the child to practice countering the negative thought (e.g., talking back to the MM).
C: I was thinking that everyone in the world hates me.
T: OK, let's pretend that I'm the MM, and you are going to talk back to me with positive thoughts. Ready? Julia…everyone in the world hates you!
C: not everyone hates me. My family loves me!
T: well, everyone at school hates you!
C: That's not true either! I have lots of friends at school…
T: All your teachers hate you!!! They punish you.
C: Ms. smith punishes me so I can do better and Ms. Oliveras told me that I her favorite yesterday!

5

6 Extensively: criteria for rating of 4 is met, but the client is assisted with coming up with more realistic/detailed counter-thoughts, either before or during the role-play (e.g., the therapist plays the child first to give examples of realistic thoughts, more realistic thoughts derived from

cognitive restructuring is used, the therapist helps the client during the role play by encouraging the child to come up with more elaborate/realistic counter-thoughts). **In addition,** the therapist obtains mood rating before and after intervention.

T: OK, let's practice talking back to the MM. when you have the thought everyone in the world hates me. I'll be you first, you can be the MM. But let's get your mood rating first…when you think this thought, what's your mood?

C: Totally and completely down!

T: OK, let's see if talking back to the MM will help you feel better.

C: Julia! Everyone in the world hates you!

T: No, not everyone hates me. My family and friends love me, and they're the people who matter.

C: Yes, but the most popular kids at school hate you!

T: that doesn't matter, what's the worst that could happen? I can just ignore the snobby behavior. Plus, they probably don't hate me, they are just insecure and need to put others down to make themselves feel better. …OK, now you try it! (child plays herself building on examples the therapist supplied).

T: OK, Julia, what's your new mood after talking back the MM with these new, more truthful thoughts?

C: Totally Terrific!

OR

T: OK, practice talking back to the MM...where are the new thoughts you came up with when we did the Thought Judge questions? You can use that to talk back when I play the MM…are you ready? (therapist and child role play talking back to the negative thought)

OR

T: OK, let's practice talking back to your negative thoughts…I'll be the Muck Monster, and you can be you. First, let's good your mood rating…when you think that negative thought, how are you feeling?

C: totally and completely down!

T: Whoa! Let's see now if talking back to the MM will help you feel better?

T: Julia…everyone in the world hates you!

C: not everyone hates me. My family loves me!

T: they don't love you…they just say they do!

C: no, they love me, they show it!

T: they do not show you they love you!

C: yes they do…my mom is planning a trip for us, my dad hugs me everyday, my brother helps me with my homework…

T: well, didn't your mom blame you for the fight with your brother?

C: So, that doesn't mean she doesn' t love me…she just misunderstood.

T: well, everyone at school hates you!
C: That's not true either! I have lots of friends at school…
T: they're fake friends.
C: no, they've got my back through thick and thin!
T: didn't Sherry spread rumors about you last year?
C: yeah, but that's just one friend…I have a bunch! And plus, we worked it out and we're friends again.
T: OK, now that you've done such a great job talking back to the MM with your new, more truthful thoughts, let's see how your mood is now.
C: Totally Terrific!

The purpose of this item is to measure the extent to which the therapist assisted the client in practicing "rational responses" to other distorted negative beliefs. Rational responses represent more accurate or reasonable ways of thinking about an event or issue than the client's original thoughts or beliefs. The rater should rate this item greater than "0" if the therapist:

(1) Attempted to teach the client ways of responding to negative thoughts;
(2) Demonstrated or participated in role plays for the purpose of increasing the client's ability to respond rationally to her negative thoughts and beliefs.

Example

The following example should receive a rating of greater than "0" on this item because the therapist participated in a role play with the client to help her practice generating rational responses to her negative thoughts.

T: what were you thinking after that happened?
C: I'm really stupid. I can't even get this easy question. I can't do anything right.
T: how did you feel after you thought that?
C: I felt bad, like a failure.

T: Let's try and figure out some things you could think instead that would be more true than thinking you're a failure. Let's pretend that I'm the muck monster. You try to talk back to the muck monster with more true thoughts. What would you say when the muck monster says that you're a failure?

C: I just didn't get one answer right, it doesn't have to mean I'm a failure.
T: have you gotten other answers right?
C: yes.
T: how often do you get the answers wrong?
C: about half the time. But that one was so easy! I'm so stupid!

T: well if half the time you get answers right, maybe you aren't a total failure at school.
C: I guess that's true. I'm not an A student either.
T: well, there might be some room for improvement on your grades, but if even if you got all the questions wrong, would that mean you were stupid? Are there any other things that would need think about before you decide that?

18) RECORDING/ MONITORING THOUGHTS*+

Did the therapist encourage the client to **record OR monitor** thoughts between sessions or review the client's records (written or mentally noted) of her thought? **Note**: a) This is not limited to assignment of therapeutic homework end of session; may occur at any point within the session (e.g., in conjunction with other interventions); b) For **Catch the Positives** interventions (e.g., Catch the Positives Diary, Catch the Positives Review), only instances where the child documents/monitors **cognitions** (e.g., caught all times she was thinking positively), **characteristics/traits** (e.g., I'm helpful, she's nice) will be coded for this item. All other experiences documented/monitored in the Catch the Positives Diary should be coded in the Behavioral Interventions section (Self-Monitoring).

*(See drop guidelines)
+(See default guidelines)

0 Not at all
1
2 Some: peripheral to session/brief, isolated referral to recording thoughts; such as encouraging girls to participate in the "bead game" (catching/changing negative thoughts), assigning practice or recording thoughts in the catch the positives diary at end of session without tying to other issues brought up in session. Brief, superficial review of practice or of Catch the positives diary with some comments, but no extensive follow up or connection with child's issues. NOTE: the content of the Catch the Positives diary must include actual thoughts the child had, not merely a record of events.
T: OK, everybody, remember to do your practice for next time…you write down a negative thought you have between now and our next meeting and use the thought judge questions….
OR
T: Julia, what did you write in your catch the positives diary?
C: Well, I noticed that the sun felt warm and no clouds in the sky, my birthday is next week and my mom is letting me have a sleep over, it was so cute when my dog did his trick I taught him…
T: good job!
3

4 Considerably:: therapist invests substantial effort in encouraging client to monitor /record thoughts or in reviewing monitored/recorded thoughts that are tied to the issues/problems of the child.

T: OK, everybody, remember to do your practice for next time..you write down your negative thought you have between now and then…Julia, if you have a fight with your mom and you have a negative thought in this bubble…

OR

T: Julia, what did you write in your catch the positives diary? Did you catch all your positive thoughts about your mom since you've been fighting a lot lately?

C: I thought that my mom loves me and is nice because she is letting me have a sleep over for my birthday next week…

5

6 Extensively: therapist puts forth extensive effort in encouraging client to monitor /record thoughts or in reviewing monitored/recorded thoughts that are tied to the issues/problems of the child. The therapist meets criteria for rating of 4 with more than one relevant issue.

The purpose of this item is to measure the extent to which the therapist:

(1) Encourages the client to monitor her thoughts, or
(2) Reviews with the client records of the client's thoughts which she made prior to session

In rating this item, the rater should consider discussion of the client's thought only if they occurred in the context of therapist requests for thought monitoring or in the context of reviewing records of the client's thoughts. The rater should not consider therapist requests for the client to record events, activities, mood or other feeling states, nor should the rater consider discussions of these phenomena which occur in the context of reviewing self-monitoring records. If the rater knows that the client is self-monitoring but is not sure that thoughts are part of what is being monitored, then this behavior should not be considered in rating this item.

Example

The following example should receive a rating of greater than "0" on this item because the therapist asks the client to monitor his thoughts

T: I'd like to record some examples from your everyday life about good things that happen, what you think about it. I'd like you to use this Catch the Positives Diary to write about the positive thoughts you have about you, others.

Important Distinctions for item #18

With item #3 REPORTING COGNITIONS

19) <u>BUILDING A POSITIVE SCHEMA*+:</u>
Did the therapist help the client to identify positive characteristics to support a new, more positive alternative view of the self (e.g., as efficacious, lovable, worthy, good, etc.), world (e.g., other people, systems as helpful, responsive), and/or future (e.g., hopeful)?
*(See drop guidelines)
+(See default guidelines)

0 Not at all
1
2 Some: therapist highlights positive aspects of self, world, or future to build upon a positive belief in a superficial, vague, unfocused manner. There is no discussion or exploration involved. **<u>Rate a 1</u>** if limited to vague, positive verbalizations such as simple compliments/praise (you did a good job; you are a good friend!)

C: I got an B today on my test! I tried so hard before but couldn't get that B, I finally did it!
T: Wow! Seems like you are a better student than you thought!
C: Yup.

3
4 Considerably: therapist <u>points out **and** elicits</u> positive aspects of the self, world, future that is relevant to the child's concerns/problems/issues. There is follow up discussion involving drawing a conclusion about specific aspects of the child's self, world, future (i.e., not the global self, world, future but specific aspects of self such as student, world, such as teachers, and future, such as grade in class). **<u>Rate a 5</u>** if the therapist meets criteria 4 for more than one issue for that child.

C: I got an B today on my test!
T: Wow! And you kept trying even though you didn't get an A the first time.
C: yup!
T: So what does that mean about your final grade for the class?
C: I can get better grades if I keep trying!
OR
C: I go a B today on my test!
T: how did you do that?
C: I didn't give up, I get studying and doing homework.
T: Wow, and what does that mean about you as a student?
C: that I work hard at school?
T: does a good student or bad student work hard at school?
C: a good student! I'm a good student!

5

6 Extensively: therapist points out **and** elicits positive aspects of the self, world, future that is relevant to the child's concerns/problems/issues to a greater extent. There is follow up discussion that goes beyond drawing positive conclusions about specific aspects of the child's self, world, future; therapist helps the child develop positive schemas about the global self, world, future. **Also,** the new conclusions are more realistic rather than overly-positive.

C: I got a B today on my test!
T: Wow! And you kept trying even though you didn't get a B the first time.
C: yup!
T: what did you do to get that B?
C: well, I studied 3 hours every night, I went for help after school, I did all my homework.
T: did you do anything different in class?
C: I paid attention, took notes, quit talking to Julia when I wasn't supposed to.
T: Wow, so it sounds like you did a lot of thins differently.
C: yes…
T: what does it mean about you?
C: I don't know.
T: do bad students do the thins you did?
C: No..I'm a good student!
T: that's right...what does it mean about you as a person?
C: what?
T: who made all those changes in their study habits and raised their grade?
C: I did.
T: where you in control or were you helpless?
C: I was in control and changed things for the better!
T: so what does that mean about you?
C: I am in control over myself and can make things better for me, I'm not helpless.
T; do you have to have work all the time and get perfect grades all the time to be a good student/in control of yourself and situations?
C: no, I can goof up every now and then, but as long as I keep staying on track I am still in control over myself and can make things work out for me.

The purpose of this item is to measure the extent to which therapist:

(1) Helps the client identify positive characteristics about her herself, world, or future,

(2) Helps the client draw positive, realistic, believable conclusions from this evidence

Also, most times building the new schema interventions will target depressogenic beliefs about the self (e.g., unlovable, helpless, unworthy, bad, defective, etc.), but be aware that targets can also include depressogenic beliefs about the world (e.g., other people, systems, etc.) and the future (e.g., hopeless, fated, miserable, etc.)

Example

T: Oh, so I heard you say that you got a good grade on your project.
C: yup!
T: What does that mean to you that you got a good grade?
C: well, I worked really hard on that!
T: what could that mean about you?
C: that I can work hard and do well when I try? I'm not helpless like the muck monster said.
T: great! I heard you say something about Ms. Smith when you got that good grade.
C: yeah, she patted me on the back and smiled, and told me how proud she was...
T: well, I wonder what that means to you, that she said that and acted that way toward you?
C: I guess it shows that she's not always in a bad mood, and maybe she does care about me.
T: great, and what could that mean about how things will work out in that class after all?
C: I think that if I work hard, and not give up, I can do good work and get the grade I wanted at the end of the semester..
T: wow! Good job looking through your bright lenses! So what could that mean about your future, how things will work out in general?
C: it's not all bad. I guess I have a lot of control over how it turns out.

20) RELATE IMPROVEMENT TO COGNITIVE CHANGE*+

Did the therapist relate improvement that has occurred in the client's depressive symptoms or related problems to changes in the client's cognitions?
Improvements need not entail dramatic therapeutic gains; may include positive change experienced during session (e.g., improved mood after coping activity, after thought judge questions, improvements reported during goals check in—given that goals pertain to cognition etc.).
***(See drop guidelines.)**
+(See default guidelines)

0 Not at all
1
2 Some: vague, superficial reference to changes in child's functioning to cognitive change. No follow up exploration/discussion is conducted.

C: Yeah, my mood rating for every day this week was 7 or more!
T: Sounds like you were catching the positives! OR you had your bright lenses on! OR Someone was talking back the MM!
C: yes, I did it!

3

4 Considerably: therapist conducts adequate discussion/exploration that relates improvement in child's functioning (e.g., affect, sleep patterns, relationships, grades) to cognitive change. Identifies specific thoughts with less emphasis on specifying improvements OR explored specific improvements with less emphasis on specifying thoughts.
C: yeah, so my mood rating for every day this week was 7 or more!
T: Why do you think that is? What causes our feelings?
C: Oh, my thoughts were more positive.
T: So what positive thoughts did you have that helped you be in a better mood this week?
C: whenever she got on me about stuff. I used the thought my mom scolds me because she cares, not because I'm a bad daughter
T: so thinking that helped you feel better in that situation…
C: yeah, and she scolds me a lot!

OR

C: yeah, so my mood rating for every day this week was 7 or more!
T: what was your usual mood?
C: 2 or 3, I always got mad/sad at home…
T: Why do you think that is? What causes our feelings?
C: Oh, my thoughts were more positive.
T: You had your bright lenses on for sure! So what happened when you were in a better mood?
C: I got along a whole lot better with my mom.
T: how's that?
C: instead of being angry talking back to her and crying and stuff when she scolded me, I was able to listen to what she said. We got along better.
T: so by thinking positively your mood went up from a 2/3 to 7, you weren't mad or sad when your mom scolded you and you listened/got along better! Way to go!

5

6 Extensively: therapist conducts extensive discussion/exploration that relates specific improvement in functioning to specific cognitive change. This would consist of discussion similar to combination of both examples in rating 4 example.

The purpose of this item is to measure the extent to which the therapist makes a connection between improvements the client has experienced and changes that have occurred in the client's beliefs. In order for this item to be rated greater than a "0", the therapist need not have related changes in the client's beliefs to therapeutic efforts to

change those beliefs. In rating this item, "improvement" refers to a reduction in the client's depressive symptomatology OR improvements in other areas of the client's life.

Example

The following example should receive a rating of greater than "0" on this item because the therapist related improvement the client has experienced in her family life to changes in his beliefs:

T: How are things going between you and your mom and brother?
C: My mom and me are getting along so much better now, I even like hanging out with my brother now too!
T: what do you think made these things happen?
C: I guess I'm getting along with my mom better now because I don't snap at her as much I used to.
T: I remember that when she said something to you that sounded like she was nagging or complaining, it made a lot of muck monster thoughts pop up about how worthless you are compared to your brother. I also remember that you felt really bad in those situations and how you reacted was making things really tense between you and your mom. It sounds like now that you're talking back to the muck monster and making him to be quiet, you're getting along better with her. Does that sound right?

Important Distinction for Item #20
with Item #2 RELATIONSHIP OF THOUGHTS AND FEELINGS
Item #9 DISTANCING BELIEFS

NOTE: Do not rate higher than a "4" unless the therapist contrasts the old thoughts/old affect/behavior with new thoughts/new affect/behavior.

21) APPLICATION OF COGNITIVE TECHNIQUES
Did the therapist apply techniques skillfully and resourcefully?
(Note: For this item, focus on how skillfully the techniques were applied, not on how appropriate they were for the target problem or whether change occurred)

0 Therapist did not apply any cognitive techniques.
1
2 Therapist used cognitive techniques, but there were significant flaws in the way they were applied (frequently tangential, incomplete, unfocused use of techniques)
3
4 Therapist applied cognitive technique with moderate skill. (for the most part techniques were employed to completion, were fairly central, and minimally tangential)
5

6 Therapist very skillfully and resourcefully employed cognitive techniques. (techniques were consistently applied in a thorough, focused manner, and were central to the child's problems)

There are general criteria for skillful application of techniques:

(1) Techniques should be presented articulately in language the child can easily understand
(2) Techniques should be sensitive to whether the child is actually involved in the change process or "going through the motions" out of compliance
(3) Techniques should be applied systematically so that there is usually a beginning (introduction, rationale), middle (discussion of possible solutions or change), and end (summary of conclusions, relevant homework assignments).
(4) The therapist should be resourceful in presenting ideas to the child in such a way that the child can superimpose the therapist's conflicting views. The therapist needs to anticipate problems the child may have in changing perspectives outside of session.
(5) The therapist is **flexible** in applying therapeutic interventions. The therapist uses what the child "brings to session" including the current/immediate presentation of the child (behavior, affect, thoughts as they occur in session) and/or problems/issues the child brings to session or is currently experiencing (e.g. including those reported by teacher, parent, etc.) vs. hypothetical problems/thoughts unrelated or not directly related to the child's current/immediate issues.

It is important to try to ignore whether the techniques are appropriate for the patient's problem and also whether the techniques seem to be working. Sometimes a therapist will apply techniques very skillfully, yet a particular child may be extremely rigid or unyielding and does not respond. In such cases, the therapist's flexibility, ingenuity, and patience may justify a high score even in the absence of client change. This is applied to modification of thoughts, assumptions, beliefs, as the techniques designed to elicit cognitions are assessed with item #1 (FOCUS ON KEY COGNITIONS).

Behavioral Interventions Coding Manual

SPECIFIC GUIDELINES FOR RATING ITEMS

GUIDELINE: IF a child is not the target of the intervention, but is exposed to the intervention by merely observing the therapist implementing an intervention which meets criteria for a "2" or higher, rate a 2. This applies to the following interventions Coping Skills Training, Mood Monitoring Education, Interpersonal Skills Training, Behavioral Activation, Homework Assigned/Reviewed and Self Monitoring. This guideline is marked in the manual with "*".

1) **IDENTIFICATION OF PROBLEMATIC BEHAVIOR(S):**
Were specific problematic behavior(s) elicited? This includes ANY behaviors that the client has engaged in (past), is engaging in (present), or will engage in (future) within or outside of the therapy session which reduce the overall functioning of the client. These behaviors are targeted in the intervention because *decreasing or eliminating* these behaviors will enhance treatment and benefit the client. Examples include boredom, losing homework, trouble sleeping.

0 Therapist did not attempt to elicit any problematic behavior(s)
1 Vague question or general check in made by therapist about problematic behavior(s) or any behavior which then is identified as problematic.(How are you doing in math class?)
2 Problematic behavior(s) elicited; however, the problematic behavior was vaguely identified. The therapist had difficulty operationally defining the key behavior(s) that were relevant to the client's target problem. (For example: "having difficulty sleeping" rather than the specific behavior of "tossing and turning in bed")
3
4 Specific operational definition of problematic behavior(s) was obtained relevant to the target problem. However, the therapist did not collaborate with the child to identify the behavior(s).
5
6 Specific operational definition of problematic behavior(s) through collaboration between the therapist and child to identify **AND** define the problematic behavior(s) that reduces the overall functioning of the client.

Purpose: To determine the extent to which the therapist and client collaboratively work to identify and define the key behavior(s) that reduce the overall functioning of the child. These behaviors must be identified to eliminate the problem that the child is experiencing. *NOTE:* If IDENTIFICATION is rated a 4 or above, EXPLORATION **must** be rated. However, EXPLORATION can be rated if IDENTIFCATION is rated below a 4.

Example:
T: Let's check in with each member. (RATE 0 if therapist stops here)
C: Not good.
T: How are you doing in math Sally? Your goal was to raise your grade to an A. (**RATE 1** if therapist stops here)
C: Well I am failing math right now and my mom thinks that I am not trying my best. We are always fighting about it. (general problem identified) **RATE 2** if therapist stops here, and focuses mainly on child trying to improve math grade without further identifying the problematic behavior)
T: You're failing math because you are not turning in your homework (specific problematic behavior elicited)?
C: Yea, but sometimes I turn it in (**RATE 4** if therapist stops her and focuses on how to increase turning in homework)
T: What keeps you from doing your homework?
C: I forget to do it or I leave it at school.
T: Oh I see! So the problem is that you leave your homework at school, which makes it hard to do at home. (**RATE 6**)

2) EXPLORATION OF PROBLEMATIC BEHAVIOR(S):
Did the therapist probe for and discuss client's problematic behavior(s)? This includes ALL questioning related to the problematic behavior. More focused exploration by the therapist will include determining the cues and consequences of the problematic behavior (which is reflected by higher ratings).

0 Not at All
1
2 Some; General questions surrounding the problematic behavior(s) were asked, though questioning may seem tangential to the problematic behavior. The problematic behavior(s) must be initiated or agreed upon by the client.
3
4 Considerably; Asked questions to determine the circumstances that surround the problematic behavior(s). The therapist is able to determine the cues OR consequences of the problematic behavior(s).
5
6 Extensively; Therapist and client collaboratively explore the problematic behavior(s) to identify the cues that precede the behavior(s) AND to determine negative consequence of the behavior(s) which can include but are not limited to negative thoughts or feelings.

Purpose: To determine the extent to which the therapist and client collaboratively work to help the client recognize the cues and consequences of specific problematic behavior(s). *NOTE:* A problematic behavior must be identified to rate this item. As noted

above, if IDENTIFICATION is rated a 4 or above, EXPLORATION **must** be rated. However, EXPLORATION can be rated if IDENTIFCATION is rated below a 4.

Example:
C: I had a bad day yesterday. I got in a fight with my brother.
T: How old is your brother?
C: He is 15. (**RATE 2**)
T: Tell me more about what happened.
C: We started yelling like we always do and he hit me in the arm. He is such a jerk!
T: Sound like you are pretty mad. What started the fight?
C: He wouldn't leave me alone; I was trying to watch my TV show.
T: What was he doing to bother you?
C: He was calling me names.
T: Okay and what did you do to let him know that was bothering you?
C: I threw the remote at him and that's when he hit me! (**RATE 4** if therapist stops here)
T: So what happened next?
C: We both got in trouble and I missed my show. I am grounded until I can get along with my brother again. (**RATE 6**)

3) IDENTIFICATION OF ADAPTIVE BEHAVIOR(S):

Were specific adaptive behavior(s) elicited? This includes ANY behaviors that the client has engaged in (past), is engaging in (present), or will engage in (future) within or outside of the therapy session which enhances the overall functioning of the client. These behaviors are targeted in the intervention because *increasing* these behaviors will enhance treatment by increasing the functioning of the client. Examples include spending time with friends, practicing for band, remembering to do homework. NOTE: This item focuses on existing adaptive behavior(s) rather than developing new adaptive behaviors for the child.

0 Therapist did not attempt to elicit any adaptive behavior(s)
1 Vague question or general check in made by therapist about adaptive behavior(s)
2 Adaptive behavior(s) elicited; however, the Adaptive behavior was generally vaguely identified. The therapist had difficulty operationally defining the key behavior(s) that enhance the client's social-emotional functioning (For example: "I have been an active family member, my mom is proud" rather than the specific behavior of "helping my mom with chores")
3
4 Specific operational definition of adaptive behavior(s) was obtained relevant to enhancing the social emotional functioning of the child. However, the therapist did not collaborate with the child to identify the behavior(s).
5

6 Specific operational definition of adaptive behavior(s) through collaboration between the therapist and child to identify **AND** define adaptive behavior(s) that contributes to the enhancement of the client's social-emotional functioning

Purpose To determine the extent to which the therapist and client collaboratively work to identify and define the key behavior(s) that enhance the social-emotional functioning of the client. *NOTE:* If IDENTIFICATION is rated a 4 or above, EXPLORATION **must** be rated. However, EXPLORATION can be rated if IDENTIFCATION is rated below a 4.

Example:
T: How are things going?
C: Really good. (**RATE 1** if therapist stops here)
T: What things have you been doing to make yourself feel better?
C: Well I have been doing fun things after school and on the weekends? (**RATE 2** if therapist stops here, and does not identify the specific adaptive behavior)
T: That's a change for staying in your room all the time. I notice that you have been spending more with your friends playing outside. What do you think about that?
C: It's been great!! **(RATE 4** if therapist stops here because there is little collaboration, yet specific behavior has been identified**)**
T: Wow! How often do you guys hang out?
C: We hang out every day after school. We just play around the creek.
T: How is that different than what you use to do before?
C: Well now I have more friends than before, because we keep asking more kids on the block to hang out with us. And before no one on my street really talked to me. Plus it is really fun! T: So hanging out with your friends is not only fun, but you are also making more friends! WOW! (**RATE 6** if it apparent that the adaptive behavior is enhancing the social-emotional functioning of the child)

4) EXPLORATION OF ADAPTIVE BEHAVIOR(S):
Did the therapist probe for and discuss client's adaptive behavior(s)? This includes ALL questioning related to the adaptive behavior(s). More focused exploration by the therapist will include determining the cues and benefits of the adaptive behavior (which is reflected by higher ratings).

0 Not at All
1
2 Some; General questions surrounding the adaptive behavior(s) were asked, though questioning may seem tangential to the adaptive behavior. The adaptive behavior(s) must be initiated or agreed upon by the client
3
4 Considerably; Asked the stimuli that precede adaptive behavior(s) and to determine the circumstances that surround the adaptive behavior(s). The

therapist is able to determine the cues of the adaptive behavior(s) OR the benefits of the adaptive behavior(s).

5

6 Extensively; Therapist and client collaboratively explore the adaptive behavior(s) to identify the stimuli that precede the adaptive behavior(s) AND to determine the benefits for the behavior(s) which can include but are not limited to negative thoughts or feelings

Purpose: To determine the extent to which the therapist and client collaboratively work to help the client recognize the cues and benefits of adaptive behavior(s). *NOTE:* If IDENTIFICATION is rated a 4 or above, EXPLORATION **must** be rated. However, EXPLORATION can be rated if IDENTIFCATION is rated below a 4.

Example:
T: How was your weekend, did you do anything fun?
C: Good, I rode my bike all around the neighborhood. I even saw a rainbow!
T: Wow that is great! Who do you go riding with? (**RATE 2** if therapist stops here)
C: Usually Cynthia and Katy.
T: What made you decide to go bike riding with Cynthia and Katy?
C: Well the weather was really nice and I like to be outside.
T: I see, so you wanted to be outside in the nice weather. (**RATE 4** if therapist stops here because a cue was determined)
C: Yea
T: What did you notice after you went for a bike ride?
C: I was so happy because I saw lots of pretty things like the rainbow.
T: Do you think you will keep riding your bike?
C: Yea- I really like being outside. (**RATE 6**)

5) PLANNING/PRACTICING ALTERNATIVE BEHAVIOR(S):

Did the therapist work with the client to plan OR to practice an alternative overt behavior(s) for the client to utilize outside of therapy? This includes any behavior which the therapist initiates to replace a problematic behavior. The client must receive support in implementing the replacement behavior through planning and practicing of the behavior in session. The goal of an alternate behavior is to enhance the functioning of the client by making an alternative behavior manageable for the client to engage in and be successful. *NOTE:* To rate this item, a problematic behavior must be identified.

0 Not at All

1

2 Some; The alternate behavior was suggested to client and no attempt was made to practice or plan the behavior.

3 Therapist checks to see if an alternative behavior is feasible but does not collaborate on creating a specific plan for the client to engage in the behavior.

4 Considerably: Alternate behavior(s) was collaboratively decided by therapist and client with a specific plan to the implement behavior(s). *If the therapist identifies barriers then it can be rated as implement a plan.* Also if NO plan is made, but the behavior(s) is practiced in session by client this rating can be achieved.

5

\\

6 Extensively; Therapist and client collaboratively developed an adaptive alternative behavior(s) to replace a problematic behavior(s) **AND** a specific plan to the implement the alternative behavior(s) was collaboratively developed. **The alternative behavior(s) must be practiced in session through role-play or modeling to obtain this rating.**

Purpose: To determine the extent to which the therapist and client collaboratively develop plan(s) for the client to engage in alternative adaptive behavior(s) outside of the treatment sessions AND to practice alternative adaptive behavior(s) within the session. NOTE: Do not rate this behavior higher than a 5 unless the alternative behavior(s) was practiced in session. Overlapping items may include *Plans for Problem Solving*.

Example:
C: I am not doing well in science class, I can't keep up and then I stop paying attention!
T: What happens before you stop paying attention?
C: Well, the teacher talks too fast and then I fall behind. So I just give up and put my head down.
T: What else could you do instead of putting your head down that would help pay attention?
C: I don't know.
T: Could you raise your hand and ask the teacher to slow down? (**RATE 2** if therapist stops here)
C: I guess.
T: Can you think of another thing that you could do to help you from getting lost?
C: I could ask the teacher for help after class.
T: That's a good idea! Anything else?
C: I could ask a friend for help too.
T: Okay you've got some good plans. Which one do you think will work for you?
C: I think raising my hand.
T: When would be a good time to do that?
C: Right when my teacher starts to go really fast.
T: Would there be any reason you wouldn't raise your hand?
C: No, I do it all the time. (**RATE 4** if therapist stops here)

T: Let's practice. I'll be you and you pretend to be your teacher. Start by teaching something in science.
C: Okay class, today we are going to learn about photosynthesis. I want you to copy the cycle from the board….okay now let's talk about the ozone.
T: (Raises hand). Excuse me, Ms Moore. Could you please slow down and repeat the last part you said.
C: Okay
T: Now let's switch and you try. (After role play) When are you going to try this?
C: In science class, tomorrow I will raise my hand like we practiced if the teacher goes too fast. (**RATE 6**)

6) <u>COPING SKILLS TRAINING*:</u>
Did the therapist teach the client coping skills and practice the coping skills in the session?
Coping skills can be applied in session to address feelings such as boredom, anxiety, anger, sleepiness, low energy, apathy, etc.

0 Not at All
1 Identified that a coping strategy is used inside or outside of session
2 Some; There is general discussion of the coping strategies with the client but no application of the skill is made to the client's specific situation. (For example: the client was asked to list types of activities that she does to cope.)
3 There is discussion of coping strategies specific to the client's situation inside or outside of session. (For example: ways that the client can implement coping skills.) However, the coping skill is not practiced in session.
4 Considerably; A coping skill is practiced within the session. This rating can still be obtained if it is not identified by the therapist that the group is engaging in a coping activity, but it is evident that the exercise is used to increase the energy or mood of group members.
5
6 Extensively; A coping skill is practiced in session with mood ratings. The rationale for using the skills is evident (you were feeling sad, so we did a coping strategy to make you feel better). To receive a rating of a 6, discussion of how the coping skill can be used outside of the session must be present.

<u>Purpose:</u> To determine the extent to which the therapist taught the client coping skills and practiced the application within the session.

<u>Example:</u>
C: I took a bubble bath before I went to bed last night, and I had no trouble sleeping!
T: Good coping! (**RATE 1** if therapist stops here)

T: When you feel bad, there are 5 coping strategies that you can use to help yourself feel better. Let's start by talking about the first coping skill: Do something fun and distracting. So when you feel down, one thing you can do to make yourself feel better is to do something that you enjoy and will distract you from feeling sad. Can you think of some fun and distracting things?
C: Play with your dogs, read a book, and go for walks.
T: Those sound like really fun things to do! When would you use them?
C: When I get in a fight with my mom. (**RATE 2** if therapist stops here)
T: Let's see how this coping skill works. Close your eyes and think about a time when someone made fun of you. Rate your mood.
C: 2
T: Now let's spend five minutes playing with hula hoops. Okay, rate your mood now.
C: 10 (**RATE 4** if therapist stops here)
T: How did your mood change from a 2 to 10?
C: Because I was hula hoping, it was so much fun that I forgot about being made fun of.
T: Yes! And when you were physically active and having fun, what kin do thoughts were having?
C: Positive thoughts!
T: How did that make you feel?
C: Happy!
T: What could you do at home when you feel down that is fun and distracting?
C: Play with my dogs (**RATE 6**)

7) <u>MOOD MONITORING EDUCATION*</u>:
Did the therapist and client work together to identify the client's internal experience of mood and apply it by using the mood meter or the 3 B's (brain, body and behavior) in the session?

0 Not at All
1 Identified that mood monitoring was used in the session by identifying the use or application of mood meter OR 3 B's without actually doing it. (For example: That's when you should use the 3 B's or use the mood monitor to help notice if you are sad)
2 Some; The specific steps of the 3 B's or the mood meter were taught. For example: Like naming brain, body and behavior or asking client to rate mood from 1-10. But no application of the skill was made.
3
4 Considerably; The 3 B's are identified and applied to a specific feeling or situation in session. Or a mood meter rating is taken before and after an activity to demonstrate a change in mood.
5
6 Extensively; The therapist and client collaborate on developing an understanding of the 3 B's or mood monitoring with application to a specific feeling or situation in session. A link between mood and behavior

is made overt. In addition, the therapist assists the client in understanding the rationale for using the skill.

Purpose: To determine the extent to which the therapist and client collaborate to develop an understanding of what the client is feelings by teaching the client how to identify the client's internal experience and how to apply that to the mood meter.

Example:
T: We can use the 3 B's as a tool to know when you become upset. **(RATE 1** if therapist stops here)
C: Okay
T: Remember the 3 B's stand for brain, body, and behavior. (**RATE 2** if therapist stops here). When are scared what does your brain tell you?
C: Something bad will happen.
T: What does your body do?
C: My heart beats really fast.
T: What happens to your behavior?
C: My hands shake and I get ready to run away. (**RATE 4** if therapist stops here)
T: Can you think of a time when you were scared?
C: Yea, yesterday I had to do a presentation in front of the class and I was really scared.
T: Okay used the 3 B's to describe what was happening to you?
C: My brain was saying "Everyone is going to laugh at me" and in my body my heart was beating super fast. My behavior….well…I guess I was talking really soft.
T: When you know that you are feeling scared, you can then use a coping skill to make yourself feel better **(RATE 6)**

8) INTERPERSONAL SKILLS TRAINING*:
Did the therapist and client work together to effectively develop the client's interpersonal skills in the session? Interpersonal skills are related to understanding, maintaining, and enhancing relationships of the client which may include individuals such as the client's parents, siblings, teachers, friends, and extended family. *NOTE:* The positive interpersonal behavior review can be rated under this item which included the client complimenting other group members. Also, this item can overlap with PLANS for problem solving.

0 Not at All
1
2 Some; An interpersonal skill or issue was mentioned in a vague manner. (For Example: kids can be mean sometimes, and they like to pick on others to make themselves feel better) OR something the client did interpersonally that was positive (For Example: you are doing a great job of getting along with your sister!)
3

4 Considerably; The client's interpersonal situation (ADAPTIVE: getting along with peers or PROBLEMATIC: arguing with parents) was discussed by having the therapist highlight or suggest interpersonal skills used by the client (For example: what were you doing to get along with your sister better). However, the focus of the discussion was not on the client's interpersonal relationship. **OR** a relevant interpersonal skill was taught to the client (such as assertiveness training, how to deal with a bully, spreading gossip)

5

6 Extensively; The therapist and client **collaborate** on how to deal with interpersonal situation specific to the client by highlighting <u>one or more useful strategies</u> to enhance the clients relationship (For example: spend more time with your brother, ask your friend to spend the night, help your mom with the dishes, etc). To obtain a rating of a six, the therapist must link the client's behavior with the impact it will have on the client's interpersonal relationship. **OR** the therapist encourages the client to practice building interpersonal skills within group (this includes complimenting other group members on what they do well in group or engaging in a role play).

<u>Purpose:</u> To determine the extent to which the therapist and client work together to effectively help the client develop interpersonal skills in the session.

<u>Example:</u>
T: Middle school is a tough time and kids can sometimes be very clickish (**RATE 2** if therapist stops here)
T: So how do you deal with kids picking on you?
C: I don't know what to do.
T: Let's come up with some ideas.
C: I could tell the teacher.
T: Sure! You could also ignore them or ask them to leave you alone. (**RATE 4** if therapist stops here)
C: There is this girl that is really mean to me.
T: Okay let's role play how you can stand up to her. *DO ROLE PLAY*
T: How do you think it would feel if you were able to stand up for yourself and then ignore this girl?
C: Really good. (**RATE 6**)

9) <u>INCREASING MASTERY</u>*:
Did the therapist encourage the client to engage in activities which would provide a sense of accomplishment for the client? *NOTE*: In session practicing of skills can produce a sense of accomplishment and be rated with this item. Also client's goals are to be rated under this item.

0 Not at All
1
2 Some; Encouraged the client to engage in activity that would provide a sense of mastery. This would include setting goals or a general goal check in. This rating can be achieved by a goal check in.
3
4 Considerably; Therapist helped client to see how participating in the activity would increase mastery and positively impact mood or thoughts about self. This includes improvement in treatment goals and its impact on mood. (For example: you are at a 100, that's 10 points better than last week, how does that make you feel?)
5
6 Extensively; Therapist collaborates with the client to identify mastery experiences and use those experiences to enhance the client's positive schema. For example: The therapist links the mastery to personal meaning of the client to build positive schema. This includes linking improvement in treatment goals to the client's personal meaning. (For example: what does it mean about you that you are able to improve on your goal of finishing your homework?)

Purpose: To measure the extent to which the therapist collaborated with the client to engage in activities, which are likely to invoke a sense of mastery and enhance the client's self schema.

Example:
T: You mentioned that you like to play the piano
C: Yea- I have been playing since I was a little kid.
T: How often to practice playing?
C: A couple times a week and more before a recital.
T: Why do you think it is important to practice?
C: So I can do good in the recital.
T: Yea, I think it's great that you practice playing the piano, it seems like such a special skill. Keep up the good work! (**RATE 2** if therapist stops here)
C: My mom makes me do it even if I don't want to.
T: You said you practice so that you can do well at your recital. How do you feel after a recital?
C: Really good, when I play well. I feel proud.
T: So even though sometimes you may not want to practice, when you do practice you perform well and that makes you feel good?
C: Yea- I get all dressed up for the recital and then I play and everyone claps! (**RATE 4** if therapist stops here)
T: So when you are listing good aspects of yourself, how would this fit in on your self map?

C: I would say that I am a good piano player and a hard worker because I practice so much.
T: Great job identifying one of your strengths! (**RATE 6**)

10) <u>BEHAVIORAL ACTIVATION: SCHEDULING/STRUCTURING ACTIVITIES*:</u>

Did the therapist work with the client to schedule and structure one or more specific activities? *NOTE:* This item MAY overlap with coping skills training, interpersonal skills training, planning and practicing alternative behaviors.

0 Not at All
1
2 Some; Therapist asked client to engage in one activity relevant to the client's treatment goals before the next meeting. (For example: What could you do to make that go up for your goal of spending time with your mom? How about planning something fun you both could do?)
3
4 Considerably; The therapist altered the activity to structure it so that the client is more comfortable and willing to engage in the activity (for example: Have the client make chit chat with a classmate before inviting that classmate to a sleepover) OR assisted the client in planning an activity relevant to the client's treatment goals by outlining the specifics such as time, day, amount that the activity will be done
5
6 Extensively; The therapist <u>collaborates</u> with the client to engage in an activity by structuring the activity to be realistic for the client and scheduling the activity outside of session. <u>A link between mood and behavior</u> is made overt. In addition, the therapist <u>explored any areas of the client's concerns</u> through problem solving or role-playing.

<u>Purpose:</u> To determine the extent to which the therapist collaborates with the client to (1) schedule specific activities for the client to engage in (2) structure the activity to make it more likely for the client to engage in (simplifying activity).

<u>Example:</u>
T: So one of your goals is make more friends. The first step in reaching that goal would be to be to start a conversation with someone that you would like to be friends with before our next meeting. Is there someone who would like to do that with?
C: This girls in my class, Sarah. (**RATE 2** if therapist stops here)
T: How do you think starting a conversation with Sarah will help you reach your goal of making more friends?
C: Well, if I talk to Sarah then she will get to know me and she will want to be my friend.

T: I think you are right; it will also give you a chance to get to know her and make sure that you want her to be your friend. Is there anything that might stop you from talking to Sarah?
C: I might get too nervous to talk to her, like I usually do.
T: How about if you start by just saying hi to her and asking one question before we meet next time? (**RATE 4** if therapist stops here)
C: Okay. I'll ask her what she is going to do this weekend.
T: Let's practice (role play interaction). How do you think Sarah will react when you talk to her?
C: She will be excited to talk to me.
T: If she is not excited for any reason, what will you do?
C: I dunno.
T: I think no matter what happens, you can congratulate yourself for trying to make more friends. That's more than you were able to do before.
C: That's true; I can always try to make friends with someone else if this doesn't work because I would be a good friend to someone. (**RATE 6**)

11) <u>HOMEWORK ASSIGNED/ REVIEWED</u>:
Did the therapist and/or client develop one or more specific assignments for the client to engage in between sessions? *NOTE:* This item only includes written work from manual

0 Did not attempt to develop, assign or review homework
1 Take up homework completed or handout homework assigned

2 Some; Assigned homework by listing things that needed to be completed before next session by page number or activity. Or asked if homework was completed.
3
4 Considerable; Assigned homework and elicited of the client has any questions OR Reviewed what homework was completed and asked if there were any questions. If the client did not complete the homework and possible barriers that may have kept the client from completing the homework were discussed rate a 4.
5
6 Extensive; The therapist collaborated with the client to assign or review homework through questions or discussion of how the homework was helpful to the <u>client's current problem</u>. In addition, the therapist explained rationale of the homework.

<u>Purpose:</u> To determine the extent that the therapist collaborates with the client to develop, assign or review homework.

<u>Example:</u>

T: Your practice that you completed was a problem solving worksheet for a problem that you had. (**RATE 2** if therapist stops here)
C: yea
T: Do you have any questions about it?
C: What was I suppose to do here?
T: That is where you write down what problem you have, and follow the steps of problem solving here. (**RATE 4** of therapist stops here)
T: Your problem was that you lost your mom's cell phone and you listed the plans and picked to look in your room, then the lost and found. How did that work out?
C: I still can't find it.
T: Now what are you going to do?
C: I guess I have a new problem of how to tell my mom that I lost her phone.
T: Sounds like you did a good job following the plans from your practice, the more practice you do the better you are at using these skills! Let's come up with some plans on how you can do that (**RATE 6**)

12) <u>MANAGING BEHAVIOR VIA REINFORCEMENT</u>:
Did the therapist help the client to arrange for reinforcements for the client's specific thoughts or behaviors in order to manage the occurrence of those behaviors? This item includes reinforcement by the therapist of ANY BEHAVIOR in session or outside of session.
NOTE: Reinforcement can be substituted with consequence for all anchors on this item.

0 Not at All
1 Reinforced client's participation such as answering a question (yes, exactly) with an affirmation rather than direct praise.
2 Some; Managed behavior in session with praise but no verbalized rationale for increasing behavior. A quick reinforcement would qualify for this rating. Example: Good job!
3 Target behavior is identified and reinforced. Example: Good job for catching the negative thought!
4 Considerably; A greater reinforcement was used to increase a behavior such as candy or a bead. To rate a 4, the targeted behavior must be overtly identified. Example: Here's a bead for catching that negative thought- I am dumb! Or a ROUND OF APPLAUSE for such a good role play.
5
6 Extensively: Systematic and consistent reinforcement was used to manage behavior. The targeted behavior was overtly identified to client. For example: The therapist gives bead after every negative thought the client has, instead of saving the beads until the end.

<u>Purpose</u>: To determine the extent that the therapist helped the client to increase the occurrence of one more of the client's behaviors using reinforcements.

T: Good Job! (**RATE 2** if therapist stops here)
T: Wow that was a great job talking back to your negative thoughts! (**RATE 3** if therapist stops here)
C: Yea, I am not always good at catching my thoughts- oh there is another negative thought by me!
T: Sure was! Here is a bead for being so good and catching that thought! (**RATE 4**)
C: Thanks!
T: Okay let's keep going, I want to give you ……..Oh I am so stupid I forgot to bring the cookies to the meeting!
C: Another negative thought!
T: You are on fire! Here is a bead for catching that thought. (**RATE 6**)

13) <u>MANAGING & BUILDING A BEHAVIOR VIA STIMULUS CONTROL</u>:
Did the therapist help the client to arrange for cues (stimulus control) for the client's specific thoughts or behaviors in order to manage the occurrence of those behaviors? *NOTE:* The stimulus MUST be external, internal cues should be rated under Mood Monitoring.

0 Not at All
1
2 Some: Identification of the stimulus or problematic behavior is made with indication of teaching the client to do something differently (manipulating behavior)
3
4 Considerably; A link is made with a specific stimulus and general manipulated behavior. (For example: When your mom looks angry (stimulus), what can you do to keep yourself from getting in trouble (general behavior))
5
6 Extensively: A contingency was put in place to manipulate a behavior. The rationale for the manipulation of the behavior is evident. A specific stimulus and specific manipulated behavior is identified.

<u>Purpose</u>: To determine the extent that the therapist helped the client to increase or decrease the occurrence of one more of the client's behaviors using stimulus-control. The therapist might ask the client to put a sticky note (stimulus) on her dresser to remind her to do her ACTION practice (behavior).

14) <u>SELF-MONITORING</u>:
Did the therapist encourage the client to record feelings, activities, or events between sessions? Or in the session, did the therapist review the client's records of feelings, activities, or events? ***NOTE*:** Rate this item when therapist uses the TAKE ACTION LIST.

0 Not at All
1
2 Some; Therapist encouraged the client to record a daily mood rating and check off the number of fun activities/ events that she engaged in. Or the therapist asked to client to report daily mood ratings between session and activities or events that the client engaged in.
3
4 Considerably- Therapist assisted the client in seeing a direct relationship between number of activities/ events or specific activities/events with an increase in mood outside the session.
5
6 Extensively- The therapist collaborated with the client to make the link that recorded mood ratings and activities/events are related. The client was able to see patterns of her behavior that contribute to a more positive mood.

Purpose: The therapist collaborated with the client to monitor events in the client's life through recordings of feelings relationship to specific activities or events.

Example:
T: Let's take a look at your Take Action List, before we meet next time. First make a list of all the fun things you like to do. Now I want you to try to do at least three things on your list each day and record your mood. We will talk about it each time we meet. (**RATE 2** if therapist stops here)

T: Tell me about your Take Action List. What day did rate your mood high?
C: On Tuesday my mood was an 8.
T: Wow! Why do you think it was so high on Tuesday?
C: Well my favorite show comes on Tuesday.
T: I also notice that you did more fun things on Tuesday compared to the rest of the week. So it seems like the more fun things you do, the higher your mood. (**RATE 4** if therapist stops here)
C: Yea, and on Saturday my mood was a 2 because I didn't do anything fun. I can tell the days I do less stuff on my list, I rate my mood lower. (**RATE 6**)

Problem-Solving Interventions Coding Manual

Rate the therapist's success eliciting desired responses per child.

Anchors are specified in the dialog in parentheses (e.g. Stop here, rate 2), indicating that if the conversation ends at a similar point, consider that rating for the item.

> ***Frequency is not as important as quality of the therapist's interventions. If the event occurs several times with one client during a session, take an average of the occurrences.*

NOTE:

IF a child is not the target of the intervention, but is exposed to the intervention by merely observing the therapist implementing an intervention which meets criteria for a "2" or higher, rate a 2.

Drop rating by 1 IF:

i. problem-solving interventions are applied to situations created by therapist such as reviews or hypothetical scenarios

22) IDENTIFYING PROBLEMATIC SITUATIONS

Was the client helped to identify situations in which problem-solving could be effective?

0 Not at All
1 Simply tells the child that problem-solving could be used.
2 Somewhat: refers to/mentions the idea that problem solving is used w/ situations that can be changed (vs. situations that cannot be changed) with no discussion.
3 Some: explores minimally with child if the situation could be changed/not changed, and how PS is used with situations that can be changed
4 Considerably: explores considerably with child if the situation could be changed/not changed; may include discussion of how the child knew it was a problem (viz., negative affect, things not going the way she wants them to)
5
6 Extensively: meets criteria for rating 4 but also encourages child to apply problem solving when uncertain whether situation could/could not be changed.

Purpose: To determine the extent to which the Tx helped the client determine whether it was a situation she could change or not.

Example:

T: What are some negative thoughts or situations that you had since we last met?
C: I got in a fight with my mom, my dog ran away, my fish died and I'm getting a bad grade in math.
T: So which of those could you use problem solving?
C: Fighting and grades. *(Stop here, rate a 2)*
T: How do you know problem solving will work?
C: Because they're things that I can change. *(Stop here, rate 4)*
T: How about your fish dying? Is that something you can problem solve?
C: No.
T: Why not?
C: Because I can't bring him back to life, I just have to cope with it.
T: Is your dog running away something you can problem solve?
C: Well, I don't know.
T: Is there something you can change so it doesn't happen?
C: Well, maybe, but I'm really not sure.
T: Ok, let's try it and see if it works. *(Stop here, rate 6)*

23) IDENTIFYING THE PROBLEM

Was the client helped to identify a specific or most central problem? A higher rating would be given if therapist helped the girl focused on a specific problem from vague to specific concern in order to help the girl feel better.

0	Not at All
1	Tells client what the problem is; identifies the problem for the client with no input or agreement from the client
2	Somewhat: therapist identifies problem for the child and the child agrees on problem but does not contribute to the identification of the problem
3	
4	Considerably: therapist collaborates with the client to identify the problem
5	
6	Extensively: therapist helps collaborates with child to specifically identify the problem and discusses how the problem is distressing for child (e.g., narrows from broad/vague problem of failing class to not completing homework on time, poor test performance, minimal time paying attention in class, etc.)

Purpose: To determine the extent to which the Tx helped her to see that it was a problem and the extent to which the Tx helped her identify a specific problem related to her bad mood.

Example:

C: I'm feeling really angry today.
T: I'm sorry you're feeling angry. When did you start feeling that way?
C: Yesterday when Kara wasn't acting like a good friend.
T: Hmmm, is that a problem for you?
C: Well, yeah! (Stop here, rate 2)
T: How do you know?
C: Because I feel bad and it's not what I want to happen.
T: It does sound like it's a problem. What kind of ACTION skill can you use? (Stop here, rate 4)
C: Problem solving.
T: What's the first "P" in problem solving?
C: Problem—identify the problem.
T: So what is the problem you want to solve?
C: For Kara to be a good friend.
T: Specifically how is she not being a good friend?
C: She keeps talking behind my back and it really hurts my feelings.
T: So that's the main problem—that she's talking behind your back. (Stop here, rate 6)

24) IDENTIFYING DESIRED OUTCOME

Was the client encouraged to consider what she wanted the outcome to be? In order to rate a higher score, the outcome must be elaborate and thoroughly explored collaboratively with the therapist and client.

0 Not at All
1 Therapist states the outcome for the child
2 Some: helps child identify desired outcome as absence of the problem with no discussion (e.g., from failing class to not failing class)
3 Therapist conducts some/minimal exploration of desired outcome. Discussion mainly surrounds absence of problem, but still limited to only the absence of problem (e.g., not failing class by not failing tests)
4 Considerably: Therapist conducts more thorough exploration of desired outcome. Discussion mainly surrounds absence of problem, but with simplistic/minimal expansion beyond absence of problem.
5

//

6 Extensively: therapist helps child conceptualize purpose as beyond the elimination of a negative situation and broadens perspective of good outcome by identifying specific desired improvements.

Purpose: To determine the extent to which the therapist helped her figure out what she wanted the results of problem solving to be. **NOTE:** the highest score that can be achieved is a 5 unless the Tx goes beyond eliminating the negative situation and helps broaden the client's perspective on what a good outcome is.

Example:

T: So the problem is that Kara is talking behind your back. What's the next "P"?
C: Purpose.
T: What does purpose mean?
C: What I want to have happen.
T: So what do you want to have happen?
C: For Kara to stop gossiping about me. (Stop here, rate 2)
T: What are some other things you would like to have happen?
C: For her to stop being such a brat.
T: What else?
C: For us to be friends and not talking behind other people's backs. (Stop here, rate 4).
T: Is there something that would help your friendship?
C: Well, if she would just tell me what she didn't like so I would know instead of gossiping. (Stop here, rate 5)
T: So what would have to happen for that to occur, for her to talk to you rather than behind your back?
C: Well, I guess I would have to be a better friend so she would want to talk to me when she's mad.
(Stop here, rate 6).

25) CREATING ALTERNATIVE PLANS

Was the client encouraged to explore possible alternative solutions for solving the problem?

0 Not at All
1 Therapist states one or a few plans
2 Some: therapist encourages child to formulate 1-2 plans
3 Therapist encourages child to formulate 3-4 plans
4 Considerably: encourages child to formulate 5 plans, but does not push beyond 5; limited to feasible plan, does not encourage to truly engage in brainstorming process (come up w/ ideas irrespective of feasibility).

//
5 helps child formulate 5 plans, both feasible and unfeasible.
6 Extensively: helps child formulate as many as possible, both feasible and unfeasible plans.
***Need to be related to quality and extend of collaboration (therapist should elicit plans rather than giving them or after the child stops giving plans, the therapist helps the child brainstorm
***Code lower if the therapist does not let the child just brainstorm without scoring each plan = serious decrease =2 (if evaluating each plan as the child goes instead of evaluating all of them after the child has listed them) – suppose to be pure brainstorming - cause of rigidity

Purpose: To determine the extent to which the Tx helped her engage in brainstorming at least five possible solutions without censoring her ideas. **NOTE:** Rate higher than 4 only if plans elicited positive events as well as negative events.

Example:

T: So you identified the problem and the purpose. What's next?
C: Plans, come up with different plans I can try.
T: So what is one?
C: I could never talk to her again.
T: Ok, what's another?
C: I could yell at her, but that's not really a good idea. (Stop here, rate 2).
T: Are we thinking about how good they are or just listing plans right now?
C: Just listing them. So yelling is one.
T: OK, what's another?
C: I could talk to her about it. That's probably enough.
T: Wait a minute, how many do we have?
C: Three.
T: How many should we have?
C: At least five.
T: Why do we need at least five?
C: So if one doesn't work we can try others.
T: Good, so what are some more plans?
C: I could ignore her or I could tell the teacher. (Stop here, rate 4).
T: Good. And you said that you would need to be a better friend. What are a couple of ways you could do that?
C: Well, I could stop talking behind her back to get back at her.
T: What else?
C: I could try to be a good listener.
T: And how would she know that you're going to be a good listener?
C: I could tell her that when she is mad at me I will be quiet and listen and not yell at her or walk away.

(Stop here, rate 6).

26) PREDICT AND PICK SOLUTIONS

Was the client encouraged to consider which plan would be most effective for the situation?

0 Not at All
1 Tells child which plan to pursue
2 Some: simply asks child which plan would work the best
3 Asks child for top choices without rating plans
4 Considerably: rates each plan on some scale
//
5 Helps client to assess plans in more in-depth manner (e.g., helps client to see what would make a plan a 3 instead of original rating of 5; helps client think of potential consequences for each plan)
6 Extensively: meets criteria for rating of 5 and helps client *practice* plan (e.g., role play)

Purpose: To determine the extent to which the Tx helped her evaluate efficacy of potential plans according to her identified purpose. Emphasis is on matching solutions to goals and on solution-generation. Tx helps the client practice the plan (e.g. role play) (earns a 6).

Example:

T: You've come up with five plans, so what is the next step?
C: Predict and pick.
T: And what does that mean?
C: Put them in order that they'll probably work best and pick one to try.
T: Good. So on a scale of 1 to 10, how would you rate never talking to Kara again? (Stop here, rate 2).
C: Probably a 0 because we wouldn't be friends if we never talked.
T: What about yelling at her? Do you think yelling would make her want to talk to you more?
C: No, so a 0 also. She wouldn't want to talk to someone who is yelling at her.
T: what about talking to her? How would that work?
C: I think that's the best one, it's a 9.
T: What about the other two?
C: Well, ignoring her would be a 1 because it's better than yelling but she would still talk behind my back and not to me. The last one is a 2 or 3 because she might stop gossiping but she would get mad because I tattled then she'd never talk to me. (Stop here, rate 4).
T: So which one are you going to try?
C: Talking to her.

T: What do you think will happen?
C: She will probably talk with me.
T: When do you think you'll do that? (Stop here, rate 5).
C: At lunch.
T: How would you like to be treated in this situation?
C: I'd want to do it in private so I'm not embarrassed, and I would want her to talk nice to me.
T: Good. Do you want to practice now? I'll be your friend, and you be you.
(Stop here, rate 6).

27) FOLLOW-UP WITH PLANS

Did the therapist and client discuss the efficacy of the implemented plan (plans from previous problem solving application)? If the first plan was not effective, was the client encouraged to try an alternative plan?

0 Not at All
1
2 Some: asked client if plan worked; vague/superficial follow up.
3
4 Considerably: discussion of degree of success of plans takes place. If unsuccessful: helps child to identify other alternative plans; may involve further problem solving; If successful, discussion of functional value of problem solving (e.g., contrast with what the outcome would have been if PS not used, if child did not persist with alternative plans, etc.)
5
6 Extensively: meets criteria for 4, but also: if unsuccessful, helps to examine why plan did not work; if successful, also involves mood rating, exploration of meaning regarding core schemas.

Purpose: To determine the immediacy with which the Tx followed up with the client and her plan, and helped her come up with more alternatives and continued problem solving.
NOTE: Rate higher than 4 only if Tx addresses what to do if no alternatives work.

Example:

T: Were you able to talk with Kara yesterday at lunch?
C: Yeah, we talked and it went really well. She said she was sorry and I said it was ok but next time please tell me when she's upset at me and I promise to listen. So she said OK, and I'm not mad at her and things are going the way I want. (Stop here, rate 2).
T: So it sounds like you had a problem, figured out what you wanted to have happen, came up with a solution and tried it out, and it worked!
C: Yeah, I guess problem solving worked!

T: So what if your first plan didn't work? Then what?
C: I would try the next plan on the list. (Stop here, rate 4).
T: And what if none of them worked?
C: I guess I would come up with more plans to try.
T: What are some other things you could try if your first plans didn't work? (Stop here, rate 6)

28) PAT ON THE BACK

Was the client helped to self-reinforce for trying to solve the problem?

0 Not at All
1 Therapist was the first to mentioned "pat on the back" in the session.
2 Some. The child was the first to mentioned "pat on the back" through the help of the Therapist's probing.
3
4 Considerably: therapist encourages child to self-reinforce in session (e.g., pat self on back); it does not matter who was first to mention "pat on the back" but instead the emphasis is on the extend of the therapist's encouragement
//
5
6 Extensively: therapist encourages child to self-reinforce in session or outside of session (e.g., bubble bath), but also encourages self-reinforcement even if plan is not successful.

Purpose: To determine the extent to which the Tx helped the client recognize and self-reward her effort regardless of how well the plan worked. **NOTE:** Rate higher than 4 only if Tx addresses importance of self-reinforcement for trying despite failure.

Example:

T: Do you stop with Predict and Pick?
C: No, there's one more, my favorite! Pat yourself on the back! (Stop here, rate 2).
T: What's that?!
C: I tell myself I did a good job and maybe do something good for myself.
T: Did you tell yourself you did a good job?
C: Yes, and I gave myself a pedicure as a reward. (Stop here, rate 4).
T: Great! But what if your plan didn't work, do you still pat yourself on the back?
C: Yes, always pat yourself on the back just for trying. (Stop here, rate 6).

Therapist Relational Interventions Coding Manual

Therapist Behaviors

1. Empathy: Was the therapist empathetic towards the client (i.e., did she convey an intimate understanding of and sensitivity to the client's experiences and feelings)?

0 Not at all

Ignored or seemed disinterested in the client's experiences and feelings; was unable and did not attempt to understand the client's experiences and feelings; devalued or dismissed the client's experiences or feelings or the meaning that the client placed on them.

1

2 Some

Made at least 1 empathetic comment (e.g., you look sad, you seem happy, that must feel really hard to have those thoughts, I can see how that thought would make you sad, I bet that is difficult for you) to child. At this level, the comment is simply an accurate word of how the child feels but does not add to what the client understands, so that there is no new information for the child, it is in synch with the child's perception of the feeling. The comment can be directed to the group as a whole to count for each girl (e.g., " Wow, everyone seems really down today").
Note: an empathetic comment can occur in the context of the mood rating as the therapist may respond to the child by reflecting back the feeling or noting their current feeling.

3

4 Considerably

Made at least 3 empathetic comments to child (e.g., you look sad, you seem happy, that must feel really hard to have those thoughts, I can see how that thought would make you sad, I bet that is difficult for you). The comments can be directed to the group as a whole to count for each girl but at least one must be directly to the girl being rated. At this level, the comment is still (but more frequent) **simply an accurate word of how the child feels but does not add to what the client understands**, so that there is no new information for the child, it is in synch with the child's perception of the feeling. **Note: an empathetic comment can occur in**

the context of the mood rating as the therapist may respond to the child by reflecting back the feeling or noting their current feeling.

5

6 Extensively

Made at least 3 empathetic comments of empathy (e.g., you look sad, you seem happy, that must feel really hard to have those thoughts, I can see how that thought would make you sad, I bet that is difficult for you). 1 comment can be directed to the group as a whole to count for each girl **but** two must be directed at only the girl rated **and** the therapist follows up these comments to the girl rated by exploring the feeling that was present for the child. Following up includes asking questions of the client in order to understand the client's experiences and feelings or their meaning to the to the client (e.g., "You look sad right now…tell me what that feels like…"). Here, the therapist also may summarize the client's experience in a way they might not have realized, helping them move to a deeper understanding of their own feelings. **Note: an empathetic comment can occur in the context of the mood rating as the therapist may respond to the child by reflecting back the feeling or noting their current feeling.**

2. Understanding

0 Therapist repeatedly failed to understand what the patient explicitly said and thus consistently missed the point. Poor empathic skills.

1 If child was quiet throughout session and therapist fails to verbally acknowledge this, rate a 1.

2 Therapist was usually able to reflect or rephrase what the patient explicitly said, but repeatedly failed to respond to more subtle communications. Limited ability to listen and to empathize.

3

4 Therapist generally seemed to grasp the patient's "internal reality" as reflected by both what the patient explicitly said and what the patient communicated in more subtle ways. Good ability to listen **and** empathize.

5

6 Therapist seemed to understand the patient's "internal reality" thoroughly and was adept at communicating this understanding through appropriate verbal and non-verbal responses to the patient (e.g., the tone of the therapist's response conveyed a sympathetic understanding of the patient's "message"). Excellent listening **and** empathic skills. Note: If therapist made at least 2 empathetic comments (as outlined in Empathy section) with **at least** one **accurate** empathetic exchange that further explored the child's feelings and excellent listening skills (not just a basic comment such as "You look sad" or "That must have made you feel sad"), rate a 6.

3. Warmth: Did the therapist convey warmth?

Special Note: Keep a frequency count of all warm comments.

0 Not at all

1

2 Some

Made at least **4** warm comment **and** at least 1 nonverbal communication (warm tone of voice when communicating) of warmth to child. A warm comment includes giving positive attention to the child (e.g., commenting on a strength of the child, a positive quality of the child, noting something they did well, how much the therapist cares about the child, stating how much the therapist cares about the child). The comment can be directed to the group as a whole to count for each girl.

3

4 A lot

Made at least **8** warm comments to the child. A warm comment includes giving positive attention to the child (e.g., commenting on a strength of the child, a positive quality of the child, noting something they did well, how much the therapist cares about the child, stating how much the therapist cares about the child). The comments can be directed to the group as a whole to count for each girl but at least one must be directly to the girl being rated.

5

6 Very much

Made at least **12** warm comments. A warm comment includes giving positive attention to the child (e.g., commenting on a strength of the child, a positive quality of the child, noting something they did well, how much the therapist cares about the child, stating how much the therapist cares about the child). The comments can be directed to the group as a whole to count for each girl but at least 2 should be directed at only the girl rated.

4. Rapport: How much rapport was there between the therapist and the client (i.e., how well did the therapist and client get along?

0 Total absence of rapport

Only negative interactions present. The client is consistently defensive and refuses to engage in sharing information.

1

2 Some rapport

Therapist and client appear comfortable working together however the client appears unduly inhibited in exchanges with the therapist. If child or therapist uses sarcasm in exchanges, rate 2. **Note: If little interaction between therapist and client makes it difficult to ascertain score, rate a 2. This may be more pertinent to larger groups.**

3

4 Considerable rapport

Harmony and accord between therapist and client with no hostile interactions. Here the child freely gives information (i.e., not defensive or inhibited).

5

6 Excellent rapport

Clear harmony and accord must be present throughout session with no negative interactions. Therapist and client appear to function well as a team and there are overt verbalizations by the client (i.e., how much they like the therapist, giving things to the therapist such as drawings, playfulness with the therapist).

5. Collaboration: Did the therapist actively attempt to engage the client in working together to explore therapeutic issues?

0 Therapist made no attempt to involve the client in working together.

1

2 Therapist occasionally attempted to involve the client in working together.

At least 1 interaction with child rated where issue was explored. Count as a 2 if therapist attempted to find ways to explore this issue (asks what child was thinking or feeling, asks child to generate coping thoughts, problem-solving, etc.). Other examples of collaboration include: setting the agenda **together** and allowing the child to select an issue or problem to work on. Group level collaboration includes engaging in a coping activity, engaging in problem-solving, and working together to restructure thoughts self-map activity, though bubble activity, assigns practice, reviews practice.

3

4 Therapist frequently attempted to involve the client in working together.

At least two separate interactions with client where issues were explored. One instance can be if the question or issue was posed to the group as a whole but the client responded to it. The second **must** be an issue directed at the individual client's issue in order to rate a 4. Rate a 3 if two times collaboration was initiated to the group as a whole but the child followed up. See above for examples of collaboration.

5

6 Throughout the session therapist actively solicited the client's involvement in working together.

At least three separate interactions with client where issues were explored. Of these, **two** must be directed the individual client's issue. Rate a 5 if one interaction with child where there issue was explored **and** two times collaboration was initiated to the group as a whole but the child responded and the therapist followed up these responses by the child. See above for examples of collaboration.

6. Involvement

0 Very detached

1

2 Somewhat detached

Therapist responded at least once to client's comments no matter what the comments were **or** therapist initiated a dialogue with the child and the child responded (this does not include didactic teaching/question and answer). If negative response such as asking to wait until later to talk about an issue rate a 1.

3

4 Mainly involved

A total of 3 times the therapist responded to comments made by a child no matter what was asked **or** therapist initiated a dialogue with the child and the child responded (this does not include didactic teaching/question and answer). If one of them was a negative response such as asking to wait to talk about an issue until later rate a 3. To rate a 4 the therapist did not appear to ignore client during session.

5

6 Very involved

At least 5 or more times the therapist responded to comments made by a child **or** therapist initiated a dialogue with the child and the child responded (this does not include didactic teaching/question and answer). To rate a 6 the therapist was attentive and responsive to the child throughout the session.

7. Interpersonal Effectiveness

0 Therapist had poor interpersonal skills. Seemed hostile, demeaning or, in some other way, destructive to the patient.

1

2 Therapist did not seem destructive, but had significant interpersonal problems. At times, therapist appeared unnecessarily impatient, aloof, insincere or had difficultly conveying confidence and competence.

3

4 Therapist displayed a satisfactory degree of warmth, concern, confidence, genuineness and professionalism. No significant interpersonal problems.

5

6 Therapist displayed optimal levels of warmth, concern, confidence, genuineness and professionalism appropriate for this particular patient in this session. To rate a 6, the rater feels there was nothing more the therapist could have done interpersonally in the session.

Harvard Community Health Plan Group Cohesiveness Scale- Version II (HCHP-GCS-II)

1. Unfocused/Focused

1 Discussion reflects no common agenda. Silence, unconnected, or individualized presentations. To rate a 1 throughout the group only one member talks with no other members participating in any meaningful manner with discussions.

2

3 Tangential relationship among themes. This implies that when issues were discussed, other members did not talk about the same specific topic. Rather, each member presented their own issues simultaneously without any real connection between the two. For example, one member begins to talk about an issue but when other members participate with the discussion it is not focused on the original idea but rather the other members simply state tangentially related material from their own experience.

4

5 Some associations between themes with moderate coherence or a confused presentation by one member or others making clear attempts to focus the presentation. Moderate coherence implies the members at some point in the conversation make a connection between each other's dialogue but do not then continue further in exploring the main connection between the issues. It is rather simply an acknowledgement of the similarity of the issues. An example of a 5 includes structured interactions (i.e., role plays, web activity, etc.) but does not go beyond the surface level (i.e., sustained focused exploration outside of **their part** in the role play).

6

7 Discussion of a common theme and logical buildup of material but with brief or slight digressions, or some unevenness. A variety of perspectives may be present. To rate a 7, some members recognize the similarities between their issues and follow up with further exploration of the overarching theme. For example, one girl may be discussing how her mom gets mad at her for bad grades while the other talks about how her mom gets mad at her for not doing her chores; this is then joined into a discussion on how to handle thoughts or feelings surrounding negative interactions with parents. This would also be rated for a sustained discussion outside of their part in a structured interaction (e.g., role play,

web activity, etc.). This is exampled by a sustained discussion of the overarching theme of the structured interaction.

8

9 Sustained discussion of a topic. The session has clear thematic coherence. A variety of perspectives are attended to and developed. To rate a 9, each discussion in session achieves this level of thematic coherence with all members joined in the dialogue and making contributions.

2. Withdrawal and Self-Absorption/Interest and Involvement

1 Predominant silence or explicit statements of total disinterest or negativistic avoidance of discussion. This item reflects all members displaying these behaviors. The predominant mood of the entire session reflects a lack of involvement by all members.

2

3 Members are only slightly involved or at least one member is involved but the rest are apathetic or uninvolved. This rating would imply that throughout the session, only one member is typically involved in discussions while the others remain detached or silent or if therapist has to verbally redirect a child back to the discussion **more than twice.**

4

5 Most members paying attention with some signs of interest or one member involved with some unevenness in interest exhibited by others; however **no side conversations** should be present or **no redirection** of children back to discussion. If children only participate after therapist has to redirect children back to discussion, only paying attention for brief moments, only some members involved, or side conversations interspersed with pertinent involvement rate a 4.

6

7 Discussion somewhat animated. Most members interested and involved in an animated way or one member intensely involved with most others clearly interested and participating now and then. To rate a 7 at least one discussion during session meets this criteria, however, if members involved but not animated, rate a 5. If the animated discussion is only for a brief period (i.e., 5 minute coping activity then rate a 6). An example of an

animated discussion in which the participants were involved also includes role-plays (i.e., Muck Monster) and would rate a 7.

8

9 All members intensely involved, speaking frequently. Interchanges like those rated a 7 occur throughout discussions during the entire session with all members actively participating each time. It is important to distinguish a 9 from 7 due to their similarity in content. To rate a 9, the group must maintain this behavior for the entire session.

3. Mistrust/Trust

1 Total inability to share personal material by blocked silence or explicit statements of acute fearfulness. A paranoid quality may be present. Note: This does not include a child's statement that they do not remember any thoughts from the week. Must be explicit statement of not wanting to share.

2

3 Some interchange about impersonal issues (e.g., sports, hobbies) or a few instances of revealing personal material in an atmosphere of discomfort or guardedness or explicit discussion of fears of sharing with little exploration of underlying reasons.

4

5 Some disclosure: most of the discussion involves an issue of some substance where moderate risk is involved or some personal material is brought up with limited responsiveness from others or group discussion of difficulty with self-disclosure with some discussion of underlying reasons. Issues of SOME substance would mostly involve sharing of only negative thoughts, problem potentially exposing shortcomings (failing a test, arguing with parents, difficulty with teacher, fighting with friends) without further exploration.

6

7 Deep personal material is discussed with some risk taking and some responsiveness or fear of sharing discussed with extensive exploration of reasons. Deep personal material would include core beliefs about the self (worthlessness, hopeless, unlovability, being bad), a traumatic experience

revealed (abuse, loss of significant others, severely distressing emotion, or other significant life stressor)

8

9 Members very open and responsive to sharing deep personal material or all members **highly responsive** to one or two members sharing of deep personal material.

4. Facilitative Behavior Scale

1 No facilitation of therapeutic work as shown by active resistance (e.g., subgroup conversation or hostile attacking behavior).

2

3 Slight effort is made to facilitate therapeutic work (e.g. solely asking factual questions or another member verbally redirects child back to discussion). Child only asks concrete question about the issue.

4

5 Some effort to facilitate therapeutic work (some attempts to examine underlying causes or elicit thoughts or feelings). To rate a 5 at least one other member must inquire about how the child was thinking or feeling or making suggestions for handling the issue (i.e., suggesting coping thoughts for the other to use, suggest problem-solving, suggest coping strategy, or giving suggestions for the other participant's self-map). Efforts to facilitate therapeutic work also include role-playing exercises between group members (i.e., taking turns being the Muck Monster for each other). To rate a 5 this pattern of responsiveness from the group occurs for only one issue during session but not for other issues that arise.

6

7 Significant efforts are made to facilitate therapeutic work. Some attempts to examine underlying causes or elicit thoughts or feelings is attempted by each group member. To rate a 7 all members must inquire about how the child was thinking or feeling or makes suggestions for handling the issue (i.e., suggesting coping thoughts for the other to use, suggest problem-solving, suggest coping strategy, or giving suggestions for the other participant's self-map). To rate a 7 this pattern of responsiveness from the group occurs for only one issue during session but not for other issues that arise. Efforts to facilitate therapeutic work also include role-playing

exercises between group members (i.e., taking turns being the Muck Monster for each other). **Note: if group only consists of two members, rate a 7 if both children display this pattern for at least 1 issue discussed (this means one issue per child).**

8

9 Strong efforts to further therapeutic work with attempts to deepen affective, cognitive, and behavioral exploration. All members make attempts to examine underlying causes or elicit thoughts or feelings. To rate a 9 all members must inquire about how the child was thinking or feeling or makes suggestions for handling the issue (i.e., suggesting coping thoughts for the other to use, suggest problem-solving, suggest coping strategy, or giving suggestions for the other participant's self-map). Efforts to facilitate therapeutic work also include role-playing exercises between group members (i.e., taking turns being the Muck Monster for each other).To rate a 9 this pattern of responsiveness from the group occurs **for all issues** discussed during session. **Note: if group only consists of two members, rate a 9 if child displays this pattern for at least 3 issues discussed (this can be three issues for one child where the other provides this help, or two issues for one and one for the other where each helps).**

5. Bonding

1 A strong sense of indifference, or separateness; members may appear repelled by each other.

2

3 Tentative presentations representing reflecting slight engagement with or responsiveness from others. A cool, aloof quality.

4

5 Some sense of mutual liking and mutual interest. To rate a 5 all members have to appear to like each other (giggles is a good indicator of some sense of mutual liking. But to rate a 5 no negative interactions. If during smiley ball activity only superficial compliments are given (i.e., your hair looks nice, etc.) rate a 5.

6

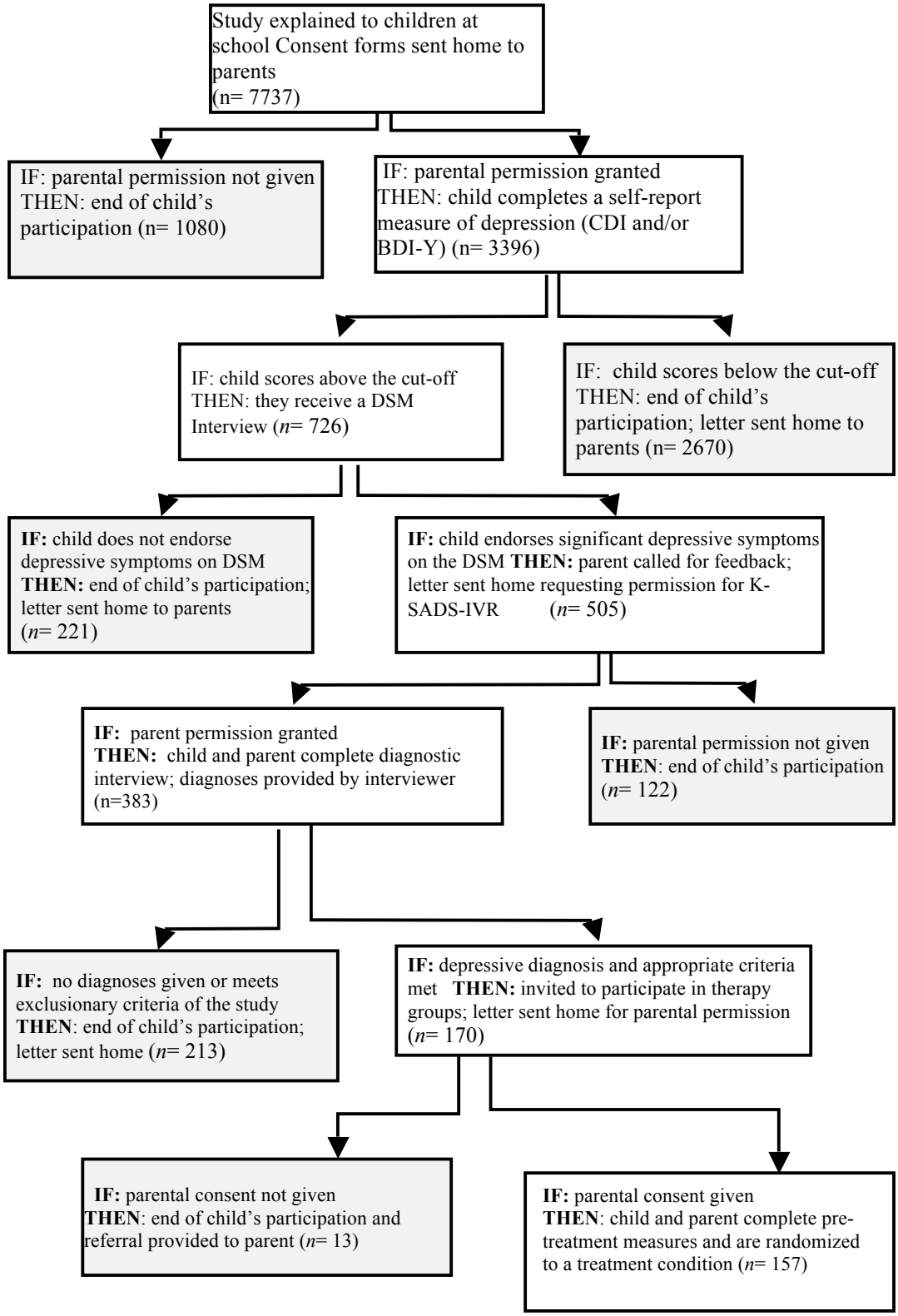
7 Clear sense of mutual attraction, liking, and warmth. One indicator of a clear sense of mutual attraction is indicated by compliments directed at other members or positive comments about member's contributions in helping themselves or each other. Pay special attention to interactions during smiley ball exercise at the end of each session **(although these typically are given to other members in early sessions before shifting to give compliments directly towards themselves)**. If this is the only time positive comments are made to other members (i.e., at the end of session), and these compliments seem genuine and go beyond the superficial (i.e., your hair looks nice), plus other indicators of warmth are present (i.e., giggling), rate a 7. Other indicators of a 7 would include exchanging email addresses in session or making plans together to spend time together outside of session (i.e., play at recess, each lunch together, etc.).

8

9 Very strong, consistent mutual attraction. Much warmth is present.

Example: Similar to above, but to rank a 9, interactions must be of this quality throughout the entire session. One indicator of a clear sense of mutual attraction is indicated by compliments directed at other members or positive comments about member's contributions in helping themselves or each other. Pay special attention to interactions during smiley ball exercise at the end of each session. If this is the only time positive comments are made to other members (i.e., at the end of session), and these compliments seem genuine, plus other indicators of warmth are present (i.e., giggling), rate a 7. If positive compliments are present at other times throughout the session and genuine compliments are given at the end of session during the smiley ball activity **(although these typically are given to other members in early sessions before shifting to give compliments directly towards themselves)** rate a 9. If the therapist only asks kids for compliments about themselves then base rating on the rest of session.

Appendix E: Multiple Gate Procedure Flow Chart



Appendix F: Letters to Parents, Parental Consent Forms, and Student Assent Forms

Initial Screening Consent Letter

Dear Parent,

SCHOOL is teaming up with Kevin Stark, Ph.D. from the University of Texas to evaluate a coping skills training program for girls called ACTION. The ACTION program is designed to teach girls how to manage their emotions and stress, solve problems, and think more positively about themselves. While we believe that all students could benefit from this program, currently, only girls who are experiencing high levels of distress will be able to participate. We are asking for permission from all parents of girls in GRADES for their daughters to participate in a screening that will help identify girls who are experiencing distress. Girls who participate in the screening will fill out a questionnaire that takes approximately 10 minutes to complete. Doctoral psychology students with appropriate training will supervise the completion of the questionnaires. At this time we do not anticipate any discomfort in completing the ACTION questionnaire.

Girls who report having more than a typical number symptoms of distress will be interviewed about specific symptoms of depression to determine if they are experiencing high levels of distress. The brief symptom interview will be conducted by trained graduate students or project staff under the supervision of Dr. Stark. If a girl in the study is reporting distress on the questionnaire or brief symptom interview, the parents will be contacted by phone to ensure the girl's well-being. ACTION staff or the school counselor may discuss your child's further participation in this research project at that time. For all girls who complete the questionnaire or interview and do not show significant symptoms of distress, parents will receive a letter stating those findings.

The purpose of the project is to determine whether the ACTION coping skills program is more effective than no counseling, and whether parent participation makes the program more effective. In addition, we are trying to learn whether adding follow-up meetings prevents future distress. The benefits to participants include possible participation in the ACTION program and helping advance our understanding of how to best help young girls manage emotions and stress, solve problems and feel better about themselves.

Participation in the project will not cost you anything and there will not be any financial compensation for participation. There are not any risks of harm from completing the questionnaire. There are no anticipated risks from completing the brief symptom interview. In fact, the procedure is designed to quickly identify and assist children who are in distress. All materials and forms will be stored in locked file cabinets in a secure office at UT to protect confidentiality.

If a child reports that she is at risk of hurting herself or others, her parents would be immediately informed and she would immediately talk with her school counselor. In

addition, she would be evaluated by one of the consulting psychiatrists at no cost to the family.

If you choose to participate, you or your daughter may stop participation at any time. Participation in the study is entirely voluntary. You are free to say that you do not want to participate by returning this form indicating on the back of this page that you do not want to participate. You can refuse to participate without penalty or loss of benefits to which you and your daughter are otherwise entitled. It will not affect your relationship with your child's school or the University of Texas.

Researchers are required by Texas state law and professional ethics codes to report to Child Protective Services (or other appropriate regulatory agency) all instances of alleged child abuse and neglect. Please note that if your child completes the screening questionnaire or interview and is believed to be at risk for emotional, psychological or possible physical harm or neglect, then the investigator will report this information to the attending physician, Child Protective Services, and any other necessary regulatory agencies. Please note when a child reports neglect or being harmed, participants cannot stop the referral of their child's case to the authorities and any subsequent actions taken.

If you have any questions about the study, you can call Kevin Stark, Ph.D. at (512) 471-0267, your school counselor, or principal. If you have questions about your rights as a participant, please contact Lisa Leiden, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 471-8871.

Sincerely,

_____
Researcher's Signature

_____
Principal's Signature

_____
Date

PLEASE KEEP THIS LETTER FOR YOUR RECORD

PARENT/GUARDIAN SCREENING PROCEDURE CONSENT

Please check the appropriate box indicating that **YES** you have read this letter and are giving permission for your daughter to participate in the ACTION project at your child's school by completing the screening questionnaire and brief symptom interview, or **NO**, you have read this letter and you do not want your daughter to complete the questionnaire or interview. Regardless of your decision, please sign this form and return it to your child's teacher.

PLEASE RETURN THIS FORM TO YOUR CHILD'S SCHOOL WITH YOUR PREFERENCE NOTED BELOW:

_____**YES** I **give my permission** for my daughter to participate by completing the screening questionnaire and brief symptom interview.

_____**NO** I **do not give my permission** for my daughter to participate by completing the screening questionnaire or brief symptom interview

_____ _____

Parent's Signature Date

_____

Child's Name (please print)

We will provide feedback for all participants. Please provide information below if your child will be participating.

Parent/adult guardian name(s): _____

Mailing address: _____ City/ZIP:_____

Parent phone number(s) in case we need to reach you with a concern about your child:

Home_____cell_____work_____

Youth Assent Form for Screening

I agree to complete a questionnaire about my thoughts, feelings, and behaviors. This questionnaire has been explained to my parent or guardian and he or she has given permission for me to participate. I may decide at any time that I do not wish to participate and that it will be stopped if I say so. My specific responses will not be shared with anyone. However, general information about how I am doing and feeling may be shared with my parent.

When I sign my name to this page I am indicating that I read this page and that I am agreeing to participate.

_____ _____

Your Signature Date

_____

Please Print your Name

Date of Birth _____

Month Day Year

Parent Consent Form for K-SADS

Dear Parent,

Per our contact with you regarding your daughter's responses to the screening questionnaire and brief symptom interview, we are requesting permission for you and your daughter to complete a more comprehensive interview that will help us determine more accurately whether she is experiencing serious emotional concerns or whether she was not feeling well on the days that she completed the questionnaire and brief interview. The interviews will be conducted by trained doctoral psychology students under the supervision of Kevin Stark, Ph.D., licensed psychologist. The interview of your daughter will be completed in a room at school that will protect her privacy. It takes 45 to 90 minutes to complete and asks specific questions about how your daughter is feeling, thinking and behaving and a range of experiences she may have encountered. The interview with you will cover the same topics and can be conducted in person or over the phone if that is preferable, at a time that is convenient for you. Participation in the interview will not cost you anything and there will not be any financial compensation for participation. Completed interviews will be stored in locked file cabinets in a secure office at UT to protect confidentiality. If she is, she may be eligible for participating in the ACTION program. If this wouldn't be the best program for her, we will provide you with possible resources from within the school and the community.

If a child reports that she is at risk of hurting herself or others, her parents would be immediately informed and she would immediately talk to her school counselor. In addition, she would be interviewed by Kevin Stark, Ph.D., a licensed psychologist, or one of the consulting psychiatrists at no cost to the family. If a child reports that she is being hurt, the school's standard procedures for reporting such instances to the relevant state agency would be followed.

The purpose of the project is to determine whether the ACTION coping skills program is helpful, and whether parent participation makes the program more effective. In addition, we are trying to learn whether adding follow-up meetings prevents future distress. If you have any questions about the study, you can call Kevin Stark, Ph.D. at (512) 471-0267 your school counselor, or principal.

If you choose to participate, you or your daughter may stop participation at any time. Participation in the study is entirely voluntary. You are free to say that you do not want to participate by returning this form indicating that you do not want to participate. You can refuse to participate and this decision will not affect your relationship with your child's school or the University of Texas.

Researchers are required by Texas state law and professional ethics codes to report to Child Protective Services (or other appropriate regulatory agency) all instances of alleged

child abuse and neglect. Please note that if your child completes the screening questionnaire or interview and is believed to be at risk for emotional, psychological or possible physical harm or neglect, then the investigator will report this information to the attending physician, Child Protective Services, and any other necessary regulatory agencies. Please note when a child reports neglect or being harmed, participants cannot stop the referral of their child's case to the authorities and any subsequent actions taken.

If you have questions about your rights as a participant, please contact Lisa Leiden, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512-471-8871). Let him know that you are enquiring about the study entitled "Helpfulness of the ACTION Coping Skills Program with and Without Parent Participation."

Please check the appropriate box indicating that **YES** you have read this letter and are giving permission for you and your daughter to participate by completing the interview, or **NO** you do not want to complete the interview nor do you want your daughter to complete the interview. Regardless of your decision, please sign this form and return it to your child's teacher. You will be given a copy of this permission letter to keep for your records.

☐ **YES** I give my permission for my daughter and I to participate by completing the interview.

☐ **NO** I do not give my permission for my daughter and I to participate by completing the interview.

_____ _____

Parent's Signature Date

_____ _____

Researcher's Signature Date

_____ _____

Principal's Signature Date

Youth Assent Form for K-SADS

I agree to participate in an interview about my thoughts, feelings, and behaviors. It has been explained to me that this interview will help to determine whether the ACTIION counseling program may be helpful for me. This interview has been explained to my parent or guardian and he or she has given permission for me to participate. The interview will be stopped if I say so. Specific things that I say during the interview will not be shared with anyone. However, general information about how I am doing and feeling may be shared with my parent for the sake of talking about what to do to help me.

I will be asked to complete an interview about my current feelings, behaviors, and thoughts. By signing this form I am giving permission for the interview to be audio-taped for the purpose of being sure that the interview was conducted correctly. These tapes will be erased as soon as the ACTION program is completed.

It is okay if I decide to stop my participation in this interview at any time. When I sign my name to this page I am indicating that this page was read to me and that I am agreeing to participate.

_____ _____

Child/Adolescent Signature Date

_____ _____

Staff/Researcher Signature Date

Parent Consent for Pre-Treatment Assessment and Treatment; Depressed Group

Dear Parent,

Based on results of the screening and interview that you and your daughter have participated in so far, we are requesting permission for you and your daughter to continue and participate in the evaluation of the ACTION coping skills program. If you give your permission for your daughter to participate, she will be randomly assigned to one of three groups: (1) ACTION coping skills program, (2) ACTION coping skills program plus parent participation, or (3) wait to receive the program in about 12 weeks.

If your daughter is randomly assigned to the ACTION coping skills program, she will meet 20 times over the next twelve to sixteen weeks with a group of girls to participate in a counseling program that is designed to teach her problem solving, coping skills for managing her emotions and stress, and strategies for thinking more positively about herself and things in general.

If your daughter is randomly assigned to the counseling plus parent participation, she will meet 20 times over the next twelve to sixteen weeks with a group of girls to participate in a counseling program that is designed to teach her problem solving, coping skills for managing her emotions and stress, and strategies for thinking more positively about herself and things in general. In addition, you would be asked to attend a total of 10 meetings over this period that will last about an hour and a half. The parent meetings will be held at school after hours and daycare and refreshments will be provided at no expense. During these meetings parents will have a chance to learn the skills that their daughter is learning, and parents will learn strategies for helping their daughter to use the skills.

The girls will meet in a small group during an elective class. Each meeting will last one class period. Steps have already been taken to ensure that she will receive any class materials that she misses. The group meetings will be led by a trained doctoral psychology student or Ph.D. level therapist and a counselor from your daughter's school. The group leaders will be supervised by Kevin Stark, Ph.D. It is not expected that your daughter will experience any discomfort or risks from participating in the ACTION coping skills program. In fact, past experience with the program indicates that the girls enjoy participating and benefit from it.

If your daughter is randomly assigned to wait to receive counseling in about 12 weeks, we will take the following steps to ensure that she is okay. A doctoral psychology student will meet with her each week to monitor how she is doing, she will be discreetly observed in school at lunch or recess for about fifteen minutes per week, and the staff member will check-in with her teacher each week. In addition, every other week, the staff member will check with you to see if you have any concerns. At the end of the waiting period, she will have the opportunity to participate in the coping skills program. If at any point during this waiting period she reports feeling worse or you would like to seek counseling elsewhere,

we will provide you with information about community and school resources. You have the option at anytime to seek additional services including consultation with one of the project's consulting psychiatrists at no cost to you.

We will be monitoring each girl's progress and report this information to two psychiatrists who are being paid by us to oversee each child's welfare. If a participant is not improving as a result of the program, then parents will be informed and we will meet with you to discuss other options for providing your daughter with help. If you would like information about medications that might be of assistance, the psychiatrists are available to meet with you and discuss these options at no cost to you.

To determine whether the ACTION coping skills program is helpful, we are asking you and your daughter to complete some questionnaires that help guide, and evaluate the effectiveness of the ACTION program. The questionnaires will take your daughter about one hour to complete. It will take you about 30 minutes to complete your questionnaires. We are asking you to complete the questionnaires so that we can determine whether participation in the ACTION program also benefits you and your family. The questionnaires have been completed by other children and adults without any discomfort. In order to assess the potential benefits of ACTION on school performance, our staff collects the following general education information: grades from reporting periods, attendance, and discipline information for participants.

For one year after completion of the ACTION program, your daughter will have the opportunity to meet with her group and apply the skills to the new problems and stresses that she faces as she grows up and navigates her way through the many difficulties of being a teenager. The groups will meet three times a semester over the rest of the course of the study. In addition, to determine if your daughter needs additional help, once a year, we will ask you and your daughter to complete the interview and the questionnaires to determine whether we have achieved the goal of preventing the difficulties from recurring. Each time in the future that you and your daughter are asked to complete the measures, you will be paid $25.00 and your daughter will be paid $20.00.

If a participant reports at any time that she is feeling like she would like to hurt herself or someone else, then, she would be immediately interviewed by a trained staff member and the school counselor. In addition, if there is concern about a child's safety, the staff member would immediately contact the parents and Kevin Stark, Ph.D. or one of the consulting psychiatrists. If at all possible, the psychiatrist on call would be available to meet with the girl and her parents to further evaluate the situation and to provide you with information about resources from within the community that could be of help. If it is not possible to immediately meet with one of the mental health professionals, then it would be recommended that the child and parents pursue the conventional procedure of driving to the emergency room of a local hospital. If a participant reports that she is being hurt, then the staff member and school counselor would follow the school's standard procedures for reporting such instances to the relevant state agency.

All of the services that we provide are available to you at no cost to your family.

The benefits to you and your daughter are that she may learn skills and strategies that will help her to be happy and healthy throughout adolescence. Similarly, you may learn strategies for helping her to successfully make it through adolescence. The benefit to society is that it will help us to determine whether teaching girls who are experiencing depression these skills helps to reduce the depression and whether it is even more helpful to involve parents. Furthermore, since girls are at very high risk for becoming depressed between the ages of 13 to 15, the results of this study will help us learn whether there is a procedure for preventing this from occurring.

The ACTION program meetings are audiotaped for quality assurance purposes. To ensure confidentiality, the following steps will be taken: (a) the cassettes will be coded so that no personal identifying information is visible on them; (b) they will be kept in a locked file cabinet in a secure office at UT; (c) they will be reviewed only for research purposes by the relevant research staff; and (d) they will be erased after they are checked and the study has been completed. Identifying information will be removed from all of the assessment materials completed during the study and the materials will be stored in a locked file cabinet in a locked research office at UT.

Participation in the ACTION coping skills program is entirely voluntary. You are free to refuse to be in the study, you are free to discontinue participation for any reason at any time, and your refusal or discontinuation will not influence current or future relationships with The University of Texas at Austin or your child's school district

Researchers are required by Texas state law and professional ethics codes to report to Child Protective Services (or other appropriate regulatory agency) all instances of alleged child abuse and neglect. Please note that if your child is believed to be at risk for emotional, psychological or possible physical harm or neglect, then the investigator will report this information to the attending physician, Child Protective Services, and any other necessary regulatory agencies. Please note when a child reports neglect or being harmed, participants cannot stop the referral of their child's case to the authorities and any subsequent actions taken.

If you have any questions about the study, concerns, or to withdraw from the study, you can call Kevin Stark, Ph.D. at (512) 471-4407, your school counselor, or principal.

If you have questions about your rights as a participant, please contact Lisa Leiden, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 471-8871. Let her know that you are enquiring about the study entitled "Helpfulness of the ACTION Coping Skills Program with and Without Parent Participation."

Please check the appropriate box indicating that **YES** you have read this letter and are giving permission for you and your daughter to participate in the ACTION coping skills program and to complete the questionnaires, or **NO** you do not want to participate in the ACTION coping skills program and you do not want to complete the questionnaires. Regardless of your decision, please sign this form and return it to your child's counselor. With this permission letter, you should have received a copy to keep for your records.

NOTE: TWO COPIES OF THIS LETTER ARE PROVIDED; ONE IS TO KEEP FOR YOUR RECORDS

PLEASE RETURN ONE COPY OF THIS PORTION TO THE SCHOOL COUNSELOR

☐ **YES** I give my permission for my daughter, _____, and me to participate in the ACTION coping skills program and to complete the questionnaires. This includes permission for ACTION staff to access report card information, discipline referrals, and attendance records during participation.

☐ **NO** I do not give my permission for my daughter, _____, to continue any further with the ACTION project.

_____ _____

Parent's Signature Date

_____ _____

Kevin D. Stark, Ph.D. Date

NOTE: TWO COPIES OF THIS LETTER ARE PROVIDED; ONE IS TO KEEP FOR

YOUR RECORDS

PLEASE RETURN THIS FORM TO YOUR SCHOOL COUNSELOR

Child/Adolescent Assent Form

I agree to participate in a study that is interested in evaluating the relationship between thoughts, feelings, and interpersonal behaviors in children and adolescents. I understand that this study has been explained to my parent or guardian and that he or she has given permission for me to participate. I understand that I may decide at any time that I do not wish to continue this study and that it will be stopped if I say so. Information about what I say and do will not be given to anyone else unless I say so.

I understand that I will be asked to complete an interview about my current feelings, behaviors, and thoughts as well as a number of questionnaires about myself and my family. I understand that by signing this form I am giving permission for the interview to be audio-taped for research purposes and that these tapes will be erased as soon as the study is completed.

I understand that it is all right if I decide to stop my participation in this study at any time. When I sign my name to this page I am indicating that this page was read to me and that I am agreeing to participate in this study. I am indicating that I understand what will be required of me and that I may stop my participation at any time.

_____ _____

Child/Adolescent Signature Date

_____ _____

Staff/Researcher Signature Date

Appendix G: Treatment: ACTION Program

Meeting One: Introductions and Establishing Rules	
Objectives	Discuss parameters of meetings Introduce counselors and participants Establish rationale for treatment Educate participants about confidentiality and establish group rules Build group cohesion Establish within group incentive system
Activities	Sunglasses Activity – Using tinted glasses, demonstrate how depression distorts the way one sees the world Web Activity – Highlight connection between each member using yarn joining group members as they share about themselves
Homework	Note at least three enjoyable activities in Catch the Positive List
Meeting Two: Coping Through Pleasant Events	
Objectives	Introduce participants to chat time and agenda setting Establish pragmatics of completing homework Introduce mood meter with focus on three Bs (Brain, Body, Behavior) Introduce Take ACTION List
Activities	Mood Meter – Rate mood on scale from 1-10, using indicators of Brain, Body, and Behavior Hula Hoop Activity – Illustrate how engaging in enjoyable behaviors leads to an improvement in mood Take ACTION List –Identify enjoyable activities to increase mood when not in group
Homework	Add to Catch the Positive Diary Engage in enjoyable behaviors, tracking mood on mood meter at end of day
Meeting Three: Recognizing Emotions, Coping & Identification of Primary Concerns	
Objectives	Encourage participants to think about meetings and doing practice Focus on the positive Introduction to Catch the Positive Diaries Educate participants about 3 B‘s Introduce coping strategies.
Activities	Rock Candy Activity - Illustrate how mood is affected by the situations or events to which one selectively attends. Catch the Positives Diary – Use notebooks to record daily positive events 3 Bs – Use human figure to educate participants about identification of feelings using signs from one’s body, brain, and behavior
Homework	Do enjoyable activities from Take ACTION List Write in Catch the Positive Diary Catch time when feelings worsened and the clues (3 B’s) that indicated change; describe use of coping skill
Meeting Four: Supporting Goal Attainment & Application of Emotion Focused Coping	

Objectives	Highlight use of group support for individual goals Introduce Muck Monster Apply coping strategies Complete coping skills activity
Activities	Web Activity – Demonstrate how group can support each other in achieving personal goals Application of Coping – Illustrate personal situations during which a person might need to use a coping skill Coping Skill Activity - Engage in in-session activity that highlights the impact of the 5 coping skills
Homework	Do enjoyable activities from Take ACTION List Write in Catch the Positive Diary Catch time when feelings worsened and the clues (3 B's) that indicated change; describe use of coping skill
Meeting Five: Introduction to Problem Solving	
Objectives	Catch the Positive check-in Experience impact of coping skills activity Introduce and apply problem-solving Introduce brainstorming
Activities	Rock Candy Activity – Illustrate how problem-solving can be used to handle unpleasant circumstances Solution Round Robin – Practice generating multiple solutions
Homework	Write in Catch the Positive Diary Catch time when feelings worsened and the clues (3 B's) that indicated change; describe use of coping skill Notice time when you have a problem, write down problem, and check off signs that it was a problem
Meeting Six: Thoughts Effect Feelings	
Objectives	Goal attainment check-in Demonstrate the role of cognition in emotion and behavior Introduction to Thought Feeling-Coping Thought Use of coping skills activity
Activities	Thought Bubbles – Demonstrates how thoughts determine how a person feels and behaves through the use of thought bubbles and emotion cards Coping Skill Activity – Engage in in-session activity that highlights the impact of the 5 coping skills
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills worksheet Complete one Problem-Solving worksheet Complete one Thought-Feeling, New Thought-New Feeling worksheet
Meeting Seven: Application of Problem Solving to Real Life Situations	
Objectives	Catch the Positive check-in Apply problem-solving to real life situations

	Generate solutions to problems Use of coping skills activity
Activities	Solution Race – Generate solutions to a problem Coping Skill Activity – Engage in in-session activity that highlights the impact of the 5 coping skills
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills worksheet Complete one Problem-Solving worksheet Complete one Thought-Feeling, New Thought-New Feeling worksheet
Meeting Eight: Application of Problem Solving To Teasing	
Objectives	Goal Attainment check-on Apply problem-solving to teasing Use of coping skills activity
Activities	Application of Problem Solving – Group applies problem solving to personal teasing experiences Coping Skill Activity – Engage in in-session activity that highlights the impact of the 5 coping skills
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills worksheet Complete one Problem-Solving worksheet Complete one Thought-Feeling, New Thought-New Feeling worksheet
Meeting Nine: Application of Problem Solving To Interpersonal Problems	
Objectives	Catch the Positive check-in Apply problem-solving to interpersonal problems Use of coping skills activity
Activities	Application of Problem Solving – Group applies problem solving to interpersonal problems Coping Skill Activity – Engage in in-session activity that highlights the impact of the 5 coping skills
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills worksheet Complete one Problem-Solving worksheet
Meeting Ten: Preparation of Group for Cognitive Restructuring	
Objectives	Goal Attainment check-in Prepare for cognitive restructuring Use of coping skills activity Talk back to the Muck Monster
Activities	Web Activity – Demonstrate how group can support each other and prepare for discussing even more personal topics Talking Back to Muck Monster – Use coping statements to talk back to their negative thoughts in a role-play Coping Skill Activity – Engage in in-session activity that highlights the impact of the 5 coping skills

Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills worksheet Complete one Problem-Solving worksheet Catch and record four negative thoughts. Talk back to them and record four coping thoughts.
Meeting Eleven: We Construct our Perceptions	
Objectives	Catch the Positive check-in Introduce the constructing of perceptions Illustrate how depression distorts thinking Provide rationale for changing negative thoughts
Activities	Storytelling – Underscore how one constructs own perceptions and that they may be more or less accurate Sunglasses Activity – Demonstrate how depression distorts the way we see things that that depression makes people more open to negative muck. Apply how thinking positively helps you feel better
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills or one Problem-Solving worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Twelve: Building A Positive Self-Schema and Talking Back to Negative Thoughts	
Objectives	Goal Attainment check-in Catch negative thoughts of group members Introduce Self-Map Talk back to the Muck Monster
Activities	Catching Negative Thoughts – Catch negative thoughts of self or others for the remaining sessions Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Catch the Positive – Brainstorm meaningful compliments for each participant in group. Talking Back to the Muck Monster – Use coping statements to talk back to their negative thoughts in a role-play
Homework	Complete Catch the Positive Diary and rate mood for the day Complete one Coping Skills or one Problem-Solving worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Thirteen: Building A Positive Self-Schema & The Cognitive Restructuring Question: What's a Different Way of Looking at it?	
Objectives	Catch the Positive check-in Catch negative thoughts Build a positive self-schema via self-maps Introduce to alternative interpretation Use Thought Judge questions - What is a different way to look at it? Apply alternative interpretation

Activities	Catching Negative Thoughts – Catch negative thoughts of self or others for the remaining sessions Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Alternative Interpretation Round Robin – Use thought judge worksheet, identify difficult situation and provide alternative interpretations for each situation
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Thought Judge worksheet using alternative interpretation
Meeting Fourteen: Building A Positive Self-Schema & The Cognitive Restructuring Question: What is a different way of looking at it?	
Objectives	Goal Attainment check-in Catch negative thoughts Build a positive self-schema via self-maps Apply alternative interpretation
Activities	Catching Negative Thoughts – Catch negative thoughts of self or others for the remaining sessions Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Talk Back to the Muck Monster – Role-play with therapist and participant, with each participant fighting muck monster using alternative interpretation
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Thought Judge worksheet using alternative interpretation
Meeting fifteen: Building A Positive Self-Schema & The Cognitive Restructuring Question: What are the clues that tell me this thought isn‘t true?	
Objectives	Catch the Positive check-in Catch negative thoughts Build a positive self-schema via self-maps Use the Thought Judge question “What are the clues that tell me this thought isn’t true? to challenge negative thoughts
Activities	Catching Negative Thoughts – Catch negative thoughts of self or others for the remaining sessions Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Taking Your Thoughts to Court – Use thought judge worksheet to provide clues for and against negative thoughts
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Thought Judge worksheet using, “What are the clues that tell me this thought isn‘t true?”
Meeting Sixteen: Building A Positive Self-Schema & The Cognitive Restructuring	

Question: What are the clues that tell me this thought isn‘t true?	
Objectives	Goal Attainment check-in Catch negative thoughts Build a positive self-schema via self-maps Apply “What are the Clues?” Prepare for termination
Activities	Catching Negative Thoughts – Catch negative thoughts of self or others for the remaining sessions Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Talk Back to the Muck Monster – Role-play with therapist and participant, with each participant fighting muck monster using alternative interpretation
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Seventeen: Integration and Application of Cognitive Restructuring Questions	
Objectives	Catch the Positive check-in Build a positive self-schema via self-maps Integrate and apply cognitive restructuring Prepare for Termination
Activities	Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Muck Monster Uno – Practice talking back to Muck Monster using Uno game
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Eighteen: Bring it All Together	
Objectives	Catch the Positive check-in Build a positive self-schema via self-maps Integrate and apply skills Prepare for Termination
Activities	Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Put it all together – Use combination of skills to work through situation
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Nineteen: Bring it All Together	
Objectives	Catch the Positive check-in Draw conclusions from Self-Maps Empower participants Prepare for Goodbye to Depression

	Preparing for termination
Activities	Self-Maps – Identify strengths in various categories (i.e., in school, as a person) to open oneself up to positive aspects of the self Web Activity – Emphasize ability to support self in preparation for separation Prepare to say goodbye to depression – Write down most common negative thoughts in preparation to shred them
Homework	Complete Catch the Positive Diary Complete one Coping Skills or one Problem Solving Worksheet Complete one Talking Back to Negative Thoughts worksheet
Meeting Twenty: Saying Good Bye	
Objectives	Say Goodbye to the group Letting go of negative thoughts and feelings Prepare for termination
Activities	Goodbye Cards – Write down favorite positive memory of other members Goodbye to Depression – Shred negative thoughts and present new coping thought

Appendix H: Intraclass Coefficients for Coding Scales

Intraclass Correlation Coefficients for CCS-BN Cognitive Intervention Subscale

Coding Measure	ICC*
CCS-BN Cognitive Interventions total score	.61
Item 1	.61
Item 2	.81
Item 3	.63
Item 4	.24
Item 5	.40
Item 6	.88
Item 7	.82
Item 8	.78
Item 9	.30
Item 10	.71
Item 11	.74
Item 12	.77
Item 13	.38
Item 14	.18
Item 15	.31
Item 16	.79
Item 17	.82

Item 18	.86
Item 19	.60
Item 20	.63

Intraclass Correlation Coefficients for CCS-BN Behavioral Intervention subscale

Coding Measure	ICC*
CCS-BN Behavioral Interventions total score	.89
Item 1	.78
Item 2	.88
Item 3	.81
Item 4	.74
Item 5	.89
Item 6	.72
Item 7	.82
Item 8	.78
Item 9	.77
Item 10	.67
Item 11	.72
Item 12	.77
Item 13	.81

Intraclass Correlation Coefficients for Problem-Solving Interventions Subscale

Coding Measure	ICC*
Problem-Solving Interventions total score	.92
Item 1	.69
Item 2	.98
Item 3	.93
Item 4	.96
Item 5	1.00
Item 6	.51
Item 7	.62

Intraclass Correlation Coefficients for CCS-BN Empathy subscale & , HCHP-GCS

Coding Measure	ICC*
CCS-BN Empathy total score	.81
Item 1	.77
Item 2	.95
Item 3	.81
Item 4	.67
Item 5	.86
Item 6	.85
Item 7	.74
HCHP-GCS total score	.84
Item 1	.91
Item 2	.89
Item 3	.66
Item 4	.88
Item 5	.85

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VITA

Prerna Arora was born in Montreal, Quebec, the daughter of Dr. Subhash Chandra Arora and Vimal Mehra Arora. After completing her work at Mountain Pointe High School, Phoenix, Arizona, in 1998, she entered Arizona State University in Tempe, Arizona. She received the degree of Bachelor of Science from Arizona State University in May 2002. In 2003, she entered the Graduate School at Arizona State University in Tempe, Arizona. She received the degree of Master of Education from Arizona State University. During the following years, she was employed as a teacher at New Roads School in Santa Monica, California. In August 2006, she entered the School Psychology Doctoral Training Program at the University of Texas at Austin. She earned her Master of Arts degree in 2009. Her professional experience includes serving as research and teaching assistants. She will complete her internship at the Children's Hospital of Philadelphia in June 2012.

Permanent Address: 1731 Pine Street Apt 3R
Philadelphia, PA 19103

This dissertation was typed by the author.