

Copyright

by

Lynn Mie Monnat

2009

The Dissertation Committee for Lynn Mie Monnat certifies that this is the approved
version of the following dissertation:

**Mechanisms of Change in CBT for Depressed Early Adolescent Girls: Mediating
Effects of the Cognitive Triad on Cognitive Interventions for Depressive Symptoms**

Committee:

Kevin Stark, Supervisor

Deborah Tharinger

Timothy Keith

Diane Schallert

Jennifer Hargrave

**Mechanisms of Change in CBT for Depressed Early Adolescent Girls: Mediating
Effects of the Cognitive Triad on Cognitive Interventions for Depressive Symptoms**

by

Lynn Mie Monnat, B.A.; M.A.

Dissertation

Presented to the Faculty of the Graduate School of

the University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

December, 2009

DEDICATION

This dissertation is dedicated to my parents Lily and Ken Horio, and my husband George Monnat, Jr.. Their unwavering love and support have been the source of inspiration and strength in pursuing my dreams over all these years.

ACKNOWLEDGEMENTS

I would like to thank my dissertation supervisor, Kevin Stark, Ph.D. for allowing me the opportunity to participate in the ACTION project and for guiding my development not only as a researcher but also as a clinician. Through the valuable training he provided, I have been fortunate enough to see how research and practice can inform one another to boost both the expansion of the field and the development of psychologists. I would also like to thank all of my committee members including Timothy Keith, Ph.D., Deborah Tharinger, Ph.D., Diane Schallert, Ph.D., and Jennifer Hargrave, Ph.D. for their support and encouragement during the dissertation process. I would like to express gratitude to Brad Gerber, Puja Patel, T.K. Nguyen, Perna Arora, and Laura Judd-Glossy who collaborated on the larger project and dedicated themselves to the arduous tasks of scale development and coding tapes. Last but not least, I want to thank Louise Tedford and Michelle Kimbrough who provided true friendship that has helped sustain me throughout the challenges of both dissertation and graduate school.

Mechanisms of Change in CBT for Depressed Early Adolescent Girls: Mediating Effects of the Cognitive Triad on Cognitive Interventions for Depressive Symptoms

Lynn Mie Monnat, Ph.D.

The University of Texas at Austin, 2009

Supervisor: Kevin D. Stark

Depression is an increasingly common health problem among youth. There is growing empirical evidence that CBT is a promising treatment for childhood depression. It remains unclear what treatment-specific effects of CBT contribute to therapeutic gains. Cognitive theories propose that a primary mechanism of change in CBT are cognitive interventions that target depressogenic cognitions regarding the self, world, and future (cognitive triad), which are thought to mediate depression. The effects of cognitive interventions on depressive symptoms are thus hypothesized to be mediated by changes in the cognitive triad. No studies have investigated whether CBT for depressed youth works by treating the cognitive triad through the implementation of cognitive techniques. As part of a larger study analyzing the mechanisms of change in CBT for depressed youth, the purpose of this study was to investigate: (1) whether specific cognitive techniques are related to depressive symptom reduction in youth, and (2) if improvements

in depressive symptoms are mediated through the cognitive triad of depressed youth. Participants were 42 girls, aged 8 to 14, who completed a manualized CBT protocol for depression in group format. Girls completed a diagnostic interview for depression and self-report measures assessing the cognitive triad. Group therapy sessions were coded for cognitive interventions. Results indicated a non-significant relation between levels of cognitive interventions and post-treatment depression scores, after controlling for pre-treatment depression. Therefore, tests of mediation were discontinued. Relevant control variables were added to the model to reduce error variance. After controlling for pre-treatment depression, age, presence of learning disorder, mastery of therapeutic skills, and behavioral interventions, cognitive interventions were significantly and positively associated with post-treatment depression. The relation between cognitive interventions and the cognitive triad was non-significant and mediational analyses were discontinued. Exploratory factor analysis revealed four cognitive interventions factors that were consistent with CBT theory. Further analyses revealed that all factors were not significantly related to post-treatment depression. Tests of interactions between cognitive interventions and behavioral interventions, age, and mastery level of therapeutic skills were also non-significant. Implications, limitations, and recommendations for further areas of research are presented.

Table of Contents

CHAPTER 1: Introduction.....	1
CHAPTER 2: Review of the Literature.....	6
Depression in Youth.....	6
Epidemiology.....	8
Course.....	9
Assessment of Depression in Youth.....	11
Summary of Depression in Youth.....	14
Gender Differences in Depression.....	15
Gender and Vulnerability to Depression.....	16
Summary of Gender Differences in Depression.....	18
Cognitive Diathesis-Stress Theories of Depression.....	19
Beck's Theory of Depression.....	20
Empirical Support of Beck's Theory of Depression.....	23
Assessment of Depressogenic Cognitions.....	25
Summary of Cognitive Diathesis-Stress Theories of Depression.....	26
Cognitive Behavioral Therapy for Depressed Youth.....	27
Beck's Cognitive Interventions for Depression.....	28
Developmental Considerations.....	38
Efficacy of Psychotherapy for Depressed Youth.....	39
Efficacy of CBT for Depressed Children.....	40
Summary of the Efficacy of CBT for Depressed Children.....	44
Efficacy of CBT for Depressed Adolescents.....	44
Summary of the Efficacy of CBT for Depressed Adolescents.....	51
Mechanisms of Change.....	53
Dismantling Component Studies.....	56
Process-Outcome Studies.....	58
Mediating Pathogenic Mechanisms.....	67

Cognitive Mediators of CBT: Youth Studies.....	67
Cognitive Mediators of CBT: Adult Studies.....	75
Measurement of CBT Change Mechanisms.....	78
Summary of Mechanisms of Change.....	83
Statement of the Problem.....	85
Hypothesis 1.....	88
CHAPTER 3: Method.....	92
Participants.....	92
Instrumentation.....	94
Measures of Depression.....	94
Measure of Cognitive Triad.....	100
Measure of CBT Cognitive Interventions.....	101
Procedure.....	103
Ethical Considerations.....	103
Depressed Sample.....	103
School District 1.....	104
School District 2.....	106
Training of Measures Administrators.....	108
Training of Interviewers.....	108
Training of Therapists.....	109
Training of Coders.....	110
Coding of Tapes.....	111
Treatment Integrity.....	114
Treatment: ACTION Program.....	114
Treatment Objectives and Cognitive Interventions.....	115
CHAPTER 4: Statistical Analysis.....	134
Preliminary Analysis.....	134
Main Analysis.....	142
Exploratory Analysis.....	144

Hypothesis One.....	147
Hypothesis Two.....	155
Hypothesis Three.....	166
Hypothesis Four.....	171
Hypothesis Five.....	174
Hypothesis Six.....	177
Demographic Variables and Cognitive Intervention Scores.....	179
Cognitive Interventions Across Treatment.....	180
CHAPTER 5: Discussion.....	184
Overview of Findings.....	185
Integration of Findings with Previous Research.....	191
Limitations.....	203
Implications.....	207
Conclusions.....	211
Appendix A: DSM-IVR Criteria for Major Depressive Disorder and Major Depressive Episode.....	215
Appendix B: DSM-IVR Criteria for Dysthymic Disorder.....	217
Appendix C: DSM-IVR Criteria for Depressive Disorder Not Otherwise Specified.....	218
Appendix D: Measures of Depression.....	220
Appendix E: Measure of the Cognitive Triad.....	226
Appendix F: Multiple Gate Procedure.....	228
Appendix G: Letters to Parents, Parental Consent Forms, and Student Assent Forms.....	229
Appendix H: Intraclass Correlation Coefficients for CCS-BN Behavioral Interventions Subscale.....	242
Appendix I: Cognitive Errors.....	243
Appendix J: Treatment Objectives.....	245
Appendix K: Cognitive Interventions Coding Manual.....	250
Appendix L: Behavioral Interventions Coding Manual.....	321

Appendix M: Therapeutic Skills Mastery Measure.....	337
Appendix N: BYI-D Scores Across Treatment.....	339
References.....	340
Vita.....	381

List of Tables

Table 1: Summary of Participant Demographic Variables.....	93
Table 2: Participant Depression Diagnosis at Time 1 Summary.....	94
Table 3: Intraclass Correlation Coefficients for CCS-BN Cognitive Interventions Subscale.....	113
Table 4: Means, Standard Deviations, and Cronbach's α for Model Variables.....	136
Table 5: Pearson Product Moment Correlations Among Main Analyses Variables.....	136
Table 6: Frequency of Attendance for Coded Sessions of Intervention.....	142
Table 7: Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores.....	143
Table 8: Means, Standard Deviations, and Cronbach's α for Model Variables.....	148
Table 9: Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores.....	148
Table 10: Means, Standard Deviations, and Accuracy for the Skills Check Measure.....	152
Table 11: Means, Standard Deviations, and Cronbach's α for Exploratory Analysis.....	154
Table 12: Pearson Product Moment Correlations Among Exploratory Analyses Variables.....	155
Table 13: Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores.....	158
Table 14: Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment CTI Scores.....	160
Table 15: Means, Standard Deviations, and Cronbach's α for Exploratory Analysis.....	164

Table 16: Factor Correlations for Exploratory Factor Analysis.....	164
Table 17: Pattern Matrix Factor Loadings for Exploratory Factor Analysis.....	165
Table 18: Pearson Product Moment Correlations Among Exploratory Analysis Variables.....	166
Table 19: Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores.....	169
Table 20: Means, Standard Deviations, and Cronbach's α for Exploratory Analysis.....	171
Table 21: Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Mastery of Therapeutic Skills, and Cognitive Interventions X Behavioral Interventions Interaction on T2 K-SADS Depression Scores.....	173
Table 22: Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores.....	174
Table 23: Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Mastery of Therapeutic Skills, and Cognitive Interventions X Age Interaction on T2 K-SADS Depression Scores.....	176
Table 24: Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores.....	176
Table 25: Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Skills Check Scores, and Cognitive Interventions X Skills Check Scores Interaction on T2 K-SADS Depression Scores.....	178
Table 26: Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores.....	179

List of Figures

Figure 4.1 Mean T2 K-SADS Scores by Number of Meetings Attended.....	140
Figure 4.2 Mean T2 K-SADS Scores by Age.....	141
Figure 4.3 Cognitive Intervention Factor Scores Across Treatment.....	183

CHAPTER 1

Introduction

Depression is a common health problem among youth that has become more prevalent at increasingly younger ages (Lewinsohn, Hoberman, & Rosenbaum; Klerman & Weissman, 1989). Early onset of depression is associated with a longer course (Lewinsohn, Rohde, Klein, & Seeley, 1999) replete with impairments to adaptive functioning into adulthood (e.g., Gotlib, Lewinsohn, & Seeley, 1998; Kandel & Davies, 1986; Weisz, McCarty, & Valeri, 2006). Correlates of youth depression include school dropout/failure, impaired academic performance, social isolation, and increased suicide risk (Emslie & Weinberg, 1994; Flemming, Boyle, & Offord, 1993; McCauley et al., 1993; Rao, Weissman, Martin, & Hammond, 1993). Rates of depression significantly rise during the transition from childhood to adolescence, during which time girls become twice as likely as males to experience depression (Hankin, Abramson, Siva, McGee, Moffitt, & Angell, 1998). Girls have been found to exhibit more cognitive vulnerabilities (e.g., ruminative style of coping, negative cognitive styles, depressogenic cognitions) (Abela, Vanderbilt, & Rochon, 2004; Hankin & Abramson, 2002; Nolen-Hoeksema, 1987) and physiological vulnerabilities (i.e., earlier onset of puberty, links between menarche and depression, increased body dissatisfaction) (e.g., Ge, Conger, & Elder, 2001; Ghen Graber, Lewinsohn, Seeley, & Brooks-Gunn, 1997). It is believed that due to these cognitive and physiological vulnerabilities, girls experience higher rates of depression when stressful life events occur (Abela, 2001). These findings make the

development of interventions that effectively target such cognitive vulnerabilities in depressed early adolescent girls more pressing.

Depressed individuals are thought to have specific cognitive vulnerabilities: negative underlying beliefs of the self, world, and future or the cognitive triad (Beck, 1967). The cognitive triad is thought to mediate the individual's response to life stress. Several studies have provided empirical support for Beck's theory of cognitive vulnerability to depression (e.g. Abela & D'Allesandro, 2002; Hankin, Abramson, Miller, & Haeffel, 2004; Joiner, Metalsky, Lew, & Klocek, 1999; Kendall, Stark, & Adam, 1990; McDermut, Haaga, & Bilck, 1997; Stark, Schmidt, & Joiner, 1996). As cognitive vulnerabilities appear to mediate the occurrence of depressive symptoms, it seems reasonable to assert that interventions that target such cognitive vulnerabilities can successfully reduce depressive symptoms and prevent future recurrences of the disorder.

There is increasing empirical evidence that CBT is a promising treatment for depression in youth. The general pattern that emerges across studies conducted with depressed youth is that compared to no-treatment, CBT is consistently associated with significant amounts of symptom reduction on short- and long-term bases; when compared to other treatments, CBT is generally comparable (Weisz, McCarty, & Valeri, 2006). It thus remains unclear, whether treatment-specific effects contribute to therapeutic gains in individuals who receive CBT. If CBT uniquely contributes to the alleviation of depressive symptoms, it is uncertain how this is achieved, as CBT packages reviewed included various techniques (e.g., social skills training, self-monitoring) and treatment foci (e.g., social skills, cognitions) that were often not examined in isolation.

Thus despite the empirical evidence that consistently supports CBT as a promising treatment for depression in youth, very little is known regarding how and why CBT exerts its therapeutic effects. Although there is a paucity of such studies, data from the few existing investigations provide tentative indications that CBT cognitive interventions exert positive effects on hypothesized cognitive mediators (e.g., Stark et al., 1987; 1991). The findings in the adult literature are conflicting, however, making the identification of mechanisms of change in youth more urgent, as children are not thought to benefit as fully from cognitive techniques as adults (Grave & Blissett, 2004; Stallard, 2002). This is of particular concern for depressed pre-adolescent girls, who present with gender-specific cognitive vulnerabilities (e.g., ruminative coping style) in addition to increased cognitive vulnerabilities (e.g., depressogenic cognitions, negative cognitive style) associated with depression.

There are also several limitations in the current research literature that if overcome, may lead to a better understanding of how and why CBT works. Identifying mechanisms of change more precisely can bolster treatment efficacy for depressed youth, especially for those at heightened risk (viz., pre-adolescent females). In youth populations, no studies to date have investigated whether CBT works through the implementation of cognitive techniques thought to remediate purported underlying negative beliefs. Specifically, there have been no published studies that have investigated: (1) whether specific cognitive techniques as they occur within-session are related to reductions in depressive symptoms, and (2) whether improvements in

depressive symptoms are mediated through changes in the cognitive triad in depressed youth.

Moreover, previous studies have exhibited methodological limitations regarding the assessment of constructs and processes of interest. First, existing studies have included units of analysis of limited specificity (e.g., whole CBT packages or components), so that precise measurement of cognitive techniques was lacking. Second, in the few studies that have investigated cognitive interventions in CBT, there was an inadequate sampling of cognitive interventions (e.g., a fraction of therapy tapes was coded). Third, the measurement of cognitive interventions appeared to have been inadequate. Specifically, measures used lacked items tapping critical pieces of cognitive interventions (building positive schema, linking therapeutic change to cognitions). Fourth, there was an inadequate measurement of pathogenic mediating constructs. Namely, instead of measuring the cognitive triad in its entirety, studies reviewed assessed one or two components (e.g., self-esteem, hopelessness). Fifth, studies with depressed youth samples did not conduct formal, direct tests of mediation, but inferred mediation through assessing the effects of CBT on mediators and outcomes.

Part of a larger study investigating CBT mechanisms of change, this study specifically attempted to address the aforementioned gaps and limitations in the research literature by investigating the relations between cognitive techniques, the cognitive triad, and depressive symptoms in a sample of depressed early-adolescent girls who have received CBT treatment for depression. Specifically, the study investigated whether cognitive techniques were indirectly related to outcome measures of depression (i.e.,

whether links between cognitive techniques and changes in outcome depression measures were mediated through changes in the cognitive triad). These analyses were conducted using data that were likely a more valid representation of the cognitive interventions that occur in CBT therapy sessions. That is, a more representative sampling of data was obtained. Further, a modified assessment instrument that captured a more complete range of cognitive techniques as outlined by major cognitive theorists (Beck, Rush, Shaw, & Emery, 1979; J. Beck, 1995) were used. Results from the study provided information that supported and expanded the existing literature regarding the mechanisms of change in CBT for depression in youth, and also raised further questions regarding this new area of investigation.

CHAPTER 2

Review of the Literature

Depression in Youth

Depression is common health problem that presents significant threats to the psychosocial adaptation of children and adolescents (Lewinsohn, Hoberman, & Rosenbaum, 1988). Although depression has been long-recognized as a condition with potentially devastating consequences, only recently has the empirical literature begun to provide the base upon which more comprehensive conceptualizations can be grounded and from which treatment can be better guided (Alloy, 1988; Arsanow, Jacobs, & Thompson, 2001). Prior to completing high school, approximately 20 percent of children and adolescents will have experienced an episode of major depression (Costello, Mustillo, & Erkanli, 2005; Zalsman, Brent, & Weersing, 2006). With a more prolonged course for youth relative to adults, depression can have significant, far-reaching implications for the developmental trajectories of children and adolescents (Jensen, Ryan, & Prein, 1992). Moreover, depression has been found to significantly affect the lives of a greater number of youth at increasingly younger ages (Klerman & Weissman, 1989)

The Diagnostic and Statistical Manual of Mental Disorders (DSM)-Fourth Edition (American Psychiatric Association, 2000) indicates that a Major Depressive Episode is characterized by a predominantly depressed mood, or the loss of interest or pleasure in nearly all activities (anhedonia) for at least two weeks. Relative to adults, children may exhibit a predominant mood characterized more by irritability than sadness. To meet the

diagnostic criteria for Major Depression, the individual experiences at least four other symptoms in addition to the mood disturbance or anhedonia: significant changes in appetite or weight, sleep, or psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; recurrent thoughts of death or suicidal ideation, plans, or attempts) (American Psychiatric Association, 2000). These symptoms must be pervasive (i.e., experienced most of the day, nearly every day, for the duration of at least two weeks). In addition, the episode must substantially impair the individual's social, occupational, or other important areas of functioning (American Psychiatric Association, 2000).

Major Depressive Disorder (MDD) is characterized by one or more Major Depressive Episodes, the average duration of which has been found to be about 32 to 36 weeks (Kovacs, Feinberg, Crouse-Novak, Paulasukas, & Finkelstein, 1984; McCauley, Mitchell, Burke, & Moss, 1988; Strober, Lampert, Schmidt, & Morrell, 1993). On average, the age of onset for MDD has been found to be between the ages of 14 and 15 in community samples, while girls have been found to have an earlier onset (Lewinsohn, Clarke, Seeley, & Rohde, 1994). Although depressive episodes in youth eventually remit with time, many children and adolescents suffer repeated depressive episodes (Kovacs, 1989).

The course of Dysthymic Disorder is characterized by chronic low-grade depressed mood that occurs for most of the day, more days than not for at least two years for adults. The diagnostic criteria are the same for children, with the exception that the episode duration is at least one year and the predominant mood may be irritable or

depressed (American Psychiatric Association, 2000). The average duration of Dysthymic Disorder is three years, and thus may have a more detrimental effect on the psychosocial adjustment of youth due to its prolonged course (Kovacs et al., 1984). Youth diagnosed with Dysthymic Disorder are also at increased risk for developing MDD. An individual is diagnosed with Depressive Disorder Not Otherwise Specified (DDNOS) if symptoms of depression occur more often than not and cause significant impairment, but do not meet criteria for MDD or Dysthymic Disorder (American Psychiatric Association, 2000).

Epidemiology

At any given point, approximately 2.5% of children and up to 8.3% of adolescents in the United States suffer from a depressive disorder (Birmaher, Ryan, & Williamson, 1996). Prevalence rates of Major Depression and Dysthymic Disorder for school-age children have been found to range from .4% to 1.85% and .6% to 2.5%, respectively (Anderson, Williams, McGee & Silva, 1987; Costello, Costello, Edelbrock, Burns, Dulcan, Brent, et al., 1988; Kashani, McGee, Clarkson, Anderson, Walton, Williams, et al., 1983; Kashani, Orvaschel, Rosenberg, & Reid, 1989). Prevalence rates of up to 2.9% have been found in high school populations, suggesting adolescents suffer depression at higher rates than children (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Rohde, Lewinsohn, & Seeley, 1991). On average, depressive episodes in children have been found to last between 8-17 months (Birmaher et al., 2004; Kovacs et al., 1984; Goodyer, Herbert, Scher, Sandra, & Pearson, 1997). In addition, the remission of a depressive episode for many youth is not long-lasting, as those who have experienced prior

depression appear to be at increased risk for experiencing recurrent episodes (Birmaher et al., 2004; McCauley et al., 1988; Kovacs, et al., 1984).

Course

Children and adults have been found to have significantly different presentations of depressive symptoms. As children's affect may naturally be more bright than those of depressed adults, the presence of depression may not be as readily identified in children (Digdon & Gotlib, 1985; Rholes et al., 1980). Some studies have found that adolescents tend to report more cognitive symptoms of depression (e.g., worthlessness, unlovability) with younger children typically exhibiting more affective symptoms (Digdon & Gotlib, 1985). In a recent longitudinal study, however, it was found that both children and adolescents had similar symptom profiles and severity of symptoms (with adolescents experiencing more melancholy) as well as similar rates of remission and reoccurrences (Birmaher et al., 2004).

Researchers have linked child and adolescent depression to impairments in several areas of life, including troubled interpersonal relationships, lower life satisfaction, impaired occupational functioning, lower ratings of overall functioning, poor physical health, criminal activity, (Gotlib, Lewinsohn, & Seeley, 1998; Kandel & Davies, 1986; Lewinsohn Rohde, Seeley, Klein, & Gotlib, 2003; Rao et al., 1995), increased risk for comorbid psychiatric disorders (Angold & Costello, 1993), impaired academic functioning (Sideridis, 2005), substance use, and suicide (Guild et al., 1998; Rohde, Lewinsohn, & Seeley, 1991), which is the third most common cause of death among adolescents (Arias, MacDorman, Strobino, & Guyer, 2003; Weisz, McCarty, & Valeri,

2006). Within certain samples, earlier age of onset has been correlated with a more prolonged duration of depression (Birmaher et al., 2007; Lewinsohn, Rohde, Klein, & Seeley, 1999), while this trend has not been observed in other youth samples (McCauley, Myers, Mitchell, Calderon, Schloretd, & Treder, 1993).

For many youth, depression is recurrent and chronic. It has been found that youth with a prior history of major depression were at higher risk for experiencing a a more protracted course of depression (Birmaher et al., 2004). Twenty to 60% of youth experience another major depressive episode 1 to 2 years after remission from a major depressive episode. Seventy percent of youth will have experienced another depressive episode within five years of remission (AACAP, 1998). The increased risk for the reoccurrence of depression for depressed youth continues into adulthood (Garber, Kriss, Kock, & Lindholm, 1988; Rao, Birmaher, Dahl, Williamson, Kaufman, et al., 1995). In a recent large-scale longitudinal study of 705 youth, depression in early adolescence was correlated with higher use of health care resources, poorer self-reported health, increased impairment in occupational functioning in later adulthood, even after controlling for present levels of depression (Keenan-Miller, Hammen, & Brennan, 2007).

The course of Dysthymic Disorder is prolonged, with a mean duration of 3 to 4 years for clinic and community samples of youth (Kovacs, Akiskal, Gastonis, & Parrone, 1994). The course of Major Depression is usually of shorter duration, lasting about 8-13 months on average (Kovacs et al., 1984). The presence of Dysthymic Disorder places youth at increased risk for developing Major Depressive Disorder. Youth may also endure a “double depression,” or Major Depressive Disorder with a concurrent,

underlying Dysthymic Disorder. In such cases, youth experience shorter periods of remission between recurrent episodes Major Depression (Kovacs et al., 1994).

Furthermore, in a study conducted with 54 youth ages 8-13, youngsters presenting with Dysthymic Disorder typically had a lower age of onset than youth with Major Depressive Disorder and exhibited more comorbid disorders (Kovacs, Aiska, Gatsonis, & Parrone, 1994).

Assessment of Depression in Youth

There have been a plethora of measures developed to assess depression and depressive symptoms in youth, including self-report questionnaires, parent and teacher rating scales, observational methods, clinical diagnostic interviews, and projective tests. For the purposes of research, depression is most typically measured with self-report questionnaires such as the Children's Depression Inventory (CDI; Kovacs, 1981), parent and teacher rating scales such as the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983), and diagnostic clinical interviews such as the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present State (K-SADS-P IVR; Ambrosini & Dixon, 2000).

The best-practice approach to the assessment of depression should include multiple methods and informants. Low levels of agreement across sources, however, often create challenges in formulating accurate assessments of symptoms (Achenbach, McConaughy, & Howell, 1987). The average correlation of youth adjustment between parent and youth reports has been found to be .25, and .20 between teacher and youth reports externalizing, rather than internalizing symptoms (Achenbach et al., 1987). It has

been suggested that due to their subjective nature, children would be more accurate reporters of internalized symptoms such as low self-worth (Kendall, Cantwell, & Kazdin, 1989). In regards to time-related information such as duration and onset of specific symptoms, children have been found to have difficulty providing reliable reports (Stark, Sander, Yancy, Bronik, & Hoke, 2000). Therefore, researchers may place greater weight on parent's reports regarding time-frames and observable, behavioral symptoms. Best practices involve the examiner's use of clinical judgment in considering both the child and parent reports when integrating discrepant information into summary ratings of symptoms.

It is not considered ideal for researchers to rely solely on the use of paper-and-pencil self-report measures in the assessment of depression. Measures such as the CDI have been found to be highly correlated with measures of anxiety (Finch, Lipovsky, & Casat, 1989; Reynolds, 1986) and have failed to accurately discriminate between depression from other disorders (Kazdin, 1988). An advantage of using self-report questionnaires is the facilitation of the rapid assessment of symptoms and large-scale screenings (Beck, Beck, & Jolly, 2001; Reynolds, 1986). In order to more accurately pinpoint specific diagnoses, the clinical interview is the recommended method of assessment.

In order to both accurately and efficiently identify youth experiencing depression, a multiple-gate procedure using a variety of assessment methods has been recommended (Reynolds, 1986). The first stage of multiple gate procedures, a wide-scale screening using a self-report measure of depression is implemented in order to target a large

number of students within a brief period. In the second stage, students who scored above a pre-determined cut-off score during the initial assessment are reassessed with the same instrument 3-6 weeks later in order to avoid the false identification of students who were experiencing temporary distressed states rather than clinical depression at the time of the initial screening. The third stage involves conducting diagnostic interviews with students who reported clinical levels of depressive symptoms in both of the preceding stages.

Despite the fact that several researchers have cited the exclusive use of self-report questionnaires as a major limitation (e.g. Cole & Turner, 1993; Cummings, DeArth-Pendley, Schudlich, & Smith, 2001; Robinson, Garber, & Hilsman, 1995; Turner & Cole, 1994), the majority of studies do not implement methods that incorporate assessment data from multiple informants and instruments. The current study used a modified version of the multiple-gate procedure as recommended by Reynolds (1986). In the second stage, a brief symptom interview using DSM-IV criteria for depression replaced the second administration of the self-report questionnaire. Administration of the brief symptom interview aided in the accurate identification of students who met full diagnostic criteria for a depressive disorder. For ethical purposes, a brief symptom interview assisted in the more rapid identification of high-risk youth experiencing previously unreported suicidal ideation or plans, self-damaging behaviors, and abuse or neglect.

Summary of Depression in Youth

Several patterns can be deciphered from the existing literature regarding the prevalence and course of child and adolescent depression. First, depression is an increasingly common health problem among youth, and has become more common at

younger ages. Second, early onset of depression is associated with a course that is more enduring and replete with impairments to adaptive functioning throughout the lifespan. Third, rates of depression significantly rise during the transition from childhood to adolescence. Fourth, the prevalence of depression is equivalent between genders until puberty, after which girls become twice as likely as males to experience depression. Therefore, the development of interventions that effectively treat current episodes of depression and prevent their reoccurrence is imperative, especially in populations at higher risk, including early-adolescent females.

The accurate assessment of depression can be particularly challenging. This is due in part to the subjective nature of many depressive symptoms and to the difficulties associated with integrating discrepant information provided by multiple reporters. The most common method of assessment reported in the literature is the sole-use of self-report questionnaires to determine the presence of depressive symptoms. When used alone, however, this method is not adequate in providing the quality of data needed for accurate diagnosis of clinical depression (Kazdin, 1988; Beck et al., 2001). In order to obtain the quality of data necessary for formulating a valid diagnosis of depressive disorder, a diagnostic interview is necessary. A major limitation of relying solely on the use of a diagnostic interview, however, is that it is time-consuming and requires a trained interviewer. A multiple-gate screening procedure can minimize the limitations of both assessment techniques while maximizing efficiency of data collection and accuracy of information derived from multiple reporters (Reynolds, 1986).

Gender Differences in Depression

That approximately twice the amount of women (relative to men) experience depression has been a robust finding across multiple studies (Nolen-Hoeksema, 1990; Weissman & Klerman, 1977). Not only is depression more common among women, but women also have been found to experience a different constellation of symptoms (Ostrov, Offer, & Howard, 1989), and at a higher severity when compared to men (Kandel & Davies, 1982). Women who have experienced depression in adolescence are more likely to experience related difficulties in psychosocial functioning including hospitalization, substance abuse, school dropout, and marital distress (Kandel & Davies, 1986).

In comparison to males, female adolescents have consistently reported higher levels of emotional distress, especially depressive symptoms (e.g. Casper, Belanoff, & Offer, 1996). Emerging around the ages of 13 through 15 (Hankin, Abramson, Silva, McGee, Moffitt, & Angell, 1998), the prevalence of this gender difference continues to rise throughout adulthood (Nolen-Hoeksema, 1990; Allgood, Merten, Lewinsohn, & Hops, 1990; Hankin & Abramson, 2001). Due to such elevated risks associated with women regarding depression and its correlates, it seems essential to consider gender in the conceptualization, assessment, and treatment of depression (Culbertson, 1997).

Gender and Vulnerability to Depression

The mechanisms through which gender differences in depression arise has been the focus of many empirical studies (e.g. Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994). Theories that consider the interaction between vulnerabilities and

stressors female youth experience during adolescence provide persuasive explanations for the gender differences observed in depressed youth (e.g. Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994). These stress-diathesis models argue that compared to males, girls have greater vulnerabilities (e.g., cognitive, interpersonal, physiological) that are present in childhood, prior to the onset of adolescence. According to these models, when girls encounter the stressful events associated with the transition to adolescence, they subsequently experience depression at higher rates than boys, due to the interaction between aforementioned vulnerabilities and stressors.

A tendency toward a ruminative coping style is one of the hypothesized cognitive vulnerabilities found to be more common in women (Abela, Vanderbilt, & Rochon, 2004; Nolen-Hoeksema, 1987). With a greater proclivity to use internally-focused rumination in the face of stress, girls are less likely to actively cope with life stressors, which would lead to greater likelihood of adaptive stress-relief through (e.g., through problem solving, engagement in distracting activities) (Nolen-Hoeksema, 1991). In addition, longitudinal data has found that girls report more psycho-social stressors in early adolescence than boys (Peterson, Sarigiani, & Kennedy, 1991).

In addition to possibly experiencing more negative life events, girls also appear to make negative causal inferences regarding those stressors, which may lead to the experience of elevated subjective distress (Hankin & Abramson, 2002). For instance, Abela (2001) found that in response to negative life events, girls were more likely than boys to draw negative inferences about themselves. These female participants also reported greater severity of depressive symptoms and more negative life events. When

asked to rate their own level of competence, girls have rated themselves significantly lower than their parents, peers, and teachers, while boys' self-ratings was on average, higher than other reporters (Cole, Jacquez, & Mascheman, 2001). Further, Hankin and Abramson (2002) found that this difference in cognition mediated gender-related discrepancies in depressive symptoms. These data provide further support for the idea that gender differences in depression rates can be accounted for by the interaction between negative life events and cognitive vulnerabilities that are observed more often in females.

Another factor that likely contributes to gender differences in depression involves significant physiological and psycho-social transitions that occur during puberty. Girls who undergo menarche at an earlier age relative to their peers are more likely to experience depression, and to endure more protracted episodes of depression (Ge, Conger, & Elder, 2001; Graber, Lewinsohn, Seeley, & Brooks-Gunn, 1997; Peterson et al., 1991; Stice, Presnell, & Bearman, 2001). Depression has been found to occur at higher rates for girls during the simultaneous onset of puberty and transition to middle school, the combination of which most boys do not experience, as the onset of puberty is typically earlier for girls than boys (Peterson et al., 1991). Corresponding with the onset of puberty, girls also tend to report more dissatisfaction with the associated physiological changes (Hayward, Hurrelmann, Currie, & Rasmussen, 2003). When evaluating their self-worth, girls tend to place more weight on their self-perceived physical appearance while boys place greatest weight on their self-perceived ability (American Association of University Women, 1992). In some studies, body image has even been found to play a

mediating role in the relationship between gender and depression (Hankin & Abramson, 2001; Siegal, 2002; Siegal, Yancy, Aneshensel, & Schuler, 1999). In a prospective study of female adolescents, Stice and colleagues (2001) found that body image partially mediated the relationship between early menarche and depression. When attempting to account for gender differences in depression, it appears that girls' perceptions of the self, particularly those regarding physical changes accompanying development are important to consider.

Summary of Gender Differences in Depression

There is an accumulation of evidence supporting diathesis-stress models of gender differences in depression. These models identify gender-specific physiological changes and psycho-social stressors as underlying mechanisms of increased vulnerability to depression among girls. Within these diathesis-stress models, girls are thought to demonstrate more cognitive vulnerabilities (i.e., more ruminative style of coping, more negative cognitive styles and depressogenic cognitions) and physiological vulnerabilities (i.e., earlier onset of puberty, links between menarche and depression, increased body dissatisfaction). The combination of increased vulnerability and stress (Abela, 2001) contributes to the higher rates of depression in adolescent girls. These findings make the development of interventions that effectively target cognitive vulnerabilities in depressed early adolescent girls more pressing.

Cognitive Theories of Depression

Cognitive Diathesis-Stress Theories of Depression

The predominant cognitive models of depression are stress-diathesis models (Abramson, Metalsky, & Alloy, 1989; Abramson, Seligman, & Teasdale, 1978; Beck, 1967). According to these models, depression arises through the interaction between cognitive variables (e.g., rigid schemas containing negatively distorted propositions that skew cognitive processes such as attention) and undesired life events. That is, depression does not result from the mere occurrence of distressing events, but rather from the meaning or interpretation the individual constructs in response to those events (Beck, 1967). The hopelessness cognitive theory (Alloy, Abramson, Metalsky, & Hartlage, 1988; Abramson et al., 1989) and Beck's cognitive theory (Beck, 1967), thus explain that maladaptive cognitions account for individual differences in the development of depression. These models hold that cognitions reflecting maladaptive attribution styles, processes (e.g., cognitive errors), and negative schemata regarding the self, world and future lead to the onset of depression when negative events occur in the individual's life (Abramson et al., 1989; Beck, 1967). Despite slight differences, these theories both hypothesize cognitive vulnerability to be the primary mechanism underlying the etiology and maintenance of depression. This study confined the construct of cognitive vulnerability to depression to that put forth by Beck's theory of depression.

Beck's Theory of Depression

The cognitive triad, or negative beliefs about the self, world, and future, is a primary component of Beck's theory of depression (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979). Although Beck acknowledged the importance of other etiological factors (e.g., genetic predisposition), the cognitive triad is thought to be a central mediating mechanism through which depression evolves. These core beliefs are thought to originate through early developmental experiences, especially those involving attachments with significant others (Beck et al., 1979). Beck held that when confronted with a stressful situation, latent schemata containing negative beliefs about the self, world, and/or future are activated. Information processing is subsequently guided in negatively biased manner, characterized by cognitive errors (e.g., overgeneralization, all-or-none thinking) (see Appendix I). More specifically, when interacting with the environment, underlying negative beliefs about the world leads the individual to view the world as defeating, full of burdens, obstacles, or calamitous situations (Beck, 1967). The individual may also see the self as inadequate, unworthy, or deficient, and the future as full of inevitable, unending difficulties (hopeless) (Beck, 1967, 1987). As a result, meanings and interpretations of events are constructed in a distorted way, resulting in the production of negatively distorted automatic thoughts.

Automatic Thoughts

Automatic thoughts are a "stream of thinking that coexists with a more manifest stream of thought." (p.75) (J. Beck, 1995). Automatic thoughts are not exclusively

characteristic of individuals experiencing psychopathology, but rather, are a common experience to everyone. Usually occurring out of immediate awareness, automatic thoughts can be brought into immediate consciousness for critical examination (J. Beck, 1995). Typically, a non-depressed individual may have negative automatic thought (e.g., “I am not making progress on my proposal”), but can spontaneously apply appropriate reality testing to the thought (e.g., “I am making some progress, and with continued effort, I’ll eventually finish it”). A depressed individual does not apply this type of critical examination to automatic thoughts but rather, automatically accepts the thought as true and can also make distorted interpretations that build upon other thoughts (e.g., “I am not making much progress and thus, I’ll never make progress. I’m a failure.”). Thus, the maladaptive automatic thought can be a distorted, or it may be the distorted interpretation of other accurate thoughts. Automatic thoughts can take the form of words, images (or both), the content of which typically leads to a specific emotional state (e.g., thoughts of abandonment lead to feelings of loss/sadness) (J. Beck, 1995).

Cognitive Errors

When activated by a significant stressor, depressogenic schemata also systematically guide the processing of incoming information by focusing attention on stimuli consistent with the maladaptive schemata, thereby filtering out inconsistent information (Beck et al., 1979). In this way, information is perceived in a consistently negative manner (Beck, 1976). These systematic “errors” in information processing significantly impairs clients’ reality-testing and reasoning abilities (Rush & Beck, 1977). Examples of such cognitive errors (Appendix I) are: all-or-nothing thinking (viewing

situations as dichotomous rather than on a continuum); personalization (the tendency to relate external events to oneself); and overgeneralization (drawing overarching conclusions from specific information that is not applicable across a broad range of situations).

Intermediate and Core Beliefs

Beliefs are deeper ideas out of conscious awareness the client has about herself and her environment from which automatic thoughts arise (J. Beck, 1995). Intermediate beliefs are more resistant to contrary information than automatic thoughts, but are more flexible than core beliefs (J. Beck, 1995). The intermediate beliefs take the form of rules, attitudes, and assumptions while core beliefs are absolute, rigid, and overgeneralized cognitions about the self and others. According to Beck (1967), the negative core beliefs fall under two broad categories: unlovability and helplessness. The core beliefs begin to form in early development as the child interacts with significant others within a variety of situations across time. Typically, more functional core beliefs operate until significant stress occurs, during which time the negative core beliefs become activated. When activated, the core beliefs filter out information that is inconsistent, while leading the individual to attend to and process information that is consistent with it (Rush & Beck, 1977). These distorted perceptions in turn, strengthen the underlying depressogenic beliefs. Through repetition over time, these schemata become increasingly rigid, expansive, and more easily activated, ultimately leading to the precipitation and maintenance of a depressive episode (Beck, 1967).

In summary, Beck's cognitive theory of depression hypothesizes that people who possess negative schemas about themselves, their world, and future are vulnerable to depression particularly when stressful life events occur (Beck, 1967, 1972, 1987; Kovacs & Beck, 1978). When encountered with a distressing circumstance, these latent schemas containing depressogenic beliefs of the self, world, and future are activated, resulting in maladaptive cognitions (e.g., negatively distorted automatic thoughts) which bring about depressed mood and behavior. The depressive schemata also influence attention and the processing of incoming information so that resulting cognitions are schema-consistent and schema-strengthening. The following section reviews empirical literature that supports Beck's theory of cognitive vulnerability to depression.

Empirical Support for Beck's Theory of Depression

There is extensive empirical evidence that supports Beck's theory of depression. Depressogenic cognitions have been associated with an increase in depressive symptoms in multiple studies (e.g. Abela & D'Allesandro, 2002; Hankin, Abramson, Miller, & Haeffel, 2004; Joiner, Metalsky, Lew, & Klocek, 1999; Kendall, Stark, & Adam, 1990; McDermut, Haaga, & Bilck, 1997; Stark, Schmidt, & Joiner, 1996). The theory appears to be applicable across a variety of developmental periods, as researchers have repeatedly found depressogenic cognitions to be significantly related to depressive symptoms in various samples of adults (e.g., Beck, Brown, Steer, Eidelson, Riskind, 1987; Jolly, Dyck, Kramer, & Wherry, 1994), college students (e.g., Bruck, Mattia, Heinberg, & Holt, 1993; McDermut & Haaga, 1994), adolescents (e.g. Garber, Weiss, & Shanley, 1993; Jolly, 1993), and children (e.g., Epkins, 1996; Kendall et al., 1990; Stark et al., 1996).

The Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project (Alloy & Abramson, 1999) is a rare study that used a longitudinal, prospective design to test the cognitive vulnerability hypotheses of depression. In the CVD project, college freshmen with no current mood disorders were assessed for risk for depression, based on the presence or absence of cognitions reflecting vulnerabilities to depression as outlined by Beck (1967) and hopelessness theorists (e.g., Abramson et al., 1989). Results indicated that high-risk participants experienced double the rate of lifetime prevalence of major depression and experienced more severe depressive episodes than low-risk participants (Alloy, Abramson, Hogan, Whitehouse, Rose, Robinson, et al., 2000). In addition, these differences between high-risk and low-risk participants were specific to depressive disorders; there were no significant differences on life-time prevalence rates for other mood disorders (Alloy et al., 2000). The findings from this study provide convincing evidence that negative cognitions may play a mediating role in the development of depressive disorders (Alloy & Abramson, 1999).

The results of follow up assessments from the CVD project further strengthen the evidence in support of cognitive vulnerability theories of depression. High-risk participants were significantly more likely to experience initial onsets and recurrences of depressive episodes at the two-and-a-half year follow-up assessment (Alloy, Abramson, & Hogan, 2000). After controlling for residual depressive symptoms in high-risk participants using initial depression symptom scores, differences between the groups remained (Abramson et al., 1999). Further, there were no differences between groups in the development of anxiety disorders during the follow-up period (Abramson et al.,

1999), suggesting that depressogenic cognitions assessed played a role specific to the development of depression.

Findings from the CVD study also demonstrated that high-risk participants with a past history of depression were more likely to experience recurrent episodes of major depression and exhibit suicidal behavior even after controlling for initial depression scores (Abramson et al., 1999; Abramson, Alloy, Hogan, Whitehouse, Cornette, Akhavan, et al., 1998). Overall, Beck's theory of cognitive vulnerability to depression appears to be well-supported by the findings of this prospective, longitudinal project. More severe depressive cognitions appeared to place individuals at greater risk specifically for depression, its initial onset, more frequent recurrence, and greater severity including suicidal behavior.

Assessment of Depressogenic Cognitions

Beck (1967) hypothesized that the cognitive triad: underlying, negatively distorted beliefs of themselves, world, and future is a causal mechanism in the etiology and maintenance of depression. Self-report questionnaires have been used as the primary assessment method of the cognitive triad. In order to measure negative beliefs regarding the self, researchers have used the Coopersmith Self-Esteem Inventory (CSEI; Coopersmith, 1967). Another instrument used to assess depressive self-referent cognitions in youth has been the Self-Perception Profile for Children (Harter, 1985). To tap thoughts regarding the future, the Hopelessness Scale for Children (HSC; Kazdin et al., 1986) has often been used. The Cognitive Triad Inventory (CTI; Beckham, Leber, Watkins, Boyer, & Cook, 1986) was designed to assess the cognitive triad in its entirety

in adults (i.e., rather than assessing these constructs separately). The CTI was later modified for the purposes of assessing the cognitive triad in children (CTI-C; Kaslow, Stark, Printz, Livingston, & Tsai, 1992). Both the CTI and CTI-C have demonstrated good psychometric properties and can be completed within a short period of time (Beckham et al., 1986; Kaslow et al., 1992). In this study, the CTI-C was used to assess the cognitive triad in depressed early-adolescent girls.

Summary of Cognitive Diathesis-Stress Theories of Depression

Proponents of the cognitive diathesis-stress models of depression hypothesize that cognitive factors mediate the individual's response to life stress. Specifically, Beck (1967) argued that the cognitive triad, or negative underlying beliefs about the self, world, and future determine whether or not an individual will experience depression when under duress. Several studies have provided empirical support for Beck's theory of cognitive vulnerability to depression in adults (e.g. Abela & D'Allesandro, 2002; Hankin, Abramson, Miller, & Haeffel, 2004; Joiner, Metalsky, Lew, & Klocek, 1999; Kendall, Stark, & Adam, 1990; McDermut, Haaga, & Bilck, 1997) as well as children (Stark, Schmidt, & Joiner, 1996). In these studies, individuals who demonstrated negatively distorted information processing and negative underlying beliefs (i.e., cognitive triad) tended to experience more depressive symptoms. In addition, studies using a longitudinal, prospective design have found that such cognitively high-risk individuals were at greater risk for experiencing depression, including episodes of greater severity and higher rates of recurrence. As cognitive vulnerabilities appear to mediate the occurrence of depressive symptoms, it seems reasonable to assert that interventions that target such cognitive

vulnerabilities can successfully reduce depressive symptoms and prevent future recurrences of the disorder.

Cognitive Behavioral Therapy for Youth Depression

Cognitive Behavioral Therapy (CBT) is based on the theoretical assumption that negative underlying beliefs such as the cognitive triad and related faulty information-processing (Beck et al., 1979) such as distorted views of the causes of significant life events (Abramson et al., 1989) mediate the development of depressive symptoms. Within a collaborative relationship between therapist and client, cognitive restructuring techniques are used to explore, identify, and remediate maladaptive cognitions in order to alleviate behavioral and affective symptoms of depression (Beck et al., 1979). In addition to cognitive restructuring, behavioral techniques are taught to help clients increase engagement in pleasant activities or to enhance social problem solving or interaction skills (Lewinsohn & Clarke, 1999). Clients also learn affect management skills to increase relaxation, self-control, and general coping strategies (Lewinsohn & Clarke, 1999).

The principle assumption underlying the broad spectrum of various CBT techniques is that therapeutic change is effected by helping clients to change their maladaptive thoughts and behaviors (Curry & Reinecke, 2003). Different modules of CBT emphasize different constellation of techniques to stimulate adaptive change (Lewinsohn & Clarke, 1999). Examples of primarily behavioral techniques include: social skills training, engagement in pleasant activities, and social problem solving. Primarily cognitive techniques include: self-monitoring progress, identifying cognitive

distortions, formulating realistic thoughts to challenge pessimistic beliefs, and examining evidence for and against negative beliefs (Curry & Reinecke, 2003). Thus, beneath the broad scope of CBT, there is a range of distinct interventions that may be offered in different permutations, depending upon the emphasis placed on the particular components within the CBT treatment package (Durlak, Fuhrman, & Lampman, 1991; Curry, 1991).

Beck's Cognitive Interventions for Depression

As previously discussed, according to Beck (1967) the primary causal, mediating agents of the etiology and maintenance of depression are maladaptive cognitions. Negatively distorted cognitions are hypothesized to arise from tacit negative beliefs or core schemas regarding the self, world, and future. Thus through a collaborative process, the therapist guides the client through an exploration of cognitive patterns in order to identify and modify negatively distorted thoughts, errors in logic, and the underlying beliefs (Beck et al., 1979). Behavioral techniques are integrated into this treatment approach particularly at the initial phase of therapy, during which the primary focus is symptom relief (J. Beck, 1995). It has been noted, however, that if the individual appears sufficiently receptive to the more self-focused interventions (i.e., is moderately depressed), cognitive techniques can be introduced at an earlier point in therapy (Rush & Beck, 1977). Further, behavioral interventions also serve the instrumental role of providing opportunities to elicit, identify, and challenge maladaptive thoughts (J. Beck, 1995). In this model, there is also a strong emphasis on practicing and generalizing skills through homework assignments. As the proposed study seeks to examine the effects of

CBT cognitive interventions, the following section will elaborate upon specific cognitive interventions CBT therapists use to assist the client with recognizing, identifying, and modifying maladaptive cognitions, as outlined by A.T. Beck (Beck et al., 1979) and J. Beck (1995).

Guided Discovery and Empiricism

Within the execution of the various cognitive techniques are the common threads of guided discovery and empiricism. The cognitive therapist does not attempt to persuade the client into adhering to a new more adaptive thought but rather, uses collaboration to lead the client through a process that is likened to empiricism of scientific investigation. Just as the patient automatically accepts negative thoughts and beliefs as true, valid information, the therapist does not automatically reject the negatively distorted cognitions as untrue, invalid information. Rather, the therapist guides the client through an “information gathering” stage, helping the depressed individual to gather and consider a more representative sample of information in order to arrive at more adaptive, realistic inferences regarding her experiences (J. Beck, 1995). Therefore, the client owns her new knowledge as she arrives at more functional interpretations, which are thought to weaken old, dysfunctional schemas and strengthen new, more adaptive schemas.

Eliciting Automatic Thoughts

Of the numerous automatic thoughts present in the individual’s stream of consciousness, the therapist targets cognitions that are dysfunctional (i.e., reflect distortions leading to duress or functional impairment) for interventions (J. Beck, 1995). As the individual is not usually consciously aware of automatic thoughts, the individual

typically is able to more readily detect corresponding negative emotions (Rush & Beck, 1977). The therapist thus helps the client to use affective cues to become more aware of her thoughts. According to cognitive theorists (e.g., Beck et al., 1979; J. Beck, 1995) there are two methods by which this is achieved: eliciting thoughts in session and eliciting thoughts that were experienced between sessions.

In session, the therapist is careful to observe external cues indicated by slight shifts in verbal (e.g., voice tone) and nonverbal (e.g., facial expressions, body language) behaviors exhibited by the client that may reflect the presence of maladaptive automatic thoughts. As these shifts occur, the therapist asks questions that encourage the client to specifically verbalize (as specifically as possible) what she was thinking as the change in emotional experience occurred (e.g., “What were you thinking just then?”) (J. Beck, 1995). If the client has trouble grasping the thought, follow up questions that encourage the client to report the thought can be used. For instance, the therapist can ask the client to guess, or may offer plausible suggestions, ask about corresponding imagery, or may offer a thought that is opposite of what the therapist hypothesizes the client is thinking about (J. Beck, 1995). If these techniques are not effective, the therapist may opt to have the client focus on the aversive affect, and then continue with the aforementioned questioning.

In order to elicit automatic thoughts that occurred outside of sessions, the therapist again asks what was going through the client’s mind at the time of the incident. The therapist can assist the client to recall the automatic thought by having the client describe the situation or imagine the situation as if it were happening in the moment and

provide descriptions as if it were occurring in the present (J. Beck, 1995). Another option is for the therapist to role-play the problematic situation with the client. Therapists can also elicit additional automatic thoughts the client may have about her reaction (e.g., emotion, behavior, physiological) to the original automatic thought. The therapist assists the client to independently identify his own automatic thoughts by encouraging the him to reflect on and pin-point his thoughts with increased immediacy and clarity when he notices a change in affect between sessions (J. Beck, 1995).

Relations Between Thoughts and Feelings

As described above, the therapist helps the client to see the relationship between thoughts and feelings by exploring client's specific thoughts that occurred around affective shifts or by encouraging the client to pay attention to what thoughts she has when she experiences significant affective states outside of session (J. Beck, 1995). In addition, the therapist helps clients to distinguish thoughts from feelings, and instills the knowledge that feelings stem directly from how she thinks about or interprets a particular situation.

The therapist also helps clients to recognize that the type and degree of emotions that are associated with the specific content of the thought and the degree to which she actually believes the thought (e.g., by using a rating scale) (J. Beck, 1995). After engaging in cognitive interventions, the therapist helps the client to determine the level of its success by assessing the extent to which a certain negative emotion has dissipated. Rating the new mood and connecting that mood change to the altered cognition helps the client to recognize that therapeutic gains were linked directly to cognitive changes (J.

Beck, 1995). In a similar manner, when the client reports improvements that have occurred outside of session, the therapist can help the client identify the new, adaptive thoughts and beliefs that underlie the therapeutic gain.

Exploring Underlying Assumptions

Together with the client, the therapist explores and identifies intermediate beliefs (e.g., assumptions, rules) that underlie many of the clients' specific negative thoughts. The underlying assumption can be identified through a variety of techniques. The intermediate belief may be plainly expressed as an automatic thought (e.g., "I should do my best, or I've failed.") (J. Beck, 1995). The therapist can also identify the full assumption by providing the first half (e.g., "If you don't do your best then..."), thus allowing the client to articulate the intermediate belief in its entirety (J. Beck, 1995). The therapist can also directly inquire about the rule or attitude (e.g., "do you have a rule about doing well?") (J. Beck, 1995).

Exploring Personal Meaning: Downward Arrow Technique

Another technique used to explore underlying assumptions is commonly referred to as the "downward arrow" technique (Burns, 1980; J. Beck, 1995). If the therapist encounters an automatic thought she believes stems from an underlying belief, she can ask the client about the personal meaning of the thought (J. Beck, 1995). Intermediate beliefs are revealed when the client explains what the meaning of the thought *is* to her (e.g., "If I don't do well, it means I'm failing"); core beliefs are elucidated when the client discloses what the thought means *about* her (e.g., if I don't do well, it means I'm failing the class, and that I'm an unworthy person) (J. Beck, 1995).

Development of Underlying Assumptions

To help the client uproot core beliefs that have their origins in early developmental experiences (Beck, 1979), the therapist explores the client's history to uncover distressing events within which faulty beliefs arose and examines how they have been sustained over time (Young, 1990). The therapist helps the client to identify, examine, and reframe evidence that she originally used to support the belief, and assists the client with gathering historical information that disconfirms the long-held belief (J. Beck, 1995)

Recognizing Cognitive Errors

In addition to identifying idiosyncratic automatic thoughts and beliefs, therapists also help clients to identify patterns of specific cognitive distortions or errors that are apparent in the client's thinking (e.g., all-or-none thinking, overgeneralization) (J. Beck, 1995). Cognitive techniques are then applied (e.g., examine evidence) to test the validity of those negatively biased thoughts. For example, if a client exhibits the overgeneralization error by verbalizing that she "always" fails, the therapist can help the client to remember times that she did not fail or examine the accuracy of the interpretation that she truly failed.

Distancing From Thoughts

At times clients have difficulty engaging in the critical examination of their thoughts because intense emotional experiences (e.g., physiological arousal) interfere with this process (Beck et al., 1979; J. Beck, 1995). In these cases, the therapist can assist the client with establishing distance from his/her own thoughts with a variety of

techniques. The overall goal is to help the client refrain from automatically accepting the thought as established fact, and to rather suspend judgment and view her thought as a subjective interpretation of undetermined accuracy. The therapist is careful to note that the thought, in fact, may be true as the distortion is usually based on some amount of factual information, however small (J. Beck, 1995). A specific example of this technique includes encouraging the client to think of feedback she would tell a best-friend if she were in the same situation, and then to apply that feedback to her self (J. Beck, 1995). Use of metaphors can also help the client gain perspective on distressing cognitions and to better conceptualize her thoughts as possible distortions (J. Beck, 1995).

Examining Evidence

Once the automatic thought is elicited and its importance to the client's presenting concerns has been determined (i.e., causes distress and disrupts functioning) the therapist helps the client to discover and evaluate evidence that both supports and disconfirms the thought (J. Beck, 1995). This information used to test the validity of the thought can be derived from current available evidence or from the client's prior experiences. Reflecting on past experiences, the therapist helps the client to reframe evidence that seemed to support the belief at the time and looks for evidence that contradicted it (J. Beck, 1995).

Alternative Explanations

Once the therapist has helped the client to discover evidence for and against the original explanation for the distressing event, the therapist also helps the client to summarize the evidence and integrate that information to formulate a more reasonable alternative explanation or conclusion (J. Beck, 1995). The goal is not to replace the

client's negative thought with an unrealistically positive thought, but again, to devise a more realistic interpretation of the situation, which is usually mood-enhancing (as depressive thoughts tend to be negatively biased and thus more distressing) (J. Beck, 1995).

Testing Beliefs Prospectively

Behavioral experiments can be used for the purposes of cognitive restructuring. For instance, the therapist can encourage the client to engage in specific behaviors in order to test the accuracy of her beliefs; prior to the experiment, the therapist can encourage the client to articulate predictions for the outcomes of certain events so that those predictions and underlying beliefs can be challenged (J. Beck, 1995). For instance, after the client predicts everyone will laugh at her while giving a speech, the therapist can encourage the individual to follow through with the behaviors (e.g., give the speech) and evaluate the actual outcomes in reference to her predictions (e.g., that everyone laughed).

Realistic Consequences of Negative Cognitions

The therapist helps the client to disarm the power of negative beliefs by helping the client to identify realistic consequences of the client's negative beliefs, if they in fact, proved to be true (J. Beck, 1995). By first asking the question, "What's the worst that could happen?" the therapist follows up with, "What's the best that could happen?" ; the client is then assisted with formulating a realistic outcome that not characterized by extremes (J. Beck, 1995). For instance, if a child believes that her mother will die soon, the therapist helps the client to see that if her mother did die tomorrow, she will neither

get her mother back nor will she lose her forever, but that she will continue to have warm memories and love for her mother, as well as the continued love of others.

Adaptive Function of Beliefs

The therapist can also help the client to restructure negative beliefs by examining their adaptive function. Distorted cognitions can be evaluated in terms of validity and utility: if it is untrue, the therapist assists the individual to evaluate its validity; if it is true, the therapist assists the client with devising alternative thoughts or responses that are more adaptive (J. Beck, 1995). The client is assisted with generating lists of the advantages and disadvantages of continuing to think a certain thought. After the maladaptive emotions and behaviors associated with the particular maladaptive thought have been elucidated, the therapist helps the client to develop more adaptive cognitive and behavioral responses when the thought arises next (J. Beck, 1995).

Practicing Rational Responses

The therapist and client can together practice possible rational responses to the client's negative thoughts and beliefs. The technique "point-counterpoint" was devised by Young (1990) to help the patient dispute negative thoughts. The patient plays the "emotional" part of the individual that clings to the dysfunctional belief and the therapist plays the "rational" part (J. Beck, 1995). Variations of this technique can be used. For instance, the client can practice refuting negative thoughts verbalized by the therapist on behalf of the client, or the client can invalidate a similar belief held by another person (J. Beck, 1995)

Recording Thoughts

The therapist encourages the client to monitor and record thoughts between sessions and reviews those thought records in subsequent sessions. In order to help the client respond more effectively to negatively distorted thoughts as they occur between sessions, the therapist helps her to identify: (1) the situation (e.g., event, recollection) that lead to the automatic thought, (2) the actual automatic thought and how much it was believed, (3) what emotions were experienced and how intensely the emotion was felt; (4) what the adaptive response was, and (5) outcome (new thought, how much it is believed, new emotions, and course of action) (J. Beck, 1995).

Building a Positive Schema

Hand-in-hand with dismantling old, faulty beliefs the therapist also helps the client build and strengthen positive beliefs. Again, the new belief is not overly positive, but is functional and realistic, which makes it easier for the client to adopt (J. Beck, 1995). The therapist helps the client to find evidence that not only contradicts the old belief but supports the collaboratively generated new belief. If the client has difficulty identifying positive information regarding herself, the therapist can ask her to find qualities in herself that would support that attribute in another person (J. Beck, 1995). The therapist can also encourage the client to consider what someone who is likely to recognize her strengths would say (e.g., best friend). Other techniques to aid the client with identifying her positive attributes include exploring situations in which the thought is least frequent, and identifying evidence from the client's earlier developmental periods that support the new, adaptive belief (J. Beck, 1995).

Developmental Considerations

There has been concern that children, particularly between the ages of 5-8, have not reached an adequate level of cognitive development to benefit from such elaborate cognitive techniques (e.g., Grave & Blissett, 2004; Stallard, 2002). At the pre-operational level of Piagetian development theory, these types of interventions would be considered inappropriate, as the thought processes of these young children are thought to be guided more by immediate perception rather than logic (Grave & Blissett, 2004). In contrast, the child at the operational level (ages seven and over) can use logical thinking about concrete concepts, while early adolescents (ages twelve and over) at the formal operational stage are able to use abstract hypothetical thinking (Grave & Blissett, 2004). In order to adjust for the fact that relative to adults, children may have limited ability to reason abstractly and to control their personal environments, CBT interventions can be modified to reflect sensitivity to children's developmental needs.

CBT manuals have been found to apply the following modifications to the downward extensions of CBT techniques for adults: (1) emphasis on the use of concrete examples (e.g., visual aids, hands-on activities), (2) inclusion of frequent summaries and review of key points, (3) frequent practice and application of skills, and (4) inclusion of family components to support skills in the home environment (Weersing & Brent, 2006). Therefore, cognitive restructuring can be appropriate for children in the operational stage of cognitive development, if these interventions are grounded within specific and concrete learning contexts, are supported through summarization and repetition, and are reinforced in environments outside therapy sessions. The sample used in this study

includes early adolescent girls ages 9-13, and the CBT treatment protocol reflects this recommended developmental-sensitivity (Stark, Hargrave, Sander, Custer, Schnoebelen, Simpson & Molnar, 2006)

In summary, cognitive behavioral treatments combine both cognitive and behavioral components to treat depression. Common to most CBT treatment packages are processes such as: modification of maladaptive thoughts, skill-building (e.g., social skills, problem solving, goal-setting), and affect regulation (Curry & Reinecke, 2003). There is a growing body of empirical evidence suggesting that for children and adolescents, CBT can be an efficacious approach to the treatment of depression. These studies will be reviewed in the following section. First, the efficacy of other psychotherapies for youth depression will be briefly highlighted.

Efficacy of Psychotherapy for Depressed Youth

Recent meta-analysis of controlled outcome studies for youth depression have found effect sizes ranging from 0.34 (Weisz, McCarty, & Valeri, 2006) to 0.72 (Micheal & Crowley, 2002), suggesting overall reliability in the alleviation depressive symptoms across treatment modalities (Weisz et al., 2006). Although the treatment outcome literature regarding depressed youth populations is limited, the existing studies show that treatments not explicitly targeting pathogenic cognitive mechanisms can be potentially viable. For example, although such efficacy studies are rare, researchers have found that interventions focusing on the family environment can bring about short-term and long-term therapeutic change for depressed adolescents, compared to no-treatment (Diamond, Siqueland, & Diamond, 2003). Targeting maladaptive relationships and interpersonal

patterns, interpersonal therapy for adolescents (IPT-A) (Mufson and colleagues (1994) has been found to be superior to clinical monitoring (Mufson et al., 1999) and treatment as usual (Mufson, Dorta, Wickermaratne, Nomura, & Olfson, 2004) (a more in-depth description of IPT-A will be provided in another section). Social skills training, however, has shown limited efficacy, as adolescents reported poorer outcome than those in social support conditions (Fine, Forth, & Gilbert, 1991) or gains equivalent to attention-placebo and no-treatment controls (Liddle & Spence, 1990). As the proposed study investigates the effects of cognitive interventions in CBT on depressive symptoms and purported mediators, the following section will extensively review the existing literature of controlled trials of CBT for depressed youth.

Efficacy of CBT for Depressed Children

Cognitive behavioral therapy (CBT) has been the most frequently tested psychosocial intervention for youth depression (Weersing & Weisz, 2002). Investigated in the majority of published randomized controlled trials (RCTs), CBT has received the most empirical support as a promising treatment for depression for both children and adolescents (Birmaher et al., 1996; Curry, 2001; Kaslow & Thompson, 1998; Kazdin & Weisz, 1998; Lewinsohn & Clark, 1999; Reinecke, Ryan, & Dubois, 1998). Meta-analyses of the effects of CBT for depression in adolescents have found effect sizes in the large range (1.27, Lewinsohn & Clarke, 1999; 1.06, Reinecke et al., 1998). Several published empirical studies of CBT conducted to date support the efficacy of CBT in decreasing depressive symptoms in children.

Butler, Mieziitis, Friedman, and Cole (1980) assigned 56 fifth- and sixth-grade students who self-reported depressive symptoms to either a: (1) CBT condition using primarily behavioral techniques (social skills and problem solving through role-play); (2) CBT condition using primarily cognitive techniques (identification of irrational, self-deprecating thoughts and adoption of more realistic, viable alternatives; listening skills; recognition of the connection between thoughts and feelings); (3) attention-placebo or (4) classroom control. Treatment was implemented weekly for ten weeks. Both CBT conditions led to greater symptom reduction than attention-placebo and classroom control conditions, with the behavioral condition exhibiting relatively greater efficacy. These results should be interpreted with caution, however, as the authors did not implement random assignment to study conditions. It could therefore be argued that findings were not the result of treatment condition, but to other between-group differences.

Using Lewinsohn's CWD-A model of CBT intervention, Kahn, Kehle, Jenson, and Clark (1990) compared a full CBT condition to relaxation only, self-modeling only, and wait-list control with 68 sixth-, seventh-, and eighth-grade students reporting moderate to severe depressive symptoms. Over the course of 15 sessions, participants were taught skills to alleviate depressive symptoms: constructive thinking, self-reinforcement, pleasant activities scheduling, and social skills. In the relaxation component, participants learned various relaxation skills and the identification of anxiety-arousing, stressful situations and their relationship to depression. Students in the self-modeling group repeatedly observed or rehearsed videotapes of them selves depicting behavior incompatible with depressed affect (e.g., positive verbalizations and body

posture) (Kahn et al., 1990). All treatment conditions showed a significant decrease in depression scores and increase in self-esteem at post-treatment and one-month follow up assessments. This study demonstrates that relative to no-treatment, CBT is effective in reducing depressive symptoms. It also points to the fact that primarily behavioral interventions show comparable levels of efficacy. This raises the question regarding which aspects of CBT contain the “active” ingredients for therapeutic change.

Stark, Reynolds, and Kaslow (1987) randomly assigned 29 children ages 9-12 who reported elevated depressive symptoms on self-report measures and during a clinical interview to one of three treatment conditions: self-control therapy, behavioral problem-solving therapy, or wait-list group. The self-control treatment was a downward extension of Rehm’s intervention for adults (Rehm et al., 1984) which combined cognitive and behavioral skills-training. Participants developed skills to self-monitor, self-evaluate performance, attribute causes of positive and negative outcomes, and to self-consequence more adaptively. The behavioral problem-solving treatment combined self-monitoring, pleasant activity-scheduling, and development of problem-solving skills. Sessions were also used to develop knowledge about feelings and to discuss them. At post-treatment, participants in both active treatments reported significant reduction in symptoms on measures of depression, while wait-list group reported minimal change. Treatment gains made by active treatment participants were maintained at 5-week follow up. Similar to the findings from the study conducted by Kahn and colleagues (1990), these findings provide support for the efficacy of CBT interventions when compared to no-treatment controls. The findings also show that the effectiveness of primarily behavioral

interventions (e.g., problem-solving training) were comparable to the treatment condition that included more in-depth cognitive techniques (e.g., altering attributions). Again, this raises the question of what CBT mechanisms influenced the observed improvements in depressive symptoms.

In a second study conducted by Stark and colleagues (1991), 24 fourth – seventh graders were assigned to a combined cognitive-behavioral treatment or to traditional school counseling, for 24 – 26 group meetings within a 14 week period. Both conditions included family meetings. Although both treatment groups demonstrated improvement on measures of depression and cognitive distortion at post-treatment, the participants in the CBT condition experienced significantly more gains. At 7-month follow up, the groups no longer differed on outcome measures. This result may have been affected by differential attrition between the treatment groups (Stark et al., 1991). In contrast to the CBT child studies previously reviewed, Stark and colleagues (1991) did not compare the various components of CBT to one another. However, the study’s findings do provide evidence that compared to treatment as usual, CBT appears to produce significantly greater reduction of depressive symptoms after acute treatment.

Weisz and colleagues (1997) randomly assigned 48 third - sixth grade children with mild to moderate depressive symptoms to either an eight-session Primary and Secondary Control Enhancement Training program or to a control condition. The training program consisted of: (1) primary control (changing objective reality through goal attainment, activity selection), and (2) secondary control (changing subjective experience through cognitive strategies targeting depressogenic thinking). The participants in the

treatment condition showed greater improvement on measures of depression than those in the control condition both at post-treatment and at 9-month follow up. These results provide further support for CBT as a potentially effective in the short-term and longer-term treatment of childhood depression. As these results were contrasted with no treatment conditions, it can neither be concluded that CBT is superior to other treatments, nor ascertained which of its components contributed to therapeutic gains.

Summary of the Efficacy of CBT for Depressed Children

In summary, in all but one study, CBT was effective in treating depression in the acute phase and gains were maintained at follow-up assessments up to 9-months later when compared to no treatment or wait-list conditions. Relative to other active treatments, CBT for depressed children appeared to have comparable efficacy. Further, CBT was found to be superior to treatment as usual immediately after treatment, but not at follow up assessment. Taken together, results across these studies provide support for cognitive behavioral interventions as a promising treatment for depression in children. They do not, however, exhibit clear patterns of the relative efficacy of various CBT components (e.g., primarily cognitive versus primarily behavioral) (Curry, 2001), so that it remains unclear what specific pathogenic mediators (e.g., negative beliefs about self, poor social skills) and which particular techniques (e.g., behavioral, cognitive) are involved in the process of therapeutic change.

Efficacy of CBT for Depressed Adolescents

Several published empirical studies conducted within adolescent samples provide further support for CBT as a potentially effective form of therapy for the alleviation of

depressive symptomatology. Like studies carried out with depressed child samples, the particular CBT techniques used and components that were emphasized varied across those with adolescents.

Reynolds and Coats (1986) randomly assigned 30 high school students to either a CBT, relaxation only, or waiting-list condition. The CBT treatment included ten weeks of biweekly sessions comprised of both cognitive and behavioral components focusing on self-control training. Specific techniques such as self-monitoring, formulating adaptive self-evaluations, and increasing positive self-reinforcements were administered. Both treatment groups exhibited significantly greater improvement on self-reports of depression and on clinical interviews than wait-list participants following the acute phase of treatment. There were no significant differences, however, between the CBT and relaxation conditions. Therapeutic improvements were sustained in both treatment groups at follow up assessment five weeks later. Similar to the studies conducted with child samples reviewed in the previous section, CBT with adolescents was helpful in alleviating depressive symptoms at post treatment assessment and follow up, when compared to a no-treatment condition. These differences were not observed, however, when CBT was compared to another treatment group (relaxation). This again stimulates curiosity as to whether CBT treats depression through unique interventions, and if so, it remains unclear how these treatment-specific processes operate to produce therapeutic change.

In a unique study conducted within a sample of ethnic-minority youth, Rossello and Bernal (1999) compared individual CBT, Interpersonal Therapy (IPT), and wait-list

conditions with 71 Puerto Rican adolescents. CBT interventions included cognitive interventions (e.g., identification of cognitive errors, refuting negative cognitions, and psychoeducation), development of pleasant activities plans, and social skills training. Although participants in both treatment conditions reported significantly less depressive symptoms at the end of therapy, only those receiving IPT reported improved self-concept and social functioning. At a three month-follow up assessment, however, both CBT and IPT groups were equivalent on those measures. It is of interest to note that cognitive interventions were implemented in the first four sessions which is atypical. Such techniques are usually applied later in treatment after some symptom relief has been achieved through behavioral interventions (Beck et al., 1979). Further, cognitive restructuring was limited to the objectives of one session. Nonetheless, these findings not only provide support for the efficacy of CBT, but indicate that its therapeutic effects can be observed in minority ethnic populations. Again, CBT was superior to no treatment, but was comparable to IPT-A. The study's implementation of one session of cognitive restructuring early in treatment leaves open the possibility that the lack of therapeutic focus placed on the cognitive vulnerability of participants may have lead to less than optimal results. That is, if the causal mechanism proposed by Beck (maladaptive cognitions) was targeted more extensively, the CBT-related gains may have been more pronounced.

Lewinsohn and colleagues (1990) tested a downward extension of Lewinsohn's Coping With Depression Course (CWD) (Lewinsohn et al., 1984) with 59 depressed youth ages 14-18. As previously described, the CWD-A CBT treatment protocol

emphasizes behavioral techniques while incorporating some cognitive interventions. Participants were randomly assigned to the CWD-A group, CWD-A with a parent training group, or to a wait-list condition. The CWD-A treatment consisted of 14 group meetings over a seven-week period, while seven parent groups were held concurrently. At post-treatment, both CWD-A and CWD-A plus parent group improved significantly more than wait-list participants on self-report measures of depression, while CWD-A plus parent group reported more improvement on parent-rated depression measures. Treated adolescents continued to improve following acute phase treatment; one month later, 70% no longer met criteria for depression, while 82% exhibited remission at six-month follow-up. At treatment termination CBT appeared to have significantly reduced depression, while parent training did not seem to contribute substantially to outcome. These gains, however, were not sustained over a long-term course. This is inconsistent with evidence that depressed children who received CBT were able to maintain gains over the course of six months (Weisz et al., 1997). A range of possible explanations exist for this discrepancy, including differences in treatment techniques and targets of intervention across the two distinct CBT packages.

Clarke and colleagues (1999) attempted to replicate the study conducted by Lewinsohn and colleagues (1990). With a sample of 123 adolescents ages 14-18 diagnosed with a depressive disorder, participants were randomly assigned to either CWD-A, CWD-A plus parent, or waiting-list groups. There were 16 child groups conducted over eight weeks, while parents attended eight meetings. Findings of the first

study (Lewinsohn et al., 1990) were replicated: the CWD-A and CWD-A plus parent groups both reported significantly more improvement on self-reports of depression than the wait-list condition, with no differences between the two treatment groups. All participants were then randomly assigned to one of three follow-up conditions over the next two years: booster sessions and assessment every four months, assessments only every four months or assessment once a year. For participants who were no longer depressed at the end of the initial treatment, booster sessions did not prevent relapse significantly more than the other conditions, but they facilitated remission of depression in participants still depressed at post-treatment (Clarke et al., 1999).

This study conducted by Clarke and colleagues (1999) replicated findings that compared to no-treatment CBT is associated with significant improvements in depression, and extended the findings to indicate that continued implementation of CBT can be effective for participants who are initially non-responsive to treatment. The study also demonstrated again, that parent-training did not contribute significantly to therapeutic gains. The lack of associations between CBT and relapse prevention might be attributed to the fact that CWD-A does not place as heavy an emphasis on cognitive interventions as other CBT packages, and thus relapse may have been influenced by residual maladaptive cognitions that were not adequately addressed.

Brent and colleagues (1997) tested a CBT intervention modeled after Beck's theory of depression (Beck et al., 1979). Adapted for use with adolescents, it primarily consisted of psychoeducation, exploration of autonomy issues, and the development of problem-solving, social, and affect-regulation skills. One hundred and seven adolescents

diagnosed with a depressive disorder were randomly assigned to either a CBT, systemic behavioral family therapy (SBFT), or nondirective supportive therapy (NST; Brent et al., 1997). At post treatment, CBT was more effective than SBFT and NST with respect to remission of depression. Further, participants in the CBT condition experienced more rapid rate of symptom reduction than those in the NST or SBFT groups. Differences between groups at two-year follow-up, however, were not significant (Birmaher et al., 2000). About half of the participants received additional treatment during the follow up period (11% CBT; 11 % SBFT; 14% NST), although the type of additional treatment was not specified (Brent, 1999). Overall, CBT appeared to be more effective than SBFT and NST in producing rapid symptom relief and remission from depression. Because the findings at follow up were confounded by effects of additional treatment for about half the subjects, conclusions regarding relative efficacy of treatments cannot be drawn from this follow up data.

Vostanis and colleagues (1996a) assigned 57 adolescents with a diagnosed depressive disorder to either a CBT or to a non-focused intervention (NFT) condition. CBT group sessions included emotion recognition, social problem solving, and cognitive restructuring while the NFT sessions included review of depressive symptoms and participation in social activities. There was an average of six sessions conducted within a period of 14 weeks. Following acute treatment, the groups showed equal improvement on outcome measures of depression. Nine months later, both groups had maintained gains (Vostanis et al., 1996b). CBT as implemented in this study was not more efficacious than non-focused intervention. There were, however, only six sessions administered, which

may have been an inadequate amount of therapy for participants to learn behavioral skills and experience cognitive change.

Wood and colleagues (1996) tested the efficacy of CBT compared to a relaxation only group with 53 depressed youth ages 9-17 years old. CBT consisted of cognitive interventions, activity scheduling, social problem solving, and targeted interventions for specific symptoms of depression (e.g., sleep disturbance). At post treatment, the CBT condition showed significantly greater improvement than the relaxation only condition. Differences between the groups were not observed at six-month follow-up, as the relaxation participants continued to improve while some of the CBT participants relapsed. It is important to note that 71% of participants in the relaxation condition received additional treatment during the follow-up period. The results show that compared to the sole-use of relaxation techniques, CBT was related to more improvements depressed youth. Because an adequate control group was not included, it is still unclear whether CBT was better than the passage of time in this sample. CBT was also related to long-term gains, but again due to methodological limitations, it is unclear whether these gains were due to CBT, and whether CBT was more efficacious than relaxation interventions.

In the Treatment of Adolescents with Depression Study (TADS) (March, 2004), the relative efficacy of fluoxetine, CBT, CBT in combination with fluoxetine, and placebo was assessed in a sample of 351 adolescents ages 12-17. CBT consisted of six initial weeks of interventions including psychoeducation, goal-setting, mood monitoring, increased engagement in pleasant activities, social problem solving, and learned cognitive

skills (Stark et al., 2006). The remaining six weeks of treatment were flexibly determined by the therapist and adolescent to target specific social skills deficits. The results of the study indicated that at post-treatment, the combination condition (CBT+fluoxetine) was related to the highest rates of reduction in depressive symptoms, while fluoxetine alone was superior to CBT, and CBT was equivalent to the placebo-control group. It is noteworthy that the cognitive interventions in the CBT protocol were not characteristic of those used in cognitive therapy (Stark et al., 2006). Further, these cognitive interventions were confined to the first six weeks of treatment, rather than extended through to treatment termination. It thus seems questionable whether the youth were exposed to the level of cognitive interventions necessary to remediate underlying cognitive structures and to produce more substantial reduction of depressive symptoms. It was also reported that TADS participants in the fluoxetine condition exhibited significantly more suicidal events than those in the other three conditions, yet the combined (CBT+fluoxetine) condition was equivalent to the CBT condition. The authors suggested that CBT may have provided participants with skills that may have reduced the risk of suicidal events (Emslie et al., 2006; March et al., 2006).

Summary of CBT for Depressed Adolescents

The general pattern that emerges across studies conducted with depressed adolescents, is that compared to no-treatment controls, CBT is consistently associated with a significantly greater amount of symptom reduction following acute treatment and at follow-up assessments. When compared to other treatments, CBT is generally comparable, but does not consistently exceed other treatments in demonstrating treatment

efficacy. The exception to this trend is that when compared to pharmacological treatments, CBT does not show superior efficacy but is equivalent to placebo in reducing depressive symptoms. When combined with CBT, however, fluoxetine treatment is superior to fluoxetine alone. Thus, it remains unclear, whether treatment-specific effects contribute to therapeutic gains in individuals who receive CBT or CBT in addition to medication. If CBT does uniquely contribute to the alleviation of depressive symptoms, it is uncertain how this is achieved, as each CBT package reviewed included various techniques (e.g., social skills training, self-monitoring) and treatment foci (e.g., self-control, social skills). Further, most of the child and adolescent CBT treatments appeared to have placed much of their emphasis on behavioral, rather than cognitive techniques or implemented cognitive interventions in a less-than-optimal manner (e.g., confined to beginning of treatment, use of skill-building rather than actual restructuring).

In regards to Beck's cognitive model of depression and its treatment, this lack of focus on the remediation of underlying beliefs regarding the self, world, and future (and subsequent distortions in information-processing) may have influenced the lack of positive outcomes observed, such as the high rates of reoccurrence at 6-month follow-up in Lewinsohn and colleague's (1990) study. Inadequate focus on pathogenic cognitive mechanisms and insufficient delivery of cognitive restructuring techniques may provide some explanation as to why CBT shows comparable efficacy with other treatments that do not explicitly focus on underlying cognitive structures. In contrast to other child and adolescent studies reviewed, the current study examines a CBT treatment protocol that devotes large amounts of therapy time to the in-depth application and instruction of

cognitive restructuring techniques such as generating alternative explanations, examining evidence, distancing, and practicing rational responses to maladaptive thoughts.

Mechanisms of Change

In 1995, Division 12 (American Psychological Association) initiated a Task Force on the Promotion and Dissemination of Psychological Procedures (Chambless, Baker, et al., 1998; Chambless, Sanderson, et al., 1996; Task Force, 1995) in order to identify treatments and methods of treatment demonstrating efficacy based upon sound scientific research or “Empirically Supported Treatments” (Beutler & Castonguay, 2006; Chambless & Hollon, 1998). Several subsequent investigations have identified treatments models that were reliably superior to no-treatment or placebo-treatment experimental controls.

The results of the Task Force were the source of much debate and researchers were criticized for ignoring mechanisms thought to be active in more relationship-based models (e.g., therapeutic alliance) (Beutler & Castonguay, 2006). To address this gap, Division 29 (Division of Psychotherapy) designed a Task Force in 2002 to identify relationship variables that accounted for therapeutic change (including therapist and client variables). Through these task force efforts, a vast body of empirical data has accumulated regarding the efficaciousness of specific treatments and the contributions of relationship variables to therapeutic gains. Building upon this foundation, it may now be productive to focus research on examining why and how these treatments of demonstrated efficacy actually work.

The attention given to the specific effects of therapy in youth has been sparse (c.f. Kazdin & Weisz, 1998; Kendall, Flannery-Schroeder, & Ford, 1999). There is very little understanding of how psychotherapy effects change in targeted pathogenic domains (e.g., how CBT affects cognitions) (Kolko et al., 2000; Shirk & Karver, 2006). Even less is known regarding how specific therapeutic processes influence potential mediators and outcomes (e.g., how cognitive restructuring influences cognitions and symptoms of depression) (Shirk & Karver, 2006).

Despite its established efficacy for the treatment of a myriad of disorders, there is still very little known regarding how and why cognitive behavioral therapy works. While research has consistently shown CBT to be superior to no-treatment or wait-list controls, the current literature indicates its overall effects are comparable to other treatments of known-efficacy, with the exception of a few disorders (Beutler & Castonguay, 2006). The observation that various models of therapies produce significant therapeutic gains despite their technical differences, has strengthened the claim by some that non-specific factors common to most modes of therapy (e.g., therapeutic alliance) are the primary underlying mechanisms of change (e.g., Frank, 1974). Despite this claim, a recent meta-analysis of child and adolescent outcome literature has indicated the therapeutic relationship to have a modest effect size of 0.24 (Green, 2006). Beck (1967) himself did not discount the importance of a therapeutic relationship characterized by empathy, sensitivity, and collaboration in the effective delivery of CBT. In fact, these qualities were considered necessary (but not sufficient) to support behavioral and cognitive interventions (Beck, 1967). Meta-analyses of CBT outcome literature has found

relational factors to account for 5% - 20% of outcome variance (Keijsers, Schaap, & Hoogduin, 2000). Little is known regarding the unique contributions of behavioral processes on symptom reduction in CBT treatment of youth psychopathology (Weersing & Weisz, 2002).

According to Shirk and Karver (2006), in order to adequately address the question of why and how an efficacious treatment works, two related variables must be examined: 1) specific treatment processes or procedures, and 2) specific pathogenic mechanisms thought to account for the etiology, maintenance, and remission of a disorder. Thus, studies that compare efficacies of different treatment models (e.g., CBT vs. IPT-A) do not provide information about how and why a treatment works, as specific procedures and potential mediators are not examined. Further, studies that examine how changes in proposed pathogenic mediators change as a result of a general treatment package (e.g., the effects of CBT on cognitive distortion) are not sufficient in deciphering how a treatment successfully reduces symptoms, as the specific processes that lead to change in pathogenic mechanisms are not looked at. Researchers have attempted to better identify active therapeutic mechanisms through a variety of approaches: (1) dismantling component analyses, (2) process-outcome studies, and (3) examination of potential mediators. Research studies that have used these methods to elucidate how CBT cognitive techniques and hypothesized cognitive mediators operate to contribute to the alleviation of depression will be reviewed in the following sections.

Dismantling Component Analysis

Due to the variation of specific interventions (e.g., social skills training, cognitive restructuring) and treatment foci (e.g., social skills, maladaptive cognitions) of CBT treatment protocols, change mechanisms cannot be identified through broad comparisons using general treatment packages as units of measurement (e.g., CBT vs. non-directive supportive therapy) (Shirk & Karver, 2006). One way in which researchers have attempted to gain knowledge regarding distinct active ingredients of therapy is through dismantling component analysis. Through this research design, researchers use experimental manipulation to identify the relative contributions of different treatment components to therapeutic improvement (Shirk & Karver, 2006). Precise component effects are isolated by randomly assigning participants to groups that deliver the particular treatment components of interest (e.g., self monitoring, social skills training). This becomes particularly relevant to the study of CBT change mechanisms, as CBT is often comprised of various combinations of different forms of behavioral and cognitive interventions. The following section reviews the one existing CBT dismantling component analysis study conducted in youth populations that investigated the effects of cognitive components relative to other components (e.g., social skills training).

To date, there has been one experimental dismantling component analyses of CBT for youth at-risk for depression. Gillham and colleagues (1994) conducted a follow up study to assess at-risk children's functioning following a depression prevention intervention. Sixty-nine children in the fifth and sixth grades were randomly assigned to a cognitive intervention or social problem solving component, while 49 children

participated in a matched-control condition. Children in the cognitive intervention component learned to identify negative beliefs, evaluate maladaptive beliefs by examining evidence, develop more realistic alternatives, and also learned how to use a more optimistic attributional style in response to negative events. In the social problem solving component, children were taught to think about their goals before acting, to generate lists of possible solutions for problems and use consequential thinking to evaluate and select viable solutions. The results indicated that compared to controls, children who received both the cognitive and social skills interventions exhibited less depressive symptoms and more optimistic attributional style after treatment and over a two-year period. These comparable findings between cognitive interventions and social skills training may be due to the fact that the participants of the sample did not meet full criteria for depression, and as such, the cognitive interventions may not have been as powerful as they are hypothesized to be in clinically depressed individuals

There appears to be very tentative evidence suggesting that youth who are experiencing elevated depressive symptoms can benefit from interventions that involve the modification of cognitive events. The cognitive module in this component analyses was significantly associated with positive outcomes on both measures of depressive symptomatology as well as hypothesized mediating cognitive mechanisms such as attributional style and cognitive errors. Nonetheless, the relative efficacy of cognitive interventions in comparison to other CBT techniques (e.g., social skills training) has not been demonstrated through this study's findings.

Process-Outcome Studies

Component analysis designs can be useful to investigate the relative effects of specific treatment components on outcome measures of interest. Such units of analysis, however, are usually treatment modules, and do not allow the examination of more precise units of analysis such as techniques, transactions, and procedures as they occur within sessions (Shirk & Karver, 2006). Process-outcome methodologies allow for more distinctive, fine-grained investigation of these within-session processes.

To date, there appear to be no published studies investigating the influence of treatment-specific techniques implemented within sessions on outcome in the child psychotherapy literature. The rare studies that have examined such within-session processes have focused on measuring general treatment adherence (Huey, Henggeler, Brondino, & Pickrel, 2000) or non-specific factors such as supportive therapist behavior (Patterson & Forgatch, 1985) and child-therapist involvement (Braswell, 1985).

More attention has been given to investigation of the efficacy of treatment-specific techniques in the adult process-outcome literature. Nonetheless, the most common use of in-session process analysis in adult populations has been to compare the activities of therapists from various theoretical orientations (e.g., therapeutic focus) to determine significant differences in their use of orientation-specific techniques (see Blagys & Hisenroth, 2002 for a review). Although these studies looked beyond the more common pre-, post-treatment assessment approach to determining treatment efficacy by studying general, and even specific processes as they occurred within session, they do not illuminate if and how specific treatment procedures affect outcome (or the proposed

mediators). There are a few published studies conducted within adult populations that have looked at within-session cognitive interventions and how they affect various outcomes, which will be reviewed below. Although these findings cannot be readily generalized to youth populations, they do provide some support for Beck's theory of depression and its treatment.

Hayes and colleagues (1996) used an observational coding system to investigate whether cognitive restructuring targeting maladaptive intrapersonal, interpersonal thoughts and negative cognitions related to early and current attachments with primary caregivers were related to symptom reduction in 30 depressed outpatient adults. The researchers found that interventions focused on maladaptive thoughts about the self and others did not predict alleviation of depressive symptoms or level of global functioning. Rather, they found that therapists' interventions directed at negative interpersonal cognitions were related to significant decline in global functioning. Significant reduction of depressive symptoms was, however, related to cognitive restructuring that targeted thoughts and beliefs related to attachment experiences with caregivers. At 24-month follow-up, these participants also showed significant improvement in their level of global functioning. The authors concluded that these findings are consistent with Beck's cognitive theory of depression which hold that interventions that activate and restructure negative core beliefs (hypothesized to develop within early developmental experiences such as attachment relationships) are thought to result in the direct alleviation of depression (Beck et al., 1979). Further, the authors speculated that because the interpersonal and intrapersonal cognitive interventions did not address deeper, more core

beliefs, they were not as effective as the interventions that targeted developmental experiences, through which core beliefs are thought to develop (Beck et al., 1979).

Another possible contributing factor to the lack of significance of the relation between other cognitive interventions and outcome measures may be related to the coding methodology. For each participant, the researchers coded one randomly selected transcript of session that occurred within the first six weeks of treatment. Therefore, the dataset may not have been a representative sampling of the cognitive interventions that occurred over the 12-week period of treatment. Thus, this may have in part, accounted for the lack of positive findings for restructuring interpersonal and intrapersonal thoughts.

Kerr and colleagues (1992) examined CBT and psychodynamic-interpersonal (IP) therapists' focus on intrapersonal and interpersonal functioning during sessions that were conducted in a previous outcome study (Shapiro & Firth, 1987). The original study used a crossover design where outpatient adults experiencing depression or anxiety received eight sessions of both CBT and PI therapy. The researchers restricted their data collection (both in-session focus and outcome) to the first eight sessions of therapy conducted in the original study. Data were collected for 26 clients, 13 of whom received CBT while 13 received PI therapy. Symptom improvement was only associated with CBT therapists' focus on intrapersonal events. It was concluded by the researchers that these findings provide tentative support for the theoretical foundations of CBT, since much of the CBT interventions focus on modification of thoughts and their effects on feelings (Kerr, Goldfried, Hayes, Castonguay & Goldsamt, 1992). Although these findings suggest that CBT may have beneficial effects on internalizing symptomatology

through interventions focused on intrapersonal experiences, it does not provide specification of the precise CBT intervention(s) that positively influenced symptoms. Therapists in the CBT condition used a variety of techniques in addition to cognitive restructuring (e.g., relaxation training, graded exposure, self-monitoring, assertiveness training, time management). Therefore, it cannot be concluded from this study's results that cognitive restructuring per se, positively affected outcome.

Beck and Strong (1982) conducted an experimental analogue study to investigate the effects of negative and positive reframes on depressive symptoms. Thirty college students with elevated depressive symptoms were randomly assigned to one of two treatment groups or to a control group. Treatment groups differed according to the type of reframe offered for their depression (positive or negative self-attributions). Treatment consisted of two 30-minute sessions during which the therapist gave three prepared interpretations at 5 minute intervals during the last 17 minutes of the session. Only treatment groups improved on measures of depression at post-treatment assessment, but individuals in the negative reframe group exhibited relapse at follow-up assessment, while the positive reframe group maintained gains. Although the participants did not receive full CBT treatment, this study offers some preliminary data that support cognitive interventions as mechanisms of change in therapy.

In a sample of 25 depressed adult outpatients, DeRubeis and Feely (1990) investigated the effects of in-session use of cognitive therapy techniques on depressive symptoms. Therapy tapes were coded for: (1) therapist facilitative interventions (e.g., empathy, warmth) (2) patient-therapist helping relationship, and (3) therapist adherence

to cognitive therapy techniques. Therapist facilitative interventions and cognitive therapy techniques were measured using the National Institute of Mental Health Collaborative Study Psychotherapy Rating Scale (CSPRS; Hollon, Evans, Elkin, Lowery, 1984). Patient-therapist helping relationship was assessed by the Penn Helping Alliance Scale (Morgan, Luborsky, Crits-Christoph, Curtis, & Solomon, 1982) which measures clients' experience of therapist's helpfulness and collaborative efforts.

In a factor analysis of cognitive therapy techniques, two factors were found. One factor represented "concrete" techniques involving symptom-focused methods such as labeling cognitive errors, examining evidence concerning beliefs, practicing rational responses, eliciting specific cognitions, and assigning/reviewing self-monitoring. This factor, however, included other items such as setting and following agenda, assignment of homework, techniques that are thought to be more structural in nature, and not designed to target cognitions directly (e.g., Spangler et al., 2001; Beck et al., 1979). The second factor was comprised of "abstract techniques" that included less focused, more abstract discussions such as: exploring personal meaning of thoughts, underlying assumptions, and adaptive function of beliefs; encouraging distancing from beliefs; and examining relation of thoughts and feelings. This factor also included techniques that are not considered cognitive restructuring techniques (e.g., encouragement of independence, negotiation of session content, cognitive therapy rationale).

The authors found that concrete rather than abstract techniques predicted significant, positive change in depressive symptoms when assessed early in treatment (within the first 2-3 sessions). Although this study is unique in that it attempted to

examine the contributions of cognitive interventions, the cognitive variables were confounded by items measuring techniques that were not specific to cognitive restructuring (i.e., structural factors). Thus, it remains unclear from this study, to what extent interventions directly targeting cognitions resulted in positive outcomes in the treatment of depression.

In a sample of 37 depressed adult participants who received CBT within the larger National Institute of Mental Health Treatment of Depression Collaborative Research Program, Shaw and colleagues (1999) investigated the effects of therapist competence on outcome measures of depressive symptoms. Therapist behavior was coded during 9 of 20 sessions using the Cognitive Therapy Scale (CTS; Young & Beck, 1980) and CSPRS (Hollon et al., 1988); the CTS was used to measure therapist competence (combined protocol adherence and therapeutic relationship), while the CSPRS (CBT and Facilitative Conditions sections) was used to code therapist adherence. The authors used two factors derived from the CTS (Vallis et al., 1986) as independent variables in their analyses of data: the Skills Scale which included general therapy skills (e.g., understanding, interpersonal effectiveness) and specific CBT skills (e.g., empiricism, focusing on cognitions, development and implementation of strategy for change). The Structure factor consisted of three items assessing agenda setting, pacing, homework review and assignment. The alpha coefficients for the Skills and Structure subscales were .86 and .43, respectively. After controlling for therapist adherence, it was found that only the Structure factor was related to significant changes on depression outcome measure. The authors maintained that although this is consistent with DeRubeis & Feeley's finding of

the relationship between Concrete Methods factor and depressive cognitions and symptoms, the lack of comprehensiveness of the CTS in measuring therapist competence may have influenced the lack of relation between the Skills factor and outcome. The items in the Structure factor comprised the only component of the CTS that was not strongly related to the CSPRS-Cognitive Behavioral and Facilitative Conditions scales, while the Skills scale was significantly correlated (.67 and .76, respectively). Further, the authors encouraged caution in the interpretation of the study's findings, as the internal consistency of the Structure factor was low. In addition, only 9 out of 20 tapes were coded, which may not have been a sufficient sampling of therapist behaviors. Lastly, these findings do not shed light on the effects of specific cognitive interventions on termination scores, as the Skills factor included other types of interventions such as development and implementation of strategy for change.

In a study conducted with a sample of 64 depressed adult outpatients, DeRubeis and colleagues (1990) investigated the effects of changes in depressive cognitions and subsequent change in depressive symptoms. The subjects were randomly assigned to cognitive therapy (CT) or pharmacotherapy only (NoCT). Depression severity scores and measures of depressive cognitions were obtained at pre-, mid-, and post-treatment. Four types of depressive cognitions (attributional style, depressogenic self-statements, underlying assumptions, hopelessness) were assessed, as measured by the Attributional Styles Questionnaire (ATQ; Seligman, Abramson, Semmel, & von Baeyer, 1979), Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980), Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978), and the Hopelessness Scale (HS; Beck,

Weissman, Lester, & Trexler, 1974). The researchers found significant, comparable improvements on all four measures of depressogenic cognitions for both the CT and NoCT groups from pre-treatment to mid-treatment. Further, mid-treatment changes on ASQ, DAS, and HS each significantly predicted later change on depression outcome in the CT group only. Lastly, depression scores at mid-treatment did not predict changes on cognitive measures at post-treatment. The authors thus concluded that cognitive change associated with cognitive interventions may have mediated depressive symptom reduction in cognitive therapy.

With a sample of 56 adults diagnosed with Bulimia Nervosa (BN), Spangler and colleagues (2004) conducted a study investigating CBT mechanisms associated with BN symptom reduction. Treatment consisted of 19 sessions over the course of over 20 weeks. The protocol included three phases: Phase I interventions focused on symptom reduction through psychoeducation and behavioral interventions (e.g., exposure to feared foods, development of alternate behaviors). Phase II (sessions 9-15) focused on modifying dysfunctional beliefs through self-monitoring thoughts and beliefs (especially body-related), evaluation of thoughts and beliefs, enhancing cognitive flexibility and problem solving skills. Phase III focused on maintenance of treatment gains and relapse prevention. Results indicated that behavioral interventions were most predictive of symptom improvement. Changes in body-related dysfunctional beliefs were not associated with cognitive restructuring interventions while therapist relational and behavioral interventions were positively and negatively associated, respectively. The researchers postulated that the negative relationship between decreased behavioral

interventions and positive change in body-related dysfunctional beliefs may have been influenced by the shift from Phase I interventions (primarily behavioral) to Phase II interventions (primarily cognitive). Further, as in studies previously reviewed, the lack of relationship between cognitive interventions and positive change in body-related dysfunctional beliefs and symptom reduction may have been influenced by an adequate sampling of cognitive therapy interventions, as only sessions 4, 10, 14, and 16 were coded.

In summary, no published studies to date have examined the effects of in-session implementation of specific therapeutic processes on outcome variables in youth populations. The adult literature contains few studies investigating the effects of cognitive interventions as mechanisms of change in therapy. Of the few adult studies that exist, there is conflicting evidence that CBT cognitive interventions influence positive change in clients. Although still tentative, there is some evidence suggesting that when applied to core-beliefs, cognitive restructuring techniques are related to the short-term and long-term alleviation of depressive symptoms and improvements in global functioning. Contrary to these results, in a study conducted with adults diagnosed with Bulimia Nervosa, CBT cognitive restructuring techniques were not associated with changes in negative body-related beliefs or symptom improvement. Coding procedures that possibly resulted in inadequate sampling of cognitive restructuring interventions may in part, have accounted for these inconsistent findings.

Mediating Pathogenic Mechanisms

In most therapies, a primary aim is not only to provide symptom relief, but it is also to alter the pathogenic mechanisms that are thought to cause and maintain the disorder (Shirk & Karver, 2006). In order to better investigate how and why a given treatment is efficacious, it is essential to focus not only on what specific therapeutic procedures or processes lead to changes, but whether changes in the proposed pathogenic mechanisms result from the intervention (Shirk & Karver, 2006). Examining whether or not such changes in the hypothesized pathogenic mechanisms lead to symptom reduction is also critical to gain a better understanding of how a particular treatment exerts its therapeutic effects. Many studies of empirically supported treatments for youth fail to link changes in hypothesized mediators to outcome (Weersing & Weisz, 2002). Studies that have looked at how CBT relates to cognitive mediators in youth, as well as the few existing studies that conduct formal tests of mediation for cognitive factors in CBT for depressed youth and adults will be reviewed in the following sections.

Cognitive Mediators of CBT: Youth Studies

As previously described, cognitive vulnerability theorists postulate that depression results from pathogenic cognitive structures or processes, including overly negative views of the self, world, and future (Beck et al, 1979) and depressogenic attributional styles (Abramson et al., 1987). A primary assumption of CBT is that the alleviation of depression symptoms occurs through cognitive restructuring techniques which putatively alter these overly pessimistic belief systems and ways of thinking. As reviewed above, there are no published studies investigating the exclusive effects of

cognitive restructuring techniques on changes in cognition or depressive symptoms in youth, and very little existing evidence in the adult literature. To date, there are a few studies in the child literature which have looked at links between CBT and alterations in depressogenic cognitions: self concept, hopelessness, and dysfunctional attributions.

Self-Concept

Vostanis and colleagues (1996b) conducted a nine month follow up of a study investigating the effectiveness of CBT for children and adolescents suffering depression. In the original study, 56 youth were randomly assigned to CBT or non-focused intervention (NFI) (Vostanis et al., 1996a). The CBT treatment package targeted depressive phenomenology, social impairment and negative thoughts through three components: (1) recognizing and labeling emotions; (2) enhancing social skills; and (3) changing negative cognitive attributions. At follow up, both treatment groups maintained significant improvement on measures of self-esteem, as measured by the Self-Esteem Inventory (Warr and Jackson, 1983). It cannot be ascertained to what extent cognitive interventions per se contributed to these observed improvements, as the unit of analysis was the entire CBT package, which included other behavioral techniques.

Stark and colleagues (1987) conducted a study with 29 children ages 9-12 identified as moderately to severely depressed who were randomly assigned to one of two active treatments or waitlist condition. The Self-Control (SC) condition targeted cognitive events through self-monitoring pleasant cognitions and positive self-statements, and by teaching more adaptive attributional style. The Behavioral Problems Solving (BPS) group placed a greater emphasis on improving interpersonal relationships. The

researchers found that at post-treatment assessment, both active treatments were associated with significant improvements on the Coopersmith Self-Esteem Inventory (CSEI; Coopersmith, 1967, 1975), a measure of children's self-evaluations of self-worth. Further, the SC condition which targeted children's cognitions was associated with greater improvements in self-worth relative to the BPS group. Although tests of mediation were not conducted, this study provides evidence that suggests cognitive mechanisms may mediate the relation between cognitive interventions and the reduction of depressive symptoms. Further study is needed to provide more extensive support of Beck's model of depression, as beliefs of the self were measured, while beliefs of the future and world were not assessed.

Similar to Stark and colleagues (1986), Reynolds and Coats (1986) found associations between CBT and academic self-esteem measures. The authors randomly assigned 30 high school students with moderately elevated levels of depressive symptoms to either a CBT, relaxation only, or waiting-list condition. The CBT treatment included both cognitive and behavioral components focusing on self-control training through techniques such as self-monitoring, self-evaluations, and self-reinforcements. Both active treatments showed similar levels of improvement on academic self-concept, while the wait-list condition did not report a substantial level of gains. None of groups, however, exhibited significant changes on measures of general self-concept. At 5-week follow up, both CBT and relaxation group participants maintained improvements in academic self-concept as well as depressive symptomatology. The authors acknowledged that lack of findings regarding treatment specificity may have been due to

the inclusion of youth exhibiting elevated depressive symptoms rather than clinical depression. Therefore, lack of change on general self-esteem measures may have been influenced by the absence of clinical levels of depression in participants at pre-treatment assessment. That is, participants may not have had severe, pervasive distortions in generalized self-concept as one would expect to see in clinically depressed individuals (Beck et al., 1979). As these participants reported moderately elevated levels of depressive symptoms, distortions regarding the self may have been more domain-specific (i.e., limited to academics).

Kahn, Kehle, Jenson, and Clark (1990) compared a CBT condition to relaxation only, self-modeling only, and wait-list control with 68 sixth-, seventh-, and eighth-grade students reporting moderate to severe depressive symptoms on self-report measures and during a clinical interview. In the CBT condition, participants were taught target skills specific to depression (constructive thinking, self-reinforcement, pleasant activities scheduling, social skills). In the relaxation component, participants learned various relaxation skills and the identification of anxiety-arousing, stressful situations and their relationship to depression. Students in the self-modeling group repeatedly observed or rehearsed videotapes of themselves depicting behavior incompatible with depressed affect (e.g., positive verbalizations and body posture). All treatment conditions showed a significant increase in self-esteem as measured by the Piers-Harris Children's Self-Concept Scale (Piers, 1984) at post-treatment and one-month follow up assessments. Although CBT was efficacious in improving self esteem and depression symptoms compared to no treatment, it was not superior to other active treatments. Also, the

behavioral and cognitive components were not isolated, so it is not clear whether there were differential contributions to the change in self-esteem scores. The specific cognitive techniques that encouraged “constructive thinking” were not delineated or isolated, so it is unclear whether deeper level cognitive restructuring occurred, which may have resulted in more pronounced changes in self-esteem measures.

Wood and colleagues (1996) tested the efficacy of CBT compared to a relaxation only group with 53 depressed youth ages 9-17 years old. CBT consisted of cognitive interventions, activity scheduling, social problem solving, and targeted interventions for specific symptoms of depression (e.g., sleep disturbance). At post treatment, the CBT condition showed significantly greater improvement than the relaxation only condition on measures of self-concept as measured by the Self-Esteem Scale (Warr & Jackson, 1985). Differences between the groups were not observed at six-month follow-up, as the relaxation participants continued to improve while some of the CBT participants relapsed. It is important to note that 71% of participants in the relaxation condition received additional treatment during the follow-up period. It thus appears that CBT contributed to significant improvements on self-concept measures (while relaxation interventions did not), but it cannot be claimed that cognitive interventions were the active mechanisms underlying these results as other behavioral techniques were applied.

Within a sample of 71 Puerto Rican youth diagnosed with a depressive disorder, Rossello and Bernal (1999) compared individual CBT, Interpersonal Therapy (IPT), and wait-list conditions. CBT interventions included cognitive interventions (e.g., identification of cognitive errors, refuting negative cognitions, and psychoeducation),

development of pleasant activities plans, and social skills training. It is of interest that the cognitive interventions occurred within sessions 2-4, with only one session dedicated to practicing disputing negative thoughts. This is not typical of CBT protocols, as cognitive interventions are not usually limited to early sessions and more direct use of restructuring techniques are not restricted to one session. Although participants in both treatment conditions reported significantly less depressive symptoms at the end of therapy, only those receiving IPT reported improved self-concept as measured by the Piers-Harris Children's Self-Concept Scale (Piers, 1972; Piers & Harris, 1984) and social functioning. At a three month-follow up assessment, however, both CBT and IPT groups were equivalent on those measures. The authors explained that the superiority of IPT over CBT in improving self-concept may have been due to IPT's greater compatibility with Puerto Rican cultural values of *familismo* ("familism" or the tendency to place interest of the family over the individual) (Rossello & Bernal, 1999). These findings also suggest that within-session process variables such as extensiveness in the execution of a technique may produce differences in outcome.

Hopelessness

Stark and colleagues (1991) conducted a study with 24 children in grades 4-7 who were experiencing a depressive disorder or elevated depressive symptoms. The children were randomly assigned to either a CBT condition consisting of self-control skills, social-skills, and cognitive restructuring interventions or to traditional school counseling. At post-treatment, the participants in the CBT condition showed significantly fewer cognitive distortions, gains that were not observed at follow-up likely due to over 50%

attrition rates in both conditions. Thus it appears that CBT does exert therapeutic effects regarding depressed youth's beliefs about the future, but again, it cannot be ascertained if, and to what extent cognitive interventions contributed to this observed gain.

In a sample of 59 depressed youth ages 14-18, Lewinsohn and colleagues (1990) randomly assigned participants to a form of CBT (CWD-A), CWD-A plus parent training, or waitlist condition. The CWD-A intervention taught skills such as mood monitoring, linking mood to activities, increasing engagement in pleasant activities, relaxation, identifying and modifying depressed thoughts, problem solving, and social skills to increase coping ability and remediation of depressive symptoms. At post-treatment, both CWD-A and CWD-A plus parent groups improved significantly more than wait-list participants on self-report measures of cognitive distortions as assessed by the Subjective Probability Questionnaire (SPQ; Munoz & Lewinsohn, 1976), DAS and Personal Beliefs Inventory (PBI, Munoz & Lewinsohn, 1976). Again, although this study provides further evidence that CBT helps youth think more positively about their futures, the exact mechanisms by which this change occurs cannot be pin-pointed, as several techniques were combined into one unit of analysis.

Although the previously discussed studies show promising results regarding the effectiveness of CBT in altering pathogenic cognitive mediators (as well as depressive symptoms, as reviewed in another section), none of these studies conducted direct tests of mediation. To date, Kolko and colleagues (2000) are the only investigators that have attempted to examine cognitive mediation of CBT outcomes in depressed youth. The researchers conducted a follow up study to an investigation that tested a CBT

intervention modeled after Beck's theory (Beck et al., 1979) of depression and its treatment (Brent et al., 1997). One hundred and seven adolescents diagnosed with a depressive disorder were randomly assigned to either a CBT, systemic behavioral family therapy (SBFT), or nondirective supportive therapy (NST; Brent et al., 1997). Adapted for use with adolescents, the CBT condition primarily consisted of psychoeducation, exploration of autonomy issues, and the development of problem-solving, social, and affect-regulation skills. In the SBFT condition, family members identified dysfunctional behavior patterns and learned communication and problem-solving skills while in the NST condition, participants were encouraged to express feelings, discuss problems with an emphasis on empathic relationships. The cognitive mediators of interest were negative attributional style as measured by the Children's Negative Cognitive Errors Questionnaire (CNCEQ; Leitenberg, Yost, & Carroll-Wilson, 1986) and hopelessness measured with the Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974). At post treatment, CBT appeared equally effective as SBFT and NST in altering negative attributional style and hopelessness, therefore, the test of mediation was cut short. Although CBT did not demonstrate greater efficacy than other treatments in reducing negative cognitions, it does not rule out the possibility that changes in distorted cognitions observed in the CBT group did, in fact, mediate positive outcome. The treatments conditions may have exerted change in hypothesized cognitive mediators through techniques specific to their models. That is, to some extent, cognitive change may mediate therapeutic gain for all models included in the study, but the manner in which the cognitive change was brought about may have differed across modalities.

In summary, there is promising evidence that CBT does in some way exert therapeutic effects on hypothesized cognitive mediators such as cognitions related to the self and future. Although there is support for these two aspects of the cognitive triad, there is a lack of studies examining the effects of CBT on the full set of cognitive triad beliefs: those regarding the world, as well as the self and future. Lastly, none of these studies were able to isolate the specific active ingredients of CBT, as unit of analysis (whole treatment packages) confounded the effects of cognitive techniques.

Cognitive Mediators of CBT: Adult Studies

In a highly cited study, Jacobson and colleagues (1996) conducted a dismantling study in which 150 adult outpatients with major depression were randomly assigned to either a CBT component comprised of activation (BA), BA and modification of automatic thoughts (AT), or full CBT treatment including modification of core schema. There was no evidence that the full CBT package produced better outcomes, at either the termination of acute treatment or the 6-month follow up. Furthermore, both BA and AT treatments were just as effective as CT at 6-month follow up at altering negative thinking as well as dysfunctional attributional styles, as measured by the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980) and Expanded Attributional Style Questionnaire (EASQ; Peterson & Villanova, 1988), respectively. In a follow-up study, Gortner, Gollan, Dobson, and Jacobson (1998) found that on depression measures, BA, AT, and CBT conditions were equally effective in preventing relapse at 12-, 18-, and 24-month follow up (measures of dysfunctional attributions and negative thinking were not assessed). Considering that there was excellent adherence to the treatment protocol (as

assessed by the CRPRS (Hollon et al., 1998), and the researchers admitted having had a treatment alliance with CBT, the findings do call into question the necessity of cognitive interventions in the alleviation of depression into the question.

While no tests of mediation were conducted, Furlong and Oei (2002) found that in a sample of 32 depressed adults receiving twelve weeks of CBT, automatic thoughts scores as measured by the ATQ (Hollon & Kendall, 1980) at week nine predicted depression scores on the BDI, while dysfunctional attitudes as measured by the DAS (Weissman & Beck, 1978) did not. The authors suggested that the findings supported the idea that automatic thoughts mediate the relationship between dysfunctional attitudes and depressive symptoms (i.e., that dysfunctional attitudes have an indirect effect on depressive symptoms). Consistent with Beck's theory (1967), these findings suggest that negative underlying beliefs as assessed by the ATQ are primary mediators of depression. Again, this does not illuminate how changes in cognition may have occurred, as the specific techniques of CBT were not isolated or examined in this study. Further, because control groups were not included, the results may not have been due to CBT treatment, but to other factors such as passage of time.

In a sample of 35 depressed adults who received 12 weeks of CBT, Kwon and Oei found that CBT was significantly related to reduction in negative automatic thoughts as measured by the ATQ (Hollon & Kendall, 1980) and dysfunctional attitudes as measured by the DAS (Weissman & Beck, 1978) during treatment. The researchers also found that reductions in these depressive cognition scores lead to significant later reductions in depression symptoms. Lastly, they found that automatic thoughts played a mediating role

in the relation between dysfunctional attitudes and depression scores. Again, although this study did not elucidate how CBT effected changes in cognition and depression, it provides some evidence that CBT may effect changes in cognition and that alleviation of depressive symptoms may be due to alterations in these cognitions. Again, since no control group was included, it cannot be determined that CBT per se lead to changes in cognition. Further, no formal tests of mediation were conducted regarding whether the changes in dysfunctional attitudes mediated the effects of CBT on depression scores.

In a later study, Oei and colleagues (2006) conducted twelve weeks of CBT with 168 depressed individuals. The results indicated that dysfunctional attitudes as measured by the DAS (Weissman & Beck, 1978), negative automatic thoughts as measured by the ATQ (Hollon & Kendall, 1980) and symptoms of depression significantly decreased during the course of treatment. They found, however, using path analysis that reduced depressive symptoms more strongly contributed to changes in negative automatic thoughts and dysfunctional attitudes. The authors noted that these results challenged the utility of cognitive interventions in the treatment of depression in adults (e.g., Jacobsen et al., 1996). These findings are of particular concern especially for children, who are thought to benefit more from concrete rather than abstract cognitive interventions requiring the use of logic, such as those applied in CBT.

In summary, these studies presented conflicting evidence regarding the role of dysfunctional cognitions in the process of change for CBT in depressed adults. While in one study, it appeared that CBT lead to changes in cognitions which were linked to changes in depression scores, it was found in another study that changes in cognition

were influenced more by changes in depression, rather than the reverse. Lastly, although a full package of CBT was correlated with short term and long term gains on depression measures, components that did not include restructuring of deeper underlying schemas produced comparable gains. Further, it remains unclear what ingredients of CBT may be contributing to change, and in what ways. The complexity of the change process is brought into light. Further research is needed to gain a better understanding of: (1) what specific processes lead to observed changes in depressive symptoms (2) through what mechanisms (i.e., mediators) are these processes operating. Again, there is dearth of existing studies examining these change mechanisms, especially in child and adolescent populations.

Measurement of CBT Change Processes

In the treatment process research literature, there have been a plethora of measures created to quantify events that occur within therapy sessions. There are several ways in which process measures can be classified, some of which include: (1) size of scoring unit (e.g., single words, phrases, speaking turns, whole sessions, time intervals), (2) perspective (therapist, client, external observers), (3) data format (e.g., transcripts, audiotape), (4) access strategy (e.g., observation, self-report), (5) measure format (e.g., coding on nominal scale, rating on ordinal scale), (6) level of inference (e.g., observed behavior, inferred subjective experience), (7) theoretical orientation (e.g., cognitive-behavioral, psychodynamic), (8) treatment modality (e.g., individual, group, family), (9) target persons (e.g., therapist, client, dyad), and (10) communication channel (e.g.,

verbal, nonverbal), and (11) dimension (e.g., evaluating quality, providing description) (Stiles, Honos-Webb, & Knobloch, 1999).

In the therapy process literature, the focus of the majority of studies measuring CBT techniques has been on establishing systematic differences between various modes of therapy (e.g., CBT, psychodynamic, etc.) or assessing overall treatment fidelity for research purposes or therapist competence. The two most widely used measures assessing CBT techniques have been the Cognitive Therapy Scale (CTS; Young & Beck, 1980) and the Collaborative Study Psychotherapy Rating Scale – CBT section (CRPRS; Hollon, et al., 1988). The two scales were developed for the purposes of delineating major components of CBT (e.g., agenda setting, cognitive interventions), and rating therapists on their competence in their execution of those components (Spangler, Beckstead, Hatch, Wiley, & Agras, 2001).

The CTS is an 11-item observer-rated scale comprised of two rationally-derived sections: General Skills subscale and Cognitive Therapy Skills subscale. The General Skills subscale is comprised of items assessing the therapists' use of techniques such as agenda-setting, collaboration, session-pacing, and understanding. The Cognitive Therapy Skills subscale items rates the therapist's use of empiricism, cognitive and behavioral techniques, homework assignment, etc. The inter-rater reliability been found be .94 ($p < .001$) for overall scores and has ranged from 0.54 (feedback, $p < .05$) to 0.87 (application of cognitive-behavioral techniques, $p < .001$) for individual items (Dobson, Shaw, & Vallis, 1985). When the factor structure has been examined, the CTS was found to be a unidimensional measure, with the coefficient alpha for the entire scale reported as

high as $\alpha = .95$ (Dobson, Shaw, & Vallis, 1985; Vallis, Shaw, & Dobson, 1986). It has been suggested that the reason for the unidimensionality of the CTS is that it does not include enough items, and is thus does not accurately reflect the multidimensionality of CBT (Vallis et al., 1986; Whisman, 1993). In order to research CBT mechanisms of change and their effects on outcome, a more comprehensive, fine-grained measure of CBT is needed to allow for the more precise and valid measurement of specific techniques such as cognitive restructuring.

The CRPRS was developed for use in the National Institute of Mental Health Treatment of Depression Collaborative Research Program (Elkin, Parloff, Hadley, & Autry, 1985; Elkin et al., 1989). The CSPRS was designed for the purposes of rating audiotapes of treatment for depression using IPT, CBT, and clinical management with pharmacological interventions. The scale assesses the extent to which therapists facilitate a range of therapeutic techniques within the therapy session. The CSPRS is composed of 96 items rated on a 7-point Likert-type scale, in three modality-specific subscales, three tangential modality subscales, and two non-modality-specific subscales. Raters blind to therapy conditions can differentiate different forms of therapy with the CRPRS (DeRubeis et al., 1982; Hill et al., 1992; Luborsky et al., 1982). The overall Kappa statistic has been found to be 0.72, indicating good level of inter-rater agreement (Gibbons, Crits-Christoph, et al., 2002).

The CBT scale (CB) of the CSPRS is comprised of 28 items that assess therapists' use of rationale, cognitive and behavioral strategies, homework, and collaboration. A factor analysis of the CSPRS-CB showed two orthogonal factors: concrete interventions

(e.g., setting agenda, homework assignment) and abstract interventions (e.g., relation between thoughts and feelings, exploration of personal meaning of thoughts) (DeRubeis & Feeley, 1990). The intra-class coefficients for inter-rater agreement on the CBT scale ranged from .88-.92 and the coefficient alpha for internal consistency reliability has been found to be 0.79 (Hill, Elkin, & O'Grady, 1992). Again, this measure does not fully capture the theorized multiple dimensions of CBT as separate factors (e.g., relational, cognitive, behavioral, structural, etc.) (Spangler et al., 2001).

Spangler (1998) developed a more comprehensive CBT coding scale for Bulimia Nervosa (CCS-BN; Spangler, 1998) in attempts to capture the full multidimensionality of CBT. There are two sections to this scale. The first section (Therapist Section) includes items from the CTS and CSPRS-CB as well as five items that were added by the authors: discussion of problem behaviors, exploration of general behavior patterns, discussion of developmental origins of underlying beliefs, use of education, and tailoring. The CCS-BN Therapist Section measures the quality of the CBT therapist's relational, cognitive, behavioral, and structural interventions implemented in session. The second section (Patient Section) assesses client variables with regard to Bulimia Nervosa (BN) symptomatology. The Patient Section will not be used in the current study, as it addresses behaviors and cognitions specific to BN.

In a confirmatory factor analysis of the CCS-BN Therapist Section (TS) Spangler and colleagues (2001) grouped 32 items selected a-priori into five theorized components: therapist empathy, cognitive interventions, behavioral interventions, homework assignment, and agenda setting. These subscales have demonstrated good to excellent

internal reliability (Spangler et al., 2001). The cognitive interventions subscale includes 19 items on a 7-point Likert-type scale that tap specific cognitive techniques outlined by A.T. Beck and colleagues (1979) and J. Beck (1995) that help the client explore, identify, and remediate maladaptive cognitions (automatic thoughts, intermediate and core beliefs, and cognitive errors). A comprehensive set of specific techniques are assessed with the cognitive interventions subscale of the CCS-BN-TS (e.g., use of guided discovery and empiricism, examining evidence for/against the belief, finding alternative explanations).

Although the CCS-BN-TS (Spangler, 1998) is a major improvement upon previous measures of CBT techniques, the cognitive intervention subscale does not represent the full range of cognitive interventions outlined by A.T. Beck (Beck et al., 1979) and J. Beck (1995). A critical cognitive intervention in the treatment of depression is building a positive schema (Beck et al., 1979; J. Beck, 1995). The dismantling of negative schemas is a necessary part of cognitive restructuring, but is not sufficient in and of itself to fully assist the individual with overcoming cognitive vulnerability to depression. The complimentary technique of explicitly building and strengthening positive schema is necessary to meet this therapeutic goal. Further, a cognitive intervention item on the CSPRS (Hollon, et al., 1998) that assess therapists' attempts to link therapeutic improvements to cognitive change was not included in the CCS-BN-TS Cognitive Intervention subscale. This seems an essential intervention for youth populations who may not possess the level of meta-cognitive skill that is more characteristic of adults. That is, it may be more critical for therapists to highlight and reinforce how cognitions are linked to therapeutic gains, as youth may not have the level

meta-cognitive skill to do so independently. Thus, a modified version of the CCS-BN-TS Cognitive Intervention subscale consisting of 21 items will be used to assess cognitive interventions in the proposed study (items assessing interventions focused on building a positive schema and linking therapeutic improvement to cognitive change will be added).

Summary of Mechanisms of Change

Despite the growing body of literature that supports CBT as a promising treatment for depression in youth, very little is known regarding how and why CBT exerts therapeutic effects. According to Shirk and Karver (2006), in order to adequately address the question of why and how an efficacious treatment works, two related variables must be examined: 1) specific treatment processes or procedures, and 2) specific pathogenic mechanisms thought to account for the etiology, maintenance, and remission of a disorder. Researchers have attempted to better identify active therapeutic mechanisms through a variety of approaches: (1) dismantling component analyses, (2) process-outcome studies, and (3) examination of potential mediators.

Although there is a paucity of such studies, a review of the few existing investigations revealed that: (1) cognitive modules in dismantling component analyses have been significantly associated with positive outcomes on both measures of depressive symptomatology as well as hypothesized mediating cognitive mechanisms in youth, (2) process-outcome studies have shown that when applied to core-beliefs, cognitive restructuring techniques are related to the short-term and long-term alleviation of depressive symptoms and improvements in global functioning in adults, (3) there is consistent positive evidence that CBT exerts therapeutic effects on hypothesized

cognitive mediators in youth (e.g., regarding the self, future) and that CBT exerts effects through these cognitive mediators on internalizing symptoms, (4) adult studies of cognitive mediation present conflicting evidence.

There are several factors that have limited the ability of studies to precisely and accurately capture mechanisms of change in CBT for depressed individuals: (1) limited specificity in units of analysis (e.g., whole CBT packages or components vs. cognitive techniques), (2) inadequate sampling of cognitive processes (e.g., coding a fraction of therapy tapes), (3) lack of valid measurement of cognitive processes (i.e., use of insufficient range of items) (3) inadequate validity of the measurement of mediating constructs (e.g., separate measurement of self-esteem, hopelessness vs. cognitive triad), (4) lack of formal, direct tests of mediation.

Further study is needed to examine whether findings that support mechanisms of change purported by Beck's theory of cognitive-vulnerability of depression can be replicated and extended through improved methods of measurement of change processes and mediating variables, especially in youth populations who may not fully benefit from cognitive interventions.

Statement of the Problem

Depression is an increasingly common health problem among youth, and has become more prevalent at increasingly younger ages (Lewinsohn, Hoberman, & Rosenbaum; Klerman & Weissman, 1989). Early onset of depression is associated with a course that is more enduring (Lewinsohn, Rohde, Klein, & Seeley, 1999) and replete with impairments to adaptive functioning throughout the lifespan (e.g., Gotlib, Lewinsohn, & Seeley, 1998; Kandel & Davies, 1986; Weisz, McCarty, & Valeri, 2006). Rates of depression significantly rise during the transition from childhood to adolescence, during which time girls become twice as likely as boys to experience depression (Hankin, Abramson, Siva, McGee, Moffitt, & Angell, 1998). Girls have also been found to demonstrate more cognitive vulnerabilities (i.e., ruminative style of coping, negative cognitive styles, depressogenic cognitions) (Abela, Vanderbilt, & Rochon, 2004; Hankin & Abramson, 2002; Nolen-Hoeksema, 1987) and physiological vulnerabilities (i.e., earlier onset of puberty, links between menarche and depression, increased body dissatisfaction) (e.g., Ge, Conger, & Elder, 2001; Ghen Graber, Lewinsohn, Seeley, & Brooks-Gunn, 1997). These cognitive and physiological vulnerabilities, when combined with stressful life events, appears to lead to the higher rates of depression in females (Abela, 2001). These findings make the development of interventions that effectively target such cognitive vulnerabilities in depressed early adolescent girls more pressing.

Depressed individuals are thought to manifest cognitive vulnerabilities regarding negative underlying beliefs of the self, world, and future or the cognitive triad (Beck, 1967). The cognitive triad and associated pathogenic cognitions are thought to mediate

the individual's response to life stress. Several studies have provided empirical support for Beck's theory of cognitive vulnerability to depression (e.g. Abela & D'Allesandro, 2002; Hankin, Abramson, Miller, & Haeffel, 2004; Joiner, Metalsky, Lew, & Klocek, 1999; Kendall, Stark, & Adam, 1990; McDermut, Haaga, & Bilck, 1997; Stark, Schmidt, & Joiner, 1996). As cognitive vulnerabilities appear to mediate the occurrence of depressive symptoms, it seems reasonable to assert that interventions that target such cognitive vulnerabilities can successfully reduce depressive symptoms and prevent future recurrences of the disorder.

There is increasing empirical evidence that CBT is a promising treatment for depression in youth. The general pattern that emerges across studies conducted within depressed youth populations is that compared to no-treatment, CBT is consistently associated with significant amounts of symptom reduction on short- and long-term bases; when compared to other treatments, CBT is generally comparable (Weisz, McCarty, & Valeri, 2006). It thus remains unclear, whether treatment-specific effects contribute to therapeutic gains in individuals who receive CBT. If CBT uniquely contributes to the alleviation of depressive symptoms, it is uncertain how this is achieved, as CBT packages reviewed included various techniques (e.g., social skills training, self-monitoring) and treatment foci (e.g., social skills, cognitions) that were not examined in isolation.

Thus despite the empirical evidence that consistently supports CBT as a promising treatment for depression in youth, very little is known regarding how and why CBT exerts its therapeutic effects. Although there is a paucity of such studies, data from the few existing investigations provide tentative indications that CBT cognitive

interventions exert positive effects on hypothesized cognitive mediators (e.g., Stark et al., 1987; 1991). The findings in the adult literature are conflicting, however, making the clarification of mechanisms of change in CBT for youth more urgent, as children are not thought to benefit as fully from cognitive techniques as adults (Grave & Blissett, 2004; Ollendick, Grills, & King, 2001; Stallard, 2002). This is of particular concern for depressed pre-adolescent females, who present with gender-specific cognitive vulnerabilities in addition to cognitive vulnerabilities associated with depression.

There are also several limitations in the current research literature that, if overcome, may provide a better understanding of how and why CBT works, and thus lead to more efficacious interventions for depressed youth, especially for those at increased risk (viz., pre-adolescent females). No studies to date have directly investigated whether CBT for depressed youth works by treating purported underlying pathogenic beliefs through the implementation of specific cognitive techniques (Beck et al., 1979). Specifically, no studies to date have investigated: (1) whether specific cognitive techniques as they occur within-session are related to depressive symptom reduction in youth, and (2) if improvements in depressive symptoms are mediated through changes in the cognitive triad of depressed youth.

Moreover, previous studies have exhibited limitations regarding the assessment of constructs and processes of interest. First, existing studies have used units of analysis of limited specificity (e.g., whole CBT packages or components) so that the precise measurement of cognitive techniques was lacking. Second, in the few studies that have investigated cognitive interventions in CBT, there was an inadequate sampling of

cognitive interventions used throughout the course of treatment (i.e., a fraction of therapy tapes was coded). Third, the measurement of cognitive interventions appeared to have been inadequate. Specifically, measures used lacked items tapping critical pieces of cognitive interventions (building positive schema, linking therapeutic change to cognitions). Fourth, there was an inadequate measurement of mediating constructs. Namely, instead of measuring the cognitive triad in its entirety, studies reviewed assessed one or two components (e.g., self-esteem, hopelessness). Fifth, studies with depressed youth samples did not conduct formal, direct tests of mediation, but inferred mediation through assessing the effects of CBT on mediators and outcomes.

Hypothesis

Research Question 1

Will the relation between therapists' use of cognitive interventions and changes in girls' severity of depression be mediated by changes in girls' cognitive triad, after controlling for girls' initial severity of depression?

Hypothesis 1

Therapist's use of cognitive interventions will indirectly effect decreases in girl's depressive symptoms via girl's cognitive triad, after controlling for initial severity of depressive symptoms. Therefore, higher scores on the Cognitive Intervention subscale of the Cognitive-Behavioral Coding Scale (CCS; Spangler, 2001) will predict girls' scores (combined self, world, and future) on the Cognitive Triad Inventory – Child (CTI-C; Kaslow et al., 1992), and higher scores on the composite depressive symptoms scale of

The Schedule for Affective Disorders and Schizophrenia for School Age Children (K-SADS-IVR; Ambrosini & Dixon, 2000). In this hypothesized model, the relation between therapists' use of cognitive interventions and post-treatment severity of depressive symptoms will be fully mediated by girls' CTI scores. Therefore, therapists' use of cognitive interventions will have an indirect effect on the girls' severity of depressive symptomatology. The hypothesized indirect effect is that the therapists' use of cognitive interventions will effect girls' cognitive triad, which will in turn influence the severity of depressive symptomatology, after controlling for initial levels of girls' severity of depressive symptomatology.

Rationale

According to Beck's (1967) cognitive theory of depression, the primary mediating agents of the etiology and maintenance of depression are negatively distorted beliefs about the self, world, and future (cognitive triad). The CBT model of psychotherapy based upon Beck's cognitive theory of depression (Beck et al., 1979; J. Beck, 1995) outlines cognitive interventions that help the client to explore, identify, and remediate these maladaptive cognitions, which are hypothesized to lead to the reduction and eventual remission of depressive symptoms. Thus, according to Beck's conceptualization of the etiology and treatment of depression, cognitive interventions have an indirect effect on depressive symptoms through changes in maladaptive cognitions (i.e., cognitive triad).

There is some empirical support for this model of the mediating effects of cognitive change on the relation between cognitive interventions and reduction in

depressive symptoms. CBT dismantling component analyses have demonstrated that primarily cognitive interventions have been associated with significant, positive changes in both depressive symptomatology and maladaptive cognitions such as dysfunctional attributional style, cognitive errors, and negative self-beliefs in both child and adolescent samples (Gillam et al., 1994; Silverman, et al. 1999; Stark et al., 1987). In one study, relative to behavioral interventions, primarily cognitive interventions were associated with significantly greater short- and long-term gains on self-esteem and depression measures in a child sample (Stark et al., 1987). In adult samples, cognitive restructuring interventions that targeted cognitions such as underlying beliefs and self-attributions were associated with short- and long-term improvements in depressive symptoms and global functioning (Beck & Strong, 1982; Hayes, 1996).

Although no formal tests of mediation were conducted in depressed youth samples, there is an accumulation of evidence that CBT has been associated with both changes in cognitive factors (e.g., self-esteem, hopelessness) and depression scores (Kahn et al., 1990; Stark et al., 1987; Vostanis et al., 1996b; Wood et al., 1996). Lastly, although no studies have examined such relationships in youth samples, changes in maladaptive cognitions (i.e., negative automatic thoughts, dysfunctional attitudes) associated with CBT lead to significant improvements in depressive symptoms in adult samples (Kwon & Oei, 2006).

Pre-treatment levels of depression severity will be controlled, as severity of depressive symptoms may influence the effectiveness of cognitive interventions. It has been recommended that cognitive behavioral treatments begin with more behavioral

interventions (e.g., coping skills training) in order to first alleviate acute depressive symptoms and maximize the potency of cognitive interventions (e.g., Beck et al., 1979; J. Beck, 1995). That is, cognitive interventions are thought to be more effective when the individual has experienced some symptom relief and is thus better able to engage in interventions of a cognitive nature.

CHAPTER 3

Method

Participants

The sample included 42 girls from the CBT only treatment condition, aged 8 to 14 ($M=10.64$, $SD=1.30$), enrolled in grades 4 to 7 at two suburban central Texas school districts. These participants had a primary diagnosis of MDD ($n=31$), MDD in partial remission ($n=5$), Dysthymic Disorder ($n=5$) or Depressive Disorder NOS ($n=1$). Of the 42 girls, 67% of the participants received a psychiatric comorbid diagnosis. The demographics of the sample are presented in Table 2. Data of seven participants of the CBT-only condition were not included in the data analyses due to unforeseen methodological problems. Three participants were excluded because the school changed the allotted time for therapy from 50 minutes to 15 minutes per meeting significantly affecting the treatment protocol. Two participants were excluded from groups because they were transferred to individual therapy. Finally, two participants changed schools during the intervention and therefore data for them was incomplete.

Participants were excluded from the larger study if they: a) had an additional psychological disorder that presented as primary due to level of severity and impact on the child's functioning, b) exhibited psychotic symptoms, c) were actively suicidal or homicidal, d) were currently being treated for depression through an outside therapist or pharmacological treatments, e) had an IQ below 85 or a learning disability that would prevent them from validly completing research measures, or f) had a severe medical

disability that would prevent regular attendance at meetings or the completion of activities. Suicidal or homicidal participants were referred to more appropriate crisis-oriented services. Prior to the completion of treatment, nine participants discontinued participation due to relocation to another school district or transfer to a more appropriate treatment modality to meet the participant's needs (e.g., low cognitive ability).

Table 1

Summary of Participant Demographic Variables (N=42)

Variable	Frequency	Percent
Age		
9	9	21.4
10	13	31.0
11	8	19.0
12	9	21.4
13	2	4.8
14	1	2.4
Grade		
4	15	35.7
5	5	11.9
6	10	23.8
7	12	28.6
Ethnicity		
Latina	16	38.1
White	16	38.1
African American	7	16.7
Asian	1	2.4
Biracial/Multiethnic	2	4.8

Table 2

Participant Depression Diagnosis at Time 1 Summary (N = 42)

Diagnosis	Frequency
Major Depression	31
Major Depression in Partial Remission	5
Dysthymia	1
Depressive Disorder Not Otherwise Specified	5

Instrumentation

Measures of Depression

Children's Depression Inventory (CDI; Kovacs, 1981) – The Children's Depression Inventory (CDI; Kovacs, 1981; see Appendix D) is the most widely used self-report measure of depression for children ages 7 to 17 and it was used in the study's screening process. Consisting of 27 items, the scale assesses the presence and severity of depressive symptoms over the prior two weeks. Each item includes a three-alternative choice format representing differing levels of symptom severity. The total scores range from 0 to 54, with higher scores indicating greater depression. Total scores of 19 or higher indicate a significant level of depression (Kovacs, 1981; Smucker, Craighead, Craighead, & Green, 1986). For screening purposes, however, a cut-off score of 16 or

above has been found to have the highest predictive value (Timbremont, Braet, & Dreesen, 2004).

The measure's internal consistency has ranged from .71 to .89 for various youth samples of differing ages (Kovacs, 1981; Smucker et al., 1986). The scale's test-retest reliability has ranged from .38 to .87 across a variety of samples of children (Kovacs, 1981). The range of test-retest reliability coefficients may reflect the mood-dependent nature of the measure, as the CDI is hypothesized to measure a state rather than a stable trait (Kovacs, 1992). A test-retest reliability of .82 (Finch, Saylor, Edwards, & MacIntosh, 1987) was found when the recommended two-week interval between administrations (Kovacs, 1992) was used. There have been inconsistent findings regarding the measures of discriminant validity, as the CDI has been found to discriminate depressive disorders from other diagnoses in some samples (e.g., Timbremont et al., 2004) but not in others (e.g., Carey, Faulstich, Gresham, & Ruggerio, 1987). Timbremont and colleagues (2004) found that participants could be correctly determine classification as depressed or not depressed using the CDI score 86% of the time. The CDI can be administered to both individuals and groups in about 10 minutes.

Beck Depression Inventory for Children

(BDI-Y; Beck et al., 2001) – The BDI-Y is a self-report measure that assesses the presence and severity of depressive symptoms in children ages of 7 and 14. It includes 20 items that assess feelings of sadness, physiological symptoms of depression, and children's negative thoughts about the self, world, and future. Internal consistency of the BDI-Y has been found to be high with coefficient alphas of .91 for females aged 7 to 10,

.90 for males aged 7 to 10, .91 for females aged 11 to 14, and .92 for males aged 11 to 14 (Beck et al., 2001). Over a retest interval of seven days, test-retest reliabilities of the BDI-Y ranged from .79 to .92. The BDI-Y total score has been correlated with the CDI total score ($r=.72$) (Beck et al., 2001), which is significantly greater than the correlation between the CDI and other Beck Inventories assessing other symptoms (e.g., anxiety, anger, disruptive behavior, self concept) (Steer, Kumar, Beck, & Beck, 2001). The BDI-Y was used as a screening measure in the present study. Cronbach's alpha was found to be high for the screening sample ($\alpha=.93$) as well as at mid-treatment for the study sample ($\alpha=.87$).

Diagnostic and Statistical Manual Brief Symptom Interview for Depression

(DSM Interview; Stark & Sander, 2002) – This semi-structured interview was designed for the screening and monitoring of depressive symptoms within the context of the larger depression study. The DSM Interview is a brief symptom interview that assesses presence of symptoms as outlined by DSM-IV criteria for depressive disorders. A symptom is considered “present” if the child reports it interferes with functioning and is distressing for most days within the past two weeks. The DSM Interview was used during the screening process of this study.

The Schedule for Affective Disorders and Schizophrenia for School Age Children

(K-SADS-IVR; Ambrosini & Dixon, 2000) – The K-SADS-IVR was used to assess if a depressive disorder was present. This instrument is a semi-structured clinical interview that is administered to both the child as well as their parent(s) to yield a summary rating of the presence and severity of symptoms according to DSM IV criteria

(see Appendix A). Symptoms of six diagnoses of the DSM-IV are assessed: major depression, mania, eating disorder, anxiety disorders, behavioral disorders, substance abuse, and psychotic disorders. Although only the depression section was analyzed in this study, the entire interview was administered in order to assess the presence of comorbid disorders. With the exception of the depression section, screening items are used prior to the initiation of a K-SADS-IVR diagnostic section. If a participant endorses an initial screening question, the entire section for that disorder is subsequently administered; if the participant does not endorse the screening question, then the interviewer proceeds on to the next set of screening questions in the following section.

The K-SADS-P IVR has been modified from its previous version, the K-SADS IIR (Puig-Antich & Ryan, 1986), to be compatible with the DSM-IV diagnostic criteria. Ratings from the participant and her primary caregiver are obtained separately and are later integrated into summary ratings by the interviewer, after considering the differing sources of information. Each symptom is given a severity rating based on the most severe point during the present episode (past 12 months) and its most severe point during the last seven days. Severity ratings range from 0 to 4 and from 0 to 6. Two items are scored 0 to 7 and while multiple items assessing the presence or absence of a symptom are scored 0 to 2. With higher scores indicate greater severity, symptoms are considered clinically significant if it is given a rating of four or greater on the 0 to 6 scales or of three or greater on the 0 to 4 scales. Diagnoses are then determined based on DSM-IV criteria.

Reliability and internal consistency data are not currently available, as the K-SADS-P IVR is a relatively recent version of the K-SADS. In a small sample, however,

the inter-rater reliability was high for the diagnosis of Major Depression, Dysthymic Disorder, Generalized Anxiety Disorder, Separation Anxiety Disorder, and Oppositional Defiant Disorder (Ambrosini, 2000). In earlier versions of the K-SADS (i.e., K-SADS IIR) high inter-rater reliability has been found for mood disorder ratings (Last & Strauss, 1990), as well as sufficient internal consistency (Ambrosini et al., 1989) and adequate test-retest reliability (Apter, Orvaschel, Laseg, Moses, & Tyano, 1989). The test-retest reliability of the K-SADS IIR depression scales were found to be .67 or higher, with a coefficient alpha for internal consistency of .68 or higher (Chambers, Puig-Antich, Hirsch, Paez, Ambrosini, Tabrizi, et al., 1985). Coefficient alphas were reported from .76 to .89 for each of the scales, with intraclass coefficients from .85 to .97 among the four depression scales (Ambrosini, Metz, Prabucki, & Lee, 1989). Early versions of the K-SADS demonstrated high inter-rater reliability for the diagnosis of depressive disorders ($\kappa = .90$) (Kaufman, Birmaher, Brent, Rao, Flynn, Moreci, et al., 1997; Apter et al., 1989) and for the symptom scales, with intraclass correlation coefficients ranging from .72 - .83 (Apter et al., 1989). For the diagnoses of other disorders, inter-rater reliability has ranged from .63 to 1.00 (coefficient κ) (Kaufman et al., 1997). Overall, high diagnostic, scale, and symptom reliability is evidenced, providing support for the the K-SADS as a reliable diagnostic instrument in child and adolescent samples (Ambrosini et al., 1989).

A continuous total depression score can be derived from the K-SADS ratings. By summing 17 depressive symptom items a composite score can be obtained with a range between 17 to 97 (Ambrosini et al., 1989; Ambrosini, Metz, Bianchi, Rabinovich, &

Undie, 1991). The scale includes the severity ratings for the following depression symptoms: depressed mood, irritability, diurnal mood variation (morning only), excessive guilt, anhedonia, fatigue, diurnal variation of fatigue (morning only), difficulty concentrating, psychomotor agitation, psychomotor retardation, insomnia, hypersomnia, loss of appetite, increased appetite, hopelessness, avoidant behavior when depressed, and suicidal ideation. When there are multiple areas assessed for one symptom (e.g., psychomotor agitation, psychomotor retardation, insomnia), the overall severity rating for that symptom is entered. Ambrosini and colleagues (1991) found that this total score correlated with the Beck Depression Inventory in a sample of outpatient adolescent girls. The total depression scale score has also demonstrated internal consistency, with Cronbach's alphas ranging from .72 to .89 (Ambrosini et al., 1989; Chambers et al., 1985). The total scale score has also demonstrated acceptable test-retest reliability ($r = .81$) (Chambers et al., 1985).

The total depression scale score was computed for this study with the 17-item criteria used by Ambrosini and colleagues, with a few modifications. The social withdrawal item was excluded as the item is not included in the K-SADS-P IVR. Additionally, a self-esteem item adapted from the Overanxious Disorder section of the K-SADS-P IVR was added to the depression scale, as low self-esteem is a primary symptom of Dysthymia. Finally, the diurnal mood variation (morning only) and the diurnal variation of fatigue (morning only) was removed from the scale and both indices of anhedonia (loss of interest, loss of pleasure) were included. These adjustments were made to make the scale more consistent with the specific symptoms used to diagnose

depression in children. Present episode summary scores were used to compute a total score from the 16 items comprising the depression scale score. Internal reliability of the K-SADS for this sample prior to the intervention ($\alpha=.78$) and following the intervention ($\alpha=.78$) were acceptable.

Measure of the Cognitive Triad

Cognitive Triad Inventory for Children (CTI-C; Kaslow et al., 1992) – The CTI-C is a downward revision of the Cognitive Triad Inventory (CTI; Beckham et al., 1986) used with adults. The instrument is comprised of 36 items on a 3-point scale; there are three 12-item subscales in the measure. Each subscale taps one of three dimensions of the cognitive triad: View of the Self, View of the World, or View of the Future. A total composite score can be created by compiling the scores from each of the three subscales. A higher total score indicates a more positive cognitive triad while a lower score indicates a more negative cognitive triad. In order to make the CTI-C developmentally appropriate for children, the wording of the original CTI items was simplified, double negatives were removed, and the content was changed to be more child-friendly. Internal consistency reliability (coefficient alpha) was demonstrated to be .83 for the self subscale, .69 for the world subscale, .85 for the future subscale, and .92 for the total scale (Kaslow, et al., 1992). A recent study conducted a confirmatory factor analysis in a sample of 122 school-aged children. The internal consistency of the total CTI-C score was found to be .82 (Zauszniewski, Panitrat, & Youngblut, 1999). Researchers have found the CTI-C total score to be significantly related to depressive symptoms in adolescents (Jacobs & Joseph, 1997; Kaslow et al., 1992). The CTI-C has consistently

demonstrated acceptable internal consistency reliability and strong convergent and discriminant validity (Kaslow et al., 1992). For the purposes of this study, the CTI-C was used to assess the cognitive triad of girls. Cronbach's alpha for the CTI-C at pre-treatment ($\alpha=.89$) and at post-treatment ($\alpha=.92$) showed good internal consistency.

Measure of CBT Cognitive Interventions

The Cognitive Coding Scale for Bulimia Nervosa Therapist Scale (CCS-BN-TS; Spangler, 1998) – A modified version of the Cognitive Interventions subscale of the CCS-BN-TS will be used to code all therapy tapes. The CCS-BN is the instrument from which the Cognitive Intervention subscale derived. The CCS-BN is a coding system used to rate within-session therapist and patient processes during the implementation of CBT for Bulimia Nervosa. There are two sections to this scale. The first section (Therapist Section) measures the quality of the CBT therapist's relational, cognitive, behavioral, and structural interventions implemented in session. This scale is comprised of 19 items on a 7-point Likert-type scale, which includes items from the Cognitive Therapy Scale (CTS; Young & Beck, 1980) and Collaborative Study Psychotherapy Rating Scale-Cognitive Behavioral Section (CSPRS-CB; Hollon et al., 1988). In addition, five items created by Spangler (1998) were added: discussion of problem behaviors, exploration of general behavior patterns, discussion of developmental origins of underlying beliefs, use of education, and tailoring. The second section (Patient Section) assesses client variables with regard to Bulimia Nervosa (BN) symptomatology. The Patient Section was not used in the proposed study, as it addresses behaviors and cognitions specific to BN.

In a confirmatory factor analysis (CFA) of the CCS-BN Therapist Section (TS) Spangler and colleagues (2001) grouped 32 items selected a-priori into five theorized components: therapist empathy, cognitive interventions, behavioral interventions, homework assignment, and agenda setting. These subscales have demonstrated good to excellent internal reliability (Spangler et al., 2001). The Cognitive Intervention subscale taps specific cognitive techniques outlined by A.T. Beck and colleagues (1979) and J. Beck (1995) that help the client explore, identify, and remediate maladaptive cognitions (automatic thoughts, intermediate and core beliefs, and cognitive errors). A comprehensive set of specific techniques are assessed with the Cognitive Interventions subscale of the CCS-BN-TS (e.g., use of guided discovery and empiricism, examining evidence for/against the belief, finding alternative explanations).

As the CCS-BN-TS Cognitive Intervention subscale does not represent the full range of cognitive interventions outlined by A.T. Beck (Beck et al., 1979) and J. Beck (1995), two items were added to the scale: building a positive schema and linking therapeutic improvement to cognitive change. As a critical cognitive intervention in the treatment of depression is building a positive schema (Beck et al., 1979; J. Beck, 1995), an item to tap this cognitive technique was rationally developed for the proposed study. Further, an item from the CSPRS-CB (Hollon, et al., 1998) that taps the cognitive intervention of linking therapeutic improvement to cognitive change will be added, as it is a strategy outlined by A.T. Beck (Beck et al., 1979) and J. Beck (1995) that may be essential to meet the development needs of the study's sample, as it aids the child in the application of meta-cognitive skills in learning how the alleviation in depressive

symptoms are associated with changes in cognition. The item Identifying Key Cognitions was dropped from the scale due to inability of raters to meet adequate levels of inter-rater reliability during the training period. The modified Cognitive Interventions subscale was thus comprised of 20 items on a 7-point Likert-type scale ranging from “not at all” to “extensively.” The Cognitive Interventions subscale’s internal consistency within this sample was good ($\alpha=.93$).

Procedure

Ethical Considerations

This study complied with the ethical issues and standards of research set forth by the American Psychological Association and the University of Texas at Austin. The principal investigator of the larger study has obtained approval from the Departmental Review Committee within the Department of Educational Psychology and the Institutional Review Board. The study was also approved by the superintendents of the two school districts. Prior to conducting data analysis for this study, the researcher will independently seek additional approval from the Departmental Review Committee within the Department of Educational Psychology and the Institutional Review Board of the University of Texas.

Depressed Sample

Depressed girls were identified in accordance with a modified version of the multiple-gate screening and assessment procedure (Appendix F) outlined by Reynolds (1986) which included: Gate 1: Screening, Gate 2: Identification, Gate 3: Assessment.

The screenings were held in public schools participating in the study for six cohorts throughout the course of five years. There was a slight difference in the screening process for the two participating school districts due to research conducted on the psychometric properties of the BDI-Y and the Children's Cognitive Style Questionnaire (CCSQ). Participants from School District 1 received the CCSQ as in addition to the CDI during the screening, while participants from School District 2 received the BDI-Y in addition to the CDI at the screening. Procedures also differed slightly between the first cohort of participants and the second through sixth cohorts. After the first cohort was screened, the second gate of assessment was modified in order to promote efficient and accurate identification of participants appropriate for the third gate (diagnostic interview).

School District 1

Within the participating elementary and middle schools, girls of the designated age range were invited to participate in the screening process. Letters that described the study and consent forms (Appendix G) were sent home to the parents of all girls in grades 4 to 7 ($n = 2082$). The girls' teachers monitored the distribution and return of consent forms. In the first gate of the screening, girls who received parental consent and who assented to participate (see Appendix G) completed the CDI in large groups ($n = 930$). Soon after completion, the CDIs were scored by Graduate Research Assistants (GRAs). In the first cohort of participants, girls who obtained a CDI score above 16 were administered a second CDI one week later ($n = 44$) in the second gate of screening. In cohorts 2-6, participants who scored above 16 on the CDI were administered a DSM-IV symptom interview individually with a trained GRA or doctoral level clinician as the

second gate ($n = 124$). The DSM-interview took place on the same day that they completed the CDI in a group format.

If participants scored above 16 on the second CDI administration (cohort 1), or reported depressive symptoms during the DSM-IV interview (cohorts 2 through 6), their parents provided feedback over the phone. Participants were also given a letter for their parent(s) that indicated their daughter reported experiencing depressive symptoms and requested permission for their daughter's participation in the third gate: K-SADS-IVR diagnostic interview. If the parent consent and child assent (see Appendix G) were obtained, the child and her primary caregiver independently completed the K-SADS-IVR diagnostic interview with a trained doctoral student interviewer ($n = 93$). A doctoral student interviewer completed the child and parent interviews. Participants were interviewed at their school while parents were interviewed in the most convenient fashion for them: over the telephone, at home, or at school, with almost all conducted over the phone. A total of 40 parent interviews were completed by mothers ($n=35$), grandmothers ($n=3$), fathers ($n=1$), and guardians ($n=1$). After the interview integrated information reported by the child and the parent into a summary symptom rating, DSM-IV diagnoses were determined.

Parents were provided feedback regarding the results of the interview during a feedback meeting or over the telephone. If a participant was diagnosed with a depressive disorder and met other inclusion criteria for the study, the parent was given a letter describing the next phase of the study: pretreatment assessment and treatment. If both parental consent and child assent were obtained, the child ($n = 35$) completed a battery of

measures, including the CTI-C in small groups of three to four participants at the girls' schools during the day. The paper-and-pencil measures were administered by a doctoral student trained to administer the assessment battery. The GRA monitored the completion of measures and read items aloud for children with low reading levels. The participants' caregivers were also asked to complete a battery of measures. In the first cohort of participants, parent measures completed measures at home and returned them through the mail. In cohorts 2-6, caregivers met with GRAs and completed the battery during evening hours at the participants' schools. Forty-four mothers, 11 fathers, 3 grandmothers, and 1 guardian completed these parent measures.

School District 2

Letters describing the study and consent forms (Appendix G) were sent home to the parents of all girls in grades 4 to 7 ($n = 4999$). The girls' teachers monitored the distribution and return of consent forms. In the first gate of the screening process, girls who received parental consent and assented to participate (see Appendix G) completed the CDI and BDI-Y in large groups ($n = 1828$). Measures were scored by trained GRAs upon completion. In the first cohort of participants, girls who scored above 16 on the CDI were administered another CDI one week later ($n = 83$) as the second gate of screening. In cohorts 2-6, participants scoring either above 16 on the CDI or above 25 on the BDI-Y completed the DSM-IV symptom interview with a trained GRA or doctoral level clinician as the second gate ($n = 533$). The second gate (DSM-IV interview) was conducted on the same day as the first gate of screening.

If participants scored above 16 on the second CDI administration (cohort 1), or reported depressive symptoms during the DSM-IV interview their parents were contacted over the phone and provided feedback; cohort 1 (n=186), cohort 2 (n=121), cohort 3 (n=180), cohort 4 (n=133), cohort 5 (n=111), cohort 6 (n=114). Upon passing through the second gate of screening, letters were sent home to parent(s), indicating that their daughter had reported experiencing depressive symptoms. In this letter, parents were provided with description of the final gate of screening (K-SADS-IVR diagnostic interview), and consent for their daughter's participation was requested. If both parent consent and child assent (Appendix G) were obtained, the child and her primary caregiver independently completed the K-SADS-IVR diagnostic interview with a trained doctoral student interviewer ($n = 274$). Participants were interviewed at their respective schools during the day while their parents were interviewed over the telephone, at home, or at school. Parents were interviewed in the setting that was most convenient for them, with almost all interviews taking place over the phone ($n=40$). Based on the combination of information from the child and the parent, DSM-IV diagnoses were formulated by the K-SADS-IVR interviewer.

Parents were informed of the results of the interview during a feedback meeting or telephone call. If a participant was diagnosed with a depressive disorder and was eligible for participation as determined by inclusion criteria, a letter was sent home to the parent describing the next phase of the study: pretreatment assessment and treatment. If both parental consent and child assent were received, the child completed a battery of measures ($n = 109$), including the LEC, CTI-C, and SRMFF-CR, in small groups of three

to four participants. A battery of paper-and-pencil measures were administered at the participant's school during the school day by a doctoral student trained in measures administration. The GRA monitored the completion of measures and read items to girls with low reading levels. The participants' caregivers were asked to complete a battery of measures. In the first cohort of participants, parent measures were completed at home and returned through the mail. In cohorts 2-6, caregivers met with GRAs and completed measures during evening hours at the girls' respective schools. Fifty-eight primary caregivers completed these measures, including forty-four mothers, 11 fathers, 3 grandmothers, and 1 guardian.

Training of Measures Administrators

The project coordinator of the larger study trained doctoral level students in the administration of measures. GRAs were provided instruction on administration and scoring of each paper-and-pencil measure. Measure administrators had at least one year of experience on the research team. When administering measures to children, at least one administrator present had to have received prior training to assess suicidal ideation and intent.

Training of Interviewers

All K-SADS-IVR parent and child interviews were conducted by doctoral level students in educational psychology who had completed program coursework in child psychopathology and formulation of psychiatric diagnoses in youth populations. Interviewers were trained to administer the K-SADS-IVR for about six months by the project coordinator and the K-SADS supervisor of the larger research study, who have

expertise in the area of childhood psychopathology and the administration of semi-structured clinical interviews. Each of the interviewers-in-training reviewed 3 tapes (78 tapes total) of previous interviews and personally observed senior interviewers conducting the K-SADS-IVR twice on average. The interviewers-in-training also practiced interviews with volunteers under the observation of a senior interviewer twice, on average. Approximately 50 hours of training took place before interviewers began independently conducting interviews. The project coordinator and K-SADS supervisor reviewed beginning interviewers' tapes and provided them with feedback. All interviewers also received weekly supervision for the administration and scoring of the K-SADS-IVR. Inter-rater reliability (kappa) for the K-SADS-IVR will be calculated for this sample.

Training of Therapists

All therapy sessions were conducted by doctoral students in school psychology and the project coordinator. Therapists were trained to implement CBT for approximately six months by the principal investigator of the larger project and project coordinator, who have expertise in the area of child psychotherapy and the implementation of CBT for youth depression. Therapists-in-training first attended didactic training conducted by the project coordinator to receive instruction on the treatment manual, therapy techniques, and pragmatic issues. Next, trainees engaged in live-observation of a senior therapist administering the complete treatment protocol to a particular group. Once observation of a senior therapist was completed, therapists-in-training then co-lead a group with a senior therapist. Throughout the training period involving live-observation and co-leading

groups, the principal investigator supervised the therapists-in-training and the senior therapist as a dyad on a weekly basis to provide feedback on audio-taped sessions and to address case-related issues. Therapists-in-training also attended bi-monthly group supervision meetings with all project therapists which were lead either by the principal investigator, project coordinator, or therapist supervisor. Once co-facilitation of groups was completed, therapists-in-training were then allowed to run groups independently, while continuing to attend weekly individual supervision with the principal investigator, as well as bi-monthly group supervision meetings. Approximately 150 hours of training took place before therapists began independent implementation of the treatment protocol.

Training of Coders

Therapy tapes were coded by doctoral level graduate students in the School Psychology program. Tapes for training coders were drawn from the Monitor Control Condition of the larger research project, which received the same intervention following the waitlist period. A total of 12 tapes were coded during training. Coders were also trained to use other rating scales measuring therapist behaviors, group cohesion, behavioral and problem solving interventions, in addition to the cognitive interventions scale. Four tapes were used for didactic purposes in order to familiarize raters with the coding systems and to establish adequate comprehension of each item. Eight tapes were used to calculate inter-rater reliability on all scales. An inter-rater reliability statistic was calculated, with each coder cleared for independent coding of data analyzed in the current study after achieving a minimum intraclass correlation coefficient of .70 or higher on each scale item. The interrater reliability was established between scores given by the

principal investigator and raters. An interrater reliability statistic was calculated. The initial training period for Cognitive Interventions Scale was approximately 50 hours.

Coding of Tapes

Therapy tapes from the CBT-only condition were coded. Each CBT group consisted of 20 group sessions for all participants. The CBT group treatment protocol consisted of three main components designed to remediate depressive symptoms: behavioral interventions (behavioral activation and affective education), problem-solving, and cognitive interventions. Behavioral activation/coping skills were taught and practiced during meetings 2 through 9 (8 sessions). The primary focus on cognitive interventions began in meeting 10 and continued through meeting 19 (10 sessions). Although sessions 10 through 19 focused on cognitive interventions, behavioral activation/coping skills and problem-solving continued to be integrated in the protocol both formally and informally. Meetings 1 and 20 of treatment were not coded due to limited implementation of therapeutic techniques. Meeting 1 focused on introductions, setting group rules, discussion of confidentiality, group incentive plan, and a provision of treatment rationale. Meeting 20 focused on termination, obtaining closure, reviewing treatment progress, planning for future problems. Half of the group sessions for each CBT-only group were coded, with an equal proportion drawn from the components of the treatment protocol. Thus, sessions 2, 4, 6, 8, 9, 12, 14, 16, 18, and 19 were coded from each group to match for the specific therapeutic content covered. Tape collections of groups were randomly assigned to coders. Raters then coded the group treatment for girls within those groups across five coding scales: therapist behavior, group cohesion, behavioral interventions,

problem solving interventions, and cognitive interventions. Coding of each tape took approximately three hours. At the conclusion of data coding used in the current study, 10% of the total sample of tapes was used to calculate the interrater reliability for the coding systems in this sample. ICC coefficient for the cognitive coding measure was as follows: CCS-BN Cognitive Interventions subscale = .61. The ICC coefficients for each scale item are presented in Table 3.

Table 3

Intraclass Correlation Coefficients for CCS-BN Cognitive Interventions 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

*Single measures ICC

Treatment Integrity

The level of treatment integrity was assessed using a coding system developed by the principal investigator of the larger study to assess the degree to which specific objectives outlined in the treatment manual were met. All treatment integrity ratings were assessed by project therapists. Therapists were randomly assigned to rate audio-tapes of other therapists, and thus did not rate their own sessions.

Treatment: ACTION Program

The treatment administered to participants was a manualized, cognitive behavioral therapy protocol designed for the treatment of depression in early adolescent girls (Stark, et al., 2007). Based on a self-control model, the treatment helps depressed youth self-monitor cues (e.g., unpleasant mood, negative thoughts, maladaptive behaviors, depressive symptoms) indicating the need to engage in therapeutic skills to improve mood. The treatment consisted of 20 group and 2 individual meetings, lasting 50 – 60 minutes. The meetings were conducted in the school setting twice a week over of eleven weeks. During these meetings, girls learned to manage depressive symptoms through six core therapeutic components: affective education, goal-setting, coping skills training, problem-solving training, cognitive restructuring, and building a positive sense of self. In sessions, therapists instilled therapeutic skills through didactic and experiential techniques (e.g., fun, developmentally-appropriate group activities, role plays, behavioral rehearsals) within the context of a supportive, collaborative therapeutic relationship. Between meetings, girls completed work book activities (i.e., therapeutic homework) to facilitate the generalization of skills learned within sessions.

Treatment Objectives and Implementation of Cognitive Interventions

The following section will provide a general overview of the therapeutic objectives and activities for each session, as outlined in the treatment manual (Appendix J). The review is limited to session objectives, as the general structure of meetings (chat time, setting the agenda, review of previous session, discussion of previously assigned therapeutic homework, assignment of new therapeutic homework, review of current session, positive interpersonal behavior review, and distribution of rewards) remains consistent across sessions. Further, a few examples of the many possible ways in which cognitive restructuring techniques can be incorporated into sessions will be illustrated.

Session One

The specific objectives for meeting one are for participants to demonstrate understanding in the following areas: (1) group pragmatics and rules, (2) why they were selected to participate and overall treatment goal, (3) limits of confidentiality, (4) support network of the group, and (5) the within group incentive system and the importance of completing therapeutic homework. An activity designed for the introduction of affective education presents a ripe opportunity for therapists to begin cognitive interventions. In this activity, dark sunglasses are used to concretely illustrate how cognitive distortions that lead to depression. The girls come to an understanding that the therapeutic skills learned will help them to “lift the dark lenses” so that they can see things more realistically and thus experience positive shifts in mood. Through Socratic questioning, the therapist can begin to explore with participants specific negative thoughts that have been contributing to their depressed state, the specific situations within which those

thoughts arise, and to link those thoughts to affect. Further, the therapist can assist the children with identifying specific, more adaptive thoughts that will in turn, improve mood.

Session Two

The objectives for meeting two are for participants to: (1) learn what an agenda is and its use in group meetings, (2) learn the importance of therapeutic homework in symptom relief, (3) identify specific plans to aid in the completion of homework, (4) learn how to accurately rate mood in different situations (using a 10 - point “mood meter”) (5) experience a change in mood while performing a coping skill and identify how they could use it outside of group, and (6) recognize the “Take Action List” (TAL) as a tool to help increase engagement in fun activities and to notice effects they have on mood.

During the introduction of the TAL, the therapist is able to continue to incorporate cognitive interventions to show the girls how thoughts (e.g., while engaging in fun activities) affect mood, help them to identify key situations within which those thoughts arise and to thus engage in activities that will help positively alter thoughts and mood. The therapist can also explore negative thoughts might hinder the girls from engaging in activities and begin introducing alternative views to increase likelihood of engagement in these coping activities. While introducing participants to the “Mood Meter,” the therapist also introduces the “Brain, Body, Behavior” or “3 B’s” (thoughts, physiological reactions, actions), cues to aid in emotion recognition and thus more immediate identification of automatic thoughts contributing to negative affective states and

behaviors. The therapist uses the mood meter before and after in-session coping activities to concretely demonstrate the positive impact of coping skills on thoughts and mood. The therapist helps the girls to realize how the activity changed their mood (e.g., distracted from negative thoughts, increased energy) and how they can elevate their mood by engaging in coping activities. Thus, the therapist can also begin restructuring their helpless schema by leading girls to the conclusion that they have control over their negative moods (i.e., by engaging in coping activities).

Session Three

During meeting three, the therapist's aims are to help participants: (1) understand the importance of thinking about therapeutic concepts between sessions, (2) experience a change in mood produced by a coping strategy (changing thoughts), (3) identify emotions by using cues in their body, brain, and behavior, and (4) name the five broad coping strategies and give several examples of each. Through a fun activity, the girls learn the importance of noticing and paying attention to positive experiences and are shown that they have a choice to focus on either the positive ("bright lenses") or negative ("dark lenses") aspects of their experiences (which then influences their mood). Here, the therapist can help girls to develop a self-schema of efficaciousness by highlighting how they have control over their cognitions. The therapist can generate a discussion about how attentional focus contributes to their depressive symptoms within concrete situations in the girls' lives, and explore negative thoughts that have occurred outside of session.

The cognitive intervention of recording thoughts is implemented as girls are encouraged to write daily about any pleasant experience (e.g., feelings, thoughts, events),

and thus gradually develop a more positive focus. As girls discuss events from the diaries, the therapist can implement a variety of cognitive techniques including helping girls to realize the adaptive functions of positive thoughts. Diary entries can also be used to gather evidence to counter negative beliefs about the self (e.g., unlovability, helplessness, unworthiness), world, and future. Another means by which the recording thoughts intervention is implemented is through practice assignments. In their child workbooks, girls record their thoughts, associated affect, and behaviors (and changes associated with engagement in therapeutic skills) that occur outside of session.

Individual Session One

In the first individual meeting, the therapist helps the participant to: (1) understand therapeutic concepts taught to date, (2) collaboratively develop therapeutic goals, (3) develop procedures to achieve those goals, and (4) role play with the counselor asking the group for help to meet those therapeutic goals. While setting therapeutic goals, the therapist can explore thoughts that are contributing to current barriers to reaching goals, thoughts about the problem itself or their ability to reach goals. Further, the discussion of goals can facilitate the elicitation of many “hot cognitions” (affectively-laden, core cognitions) (Beck et al., 1979) as the core issues of the girls can be brought into conscious awareness. Once cognitions are elicited, the therapist is able to apply cognitive techniques appropriate for the child (e.g., if rapport is strong, more challenging restructuring can be implemented).

After collaboratively establishing goals that are relevant to the relief of depressive symptoms, plans to help the girls reach their goals are created, which includes the

application of adaptive thoughts that are collaboratively formulated. When girls demonstrate reluctance to share their goals with the group (which may be related to negative beliefs about others or self), the therapist is presented with another opportunity to apply cognitive restructuring techniques. Encouraging the child to examine realistic consequences of those cognitions is an example of a fitting cognitive intervention for that circumstance (e.g., “What’s the worst that could happen if you mess up reading your goals out loud?”). Another intervention, testing beliefs prospectively can be used to help girls modify negative beliefs (e.g., by encouraging the girl to test whether or not the others will say mean things about her goals).

Session Four

The objectives for meeting four are for girls to be able to: (1) identify ways to support other group members in reaching their goals, (2) identify the situations within which to use the three major therapeutic skills, (3) identify key concerns and solicit help from group members, (4) begin to use coping strategies to manage negative moods, and (5) experience a change in mood through use of a coping skills strategy and name other situations within which she could use a similar strategy. A therapeutic concept of the “Muck Monster” (MM) is introduced, which aids in the application of the “distancing” cognitive intervention. The girls learn that the MM tells “lies” and that they can learn to “talk back” with more rational, optimistic thoughts. The therapist can then use this concept to elicit negative thoughts the girls have experienced, and generate alternative views they can use to experience alleviation of symptoms.

Session Five

The therapist's objectives for meeting five include assisting participants to: (1) shift focus to the positive by sharing positive experiences or observations, (2) experience a change in mood using a coping skills strategy and identify other times to use a similar skill, (3) explain problem-solving steps and identify appropriate situations to use problem-solving, (4) begin to apply problem solving to their daily lives, and (5) generate multiple solutions to a problem, rather than a single solution. In learning the problem-solving steps, participants learn to modify their thinking about problems: they learn to conceptualize stressful situations as problems to be solved, and that they have many viable options to manage those situations, rather than viewing problems as hopeless situations. Also, as the girls apply the problem solving steps their own problems, therapists can explore the automatic thoughts and underlying assumptions and beliefs that are stimulated by those stressors, and apply restructuring (e.g., alternative views, distancing, etc.) as deemed appropriate.

Session Six

During the sixth meeting, therapists help youngsters to: (1) identify progress made toward goals and problem-solve difficulties making gains, (2) articulate relationships between thoughts and feelings and understand the role of changing thoughts as a coping strategy, (3) identify their own thoughts that lead to negative feelings and develop coping statements for future use, (4) experience a change in mood through application of a coping strategy and identifying other times to use a similar strategy. In the goal-attainment check-in, the therapist explores any negative thoughts about the process (e.g.,

hopelessness), and restructures them as needed. Also, gains that are made can be used as evidence to counter maladaptive and to build positive schemas about the self, world, and future. Also during goal-check-ins, the therapist can make good use of the cognitive intervention that helps girls to link therapeutic gains to changes in cognition. Particularly when gains are not made, the therapist can help the child to see that lack of progress does not reflect internal, global, stable traits such as defectiveness, unworthiness, helplessness, hopelessness etc., and to develop more adaptive alternatives to rigid rules about achievement (e.g., “if I’m not beating everyone else, I’m not good enough.”) Also during this meeting, girls do an activity that explicitly teaches them to link thoughts to emotions. The therapist can help intensify the therapeutic aspect of the activity by encouraging girls to apply problematic thoughts and emotions they typically experience outside of sessions to the exercise. The therapist helps the child formulate coping statements to change thoughts and “lift the dark lenses” or “talk back to the Muck Monster,” thus applying the “distancing” intervention, formulating alternative views, etc..

Sessions Seven to Nine

The focus of meetings 7 – 9 is to help participants: (1) shift their focus to the positive by sharing pleasant events and situations they have noticed, (2) generate multiple solutions to everyday problems, including interpersonal problems (meetings 8-9) and (3) experience a change in mood through use of a coping skills strategy and identify other times a similar strategy can be used (while meeting eight includes a goal check-in). While reinforcing the steps of problem solving is a major focus for these three meetings, integration of skills is also focus to help girls experience greater efficacy. For example,

therapists attempts to elicit negative thoughts about problems and their negative thoughts about difficulties they were having overcoming problems and proceeds with cognitive restructuring and/or application of coping skills (e.g., to help alleviate frustration with the problem). Role-plays and behavioral rehearsals are used to practice solutions to interpersonal problems (e.g., assertiveness). The therapist can capitalize on these rehearsals to elicit cognitions that arise in interpersonal situations, explore and modify underlying beliefs and assumptions that may be contributing to their conflicts.

Individual Meeting Two

The second individual meeting contains several objectives, including helping participants to (1) demonstrate understanding of therapeutic concepts to date, (2) identify progress toward goals and problem solve obstacles, (3) demonstrate comprehension of using skill integration to obtain improvement in depressive symptoms, (4) identify their most common negative thoughts and describe their impact on emotion, behavior, and relationships, (5) identify specific areas to monitor in their Catch the Positives Diaries, and (6) describe the cognitive restructuring process. The therapist can use the review to help girls find positive evidence for their therapeutic progress and come to adaptive conclusions that support positive schemas. For instance, as girls exhibit in-vivo evidence of their progress (e.g., as they name coping skills, review goals), the therapist can help girls to conclude that they are efficacious, the future is hopeful, and others (e.g., group-members) are supportive. Using the case-conceptualization, the therapist helps the child identify common negative thoughts and discusses the effects of those thoughts on their mood, behavior, and relationships with others. As the therapist at this point has learned

more about the child's history (e.g., through parent contact, disclosures), she can help the child explore how her core schemas may have developed. The therapist assists the child with "talking back" to the negative thoughts with coping statements. This is an example of the cognitive intervention, "practicing rational responses."

The therapist also supplies the child with a specialized "Catch the Positives Diary" that targets areas in need of self-monitoring, as determined by the conceptualization, treatment plan, and participant's goals. Through this intervention, the child collects positive information with which to combat negative beliefs about the self, world, and/or future and to build a positive schema. Lastly, the two cognitive restructuring questions are explicitly introduced and are applied to the child's most common negative thoughts (i.e., examining evidence, generating alternative views).

Session Ten

The objectives for meeting ten are to help group members: (1) evaluate progress made toward goals and problems solve difficulties, (2) recognize group has become closer and that members will start discussing negative thoughts, and (3) experience a change in mood through application of a coping strategy and begin disputing negative thoughts. The therapist implements an activity to exemplify how the bonds between members have grown stronger, thus providing the safety needed for disclosing more personal thoughts. The therapist can use this activity to help girls gather evidence about themselves and others as trustworthy, supportive, and worthy, etc. (e.g., by noticing how confidentiality has been maintained). If needed, the therapist restructures negative

thoughts surrounding distrust. If they are ready, the girls share the thoughts they think when they feel the saddest.

In order to facilitate eliciting thoughts and to help girls become more aware of their negative cognitions, girls engage in visualization exercise of their Muck Monster telling lies about themselves and share those thoughts with the group. The girls also role-play talking back to the Muck Monster (with either therapist or child as the Muck Monster), an example of practicing rational responses (as well as distancing from beliefs). Also in this way, empiricism is used to help girls to recognize that negative thoughts are not necessarily true (that just because they think a thought, it does not mean it is true) but are hypothesis to be tested by examining evidence, finding more viable, realistic explanations, etc..

Session Eleven

For the eleventh meeting, the therapist strives to aid participants to: (1) shift their focus to the positive by sharing pleasant events or observations, (2) understand that perceptions are constructed and the way a situation is perceived affects mood, (3) continue to identify their most common negative thoughts and the effects of those thoughts on mood, and (4) develop and elaborate upon coping statements to dispute negative thoughts. The girls participate in an activity where they create stories using a neutral stimulus (e.g., vague social situation) from different perspectives (e.g., pessimistic, optimistic). During the discussion, the therapist guides the girls to the realization that thoughts are subjective, and need to be judged for their accuracy. The girls come up with the top 3-4 negative thoughts that make up their “dark lenses,” and

identify feelings associated with those thoughts and generate their own coping thoughts to combat the negative thoughts and feelings. If appropriate, the therapist can intensify the intervention by exploring underlying meanings of thoughts if they appear to be automatic thoughts or intermediate beliefs, and subsequently restructure them. As with other cognitive interventions, the therapist uses the mood meter to help children see the change in affect the changes in cognition brought about. Thus, the therapist can incorporate interventions that explore the adaptive/maladaptive function of cognitions and connections between thoughts and emotions.

Session Twelve

The objectives for meeting twelve are to assist participants to: (1) evaluate progress made toward goals and problem solving difficulties, (2) identify their own and other's negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) understand the importance of asking themselves questions to believe their new, more positive thoughts. In a game format, the girls practice identifying their own and other's negative thoughts. The therapist can use this as a springboard to further explore personal meanings and underlying assumptions of thoughts (e.g., help the child identify beliefs underlying the thought "I'm so clumsy" or personal meanings of "this school sucks") and help the child apply restructuring skills, link emotions to thoughts, etc. Beginning with this meeting, building a positive schema becomes a central cognitive intervention used until termination of treatment. Cognitive restructuring strategies (e.g., examining evidence, finding alternatives) are used when participants have difficulties realizing personal strengths. The girls can also apply

restructuring strategies when valid areas of weakness are identified. Instead of convincing girls of unrealistically positive thoughts, the girls learn to view areas of weaknesses more realistically: as problems that can be solved, situations that can be coped with, not as indications of unlovability, defectiveness, etc. Girls' beliefs about others can also be restructured through this activity, as they arrive at the realization that strengths in others can be appreciated and valued (rather than being viewed as indications of their own inadequacy). The girls are also explicitly taught and regularly practice cognitive restructuring techniques (examining evidence, finding alternative views)

Session Thirteen

In meeting thirteen, therapist focuses interventions to help participants: (1) shift their focus to the positive by sharing pleasant events or observations, (2) identify their own and others' negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) effectively use the cognitive restructuring technique, "What's a different way of looking at it?". The girls are provided with about three of their own most frequent negative thoughts and are encouraged to verbalize them some time in the meeting or to state a negative thought they are currently experiencing. Added to the ongoing game is the challenge of "talking back" to their own or other's negative thoughts as they are verbalized in group. Continuing with building a positive schema with the self maps, the therapist again, uses cognitive restructuring when the child's distorted cognitions are preventing her from accurately assessing strengths or when valid areas of weakness are identified. As the girls practice finding alternative views, they continue to recognize that there are many ways to view a situation and that

when depressed, they tend to make negative interpretations, which are likely untrue. As much as possible, the girls apply this process to real-life situations recently experienced.

Session Fourteen

The objectives for meeting fourteen are for participants to be able to: (1) evaluate progress made toward goals and problem solve difficulties, (2) continue identifying their own and other's negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) be to apply the cognitive restructuring strategy, "What's another way of looking at it?". In this session, an activity is implemented to help participants practice cognitive restructuring techniques to challenge their own negative thoughts. Girls "talk back" to an illustration of their Muck Monster using cards provided by the therapist that lists the girl's most common negative thoughts and the situation within which they arise. As the Muck Monster tells the girl the negative thought, the participant recalls the last time she had the thought and rates her mood. The participant then practices talking back to the Muck Monster by coming up with alternative explanations to the given situation. The therapist or other group members offer their support in generating ideas for more realistic, positive interpretations. The participant re-rates her mood after she has successfully "talked back" to the Muck Monster. This one activity facilitated by the therapist utilizes a variety of cognitive techniques including eliciting thoughts, linking thoughts to emotions, distancing, practicing rational responses, finding alternative explanations, empiricism, building a positive schema. The therapist at any point could explore surface negative thoughts to uncover more deeper, underlying structures, recommend prospective tests of beliefs, etc.

Further, in helping children identify negative thoughts and formulate more viable explanations, the cognitive technique of identifying cognitive errors can be used as well. For instance, if a child says that her mother is “always grouchy” the therapist can point out that the muck monster usually uses extremes (e.g., “always,” “never,”) to “tell lies,” and can thus help the child to remediate the error in processing more explicitly.

Session Fifteen

The therapist targets the following objectives to assist participants with: (1) shifting their focus to the positive by sharing pleasant events and observations, (2) identifying their own and others’ negative thoughts, (3) recognizing positive characteristics about themselves to build a positive self-schema, and (4) effectively using the cognitive restructuring question, “What’s the Evidence” to help with evaluating information that supports and disconfirms the belief. The girls are reminded that the Muck Monster often distorts the truth or lies to them about themselves, the world, and future. They are taught that the second thought judge question helps them to find facts and evidence that helps support a more optimistic, realistic interpretation (if the thought is true, problem solving is used). The group together, lists evidence that supports the thought in one column, and evidence that disproves the thought in another column. The participants rate the “weight” of each piece of evidence concretely (e.g., with beads), and add up the values to assess the believability of the negative thought. After the “verdict” has been placed, the participant re-rates her mood. The therapists have the flexibility to use other cognitive restructuring questions as deemed appropriate to the particular negative thought (e.g., “What would I tell my best friend if she had the thought?,” “What

if that really happens? What is the worst that could happen? What is the best that could happen? What is the most realistic?”).

Session Sixteen

In meeting sixteen, the therapist attempts to help participants: (1) evaluate progress made toward goals and problem solve impediments, (2) identify their own and other’s negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) apply the cognitive restructuring question, “What are the clues that tell me this thought isn’t true?,” and (5) recognize that treatment is coming to an end. In addition to adding more positive characteristics to the Self-Maps, the therapist helps the girls to process their relative strengths in terms of being a powerful resource within their relationships to others as well as themselves. The girls are encouraged to apply their strengths to help others between meetings and to share those experiences with the group, thus broadening their positive sense of self to the concept of themselves in relation to others. The group members are also paired for the purposes of secretly monitoring the behaviors of others that reflect strengths on their self-maps, which they share in group at later time. This provides opportunities for the therapist to help the girls view others in a positive light as they focus on other’s strengths and experience others as supportive (as they receive compliments from group members).

Session Seventeen

For meeting seventeen, participants: (1) shift their focus to the positive by sharing pleasant events and observations, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) appropriately use the cognitive restructuring

questions, and (4) recognize group is ending and become aware of alternative ways to bring up issues that have not been discussed. For some girls, termination of group can elicit negative thoughts that are fruitful opportunities for the therapist to help the child explore, identify, and change beliefs regarding themselves as unlovable or helpless (i.e., they cannot do well without the program), others as unreliable (i.e., as they may perceive being abandoned). Discussing termination can be an appropriate time for therapist to implement techniques such as exploring development of beliefs and other techniques explicitly taught (examining evidence, alternative views, distancing, recognizing cognitive errors).

Session Eighteen

For meeting eighteen, therapists aim to help participants: (1) evaluate progress toward goals and problem solve difficulties, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) integrate and apply all the skills to positively alter mood, and (4) recognize the “smiley ball” as their new ability to “catch the positive.” To aid in preparation for termination, the therapist gives each girl a “smiley ball” that has been used in the positive interpersonal behavior review during each meeting. The therapist explains that the “smiley ball” represents their new ability to replace negative, distorted views of themselves with more positive, realistic ones. The therapist can use this activity to highlight progress the girls have made across treatment. For instance, girls may initially have had extreme difficulty formulating positive information about themselves for these positive interpersonal reviews (i.e., when they give themselves and others compliments about in-session behavior). The therapist can

help the child link therapeutic gains to cognitive change by using progress in this exercise as a concrete example. For example, the therapist could help the child see how she “believed” the Muck Monster so much, that she wore their dark lenses most of time and could not see the positive characteristics about herself and thus experienced sadness, anger, etc. The therapist could then help the child in session see how by learning skills, she was able to fill her self map, catch the positives in her diary, give others compliments, solve problems, talk back to the muck monster and see through her bright lenses.

Session Nineteen

In meeting nineteen, the therapist helps participants to: (1) shift their focus to the positive by sharing pleasant events and observations, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) recognize that although group is ending, they have internalized the support of the group, (4) identify negative thoughts they are ready to let go and discuss thoughts and feelings regarding termination. In the final self-map activity, the girls come up with conclusions about themselves from the list of strengths in each area of the map. The girls also construct an interpretation of themselves as a whole, after considering conclusions regarding separate areas of the self. The girls are encouraged to continue building upon the positive self-schema in order to continue self-improvement and associated positive mood. The girls also complete a final web activity that demonstrates how the relationships made over the course of ACTION have been internalized and have become a source of strength. Further, the participants are helped to see how they have also learned and internalized the

skills they need to “be their own best friend” and independently use the therapeutic skills to help them improve mood in the future. In preparation for a final activity in the last meeting, the participants write down their most common negative thoughts, negative feelings or situations that used to be problematic. The therapist then leads a discussion regarding a review of what they have learned throughout the course of treatment, what they have learned about one another, and processes feelings and thoughts associated with termination.

Session Twenty

In the final group, the therapist helps girls to: (1) say goodbye to group members and therapists, (2) symbolically release the negative thoughts and feelings associated with depression, and (3) process the termination experience. To assist the girls with saying goodbye, the girls create cards for each other that contain their most positive memory about that person or what they liked about that person. Then, the girls take the negative thoughts, feelings, or problems they had recorded in the previous meeting and place them through a shredder. The girls can talk back to the Muck Monster as they destroy the pieces of paper and applaud one another. The girls are presented with a pair of bright sunglasses to represent how they learned to successfully “life the dark” lenses and defeat the Muck Monster. The group ends with a final discussion to again, process any remaining issues surrounding termination.

Thus, despite the fact that treatment integrity standards require the therapist to meet all meeting objectives, there is considerable flexibility in the manner in which these objectives can be met. There are also an infinite amount possible combinations within

which cognitive restructuring techniques can be integrated with treatment objectives and with the material each unique girl and group present across sessions.

CHAPTER 4

Statistical Analysis

This investigation was part of a larger study analyzing the mechanisms of change in CBT for depressed girls. Specifically, this study looked at the influence of cognitive interventions on the severity of depressive symptoms in early adolescent girls following cognitive behavioral therapy. First, descriptive statistics and preliminary data-screening analyses are summarized. Next, the results for the main hypothesis are presented using multiple regression analysis. Lastly, exploratory statistical analyses are discussed.

Preliminary Analyses

Missing Data

In order to maximize the use of available data, values were imputed for missing data at the item level. Missing outcome data was imputed using full information maximum likelihood estimation. Maximum likelihood methods are the recommended approach to addressing the problem of missing data (Keith, 2006). To compute missing values with maximum likelihood estimation, the following variables were entered into the analysis to obtain missing data probability estimates for one participant: K-SADS Time 1 (pre-treatment) and Time 2 (post-treatment), Time 1 and Time 2 CTI total scores, age, grade, and Cognitive Interventions weighted average. Due to absences from group meetings, participants had varying exposures to cognitive interventions. In order for cognitive intervention scores to reflect the level of intervention received, the cognitive

total score was averaged and weighted based on the participants' attendance to coded sessions.

Assumptions of Multiple Regression

In order to test for violations of multiple regression assumptions, pre-data screening was conducted using inspection of histograms, scatterplots, and frequencies for all model variables. The analyses indicated no outliers. A scatter plot between predicted scores and residuals, and a probability plot was generated to assess normality. Further, for each variable, skewness and kurtosis was assessed. For all variables of interest there were no values skewness or kurtosis greater than the absolute value of one, and visual inspection of histograms indicated normal distributions; therefore, it was concluded all other variables met the assumption of having normal distributions. The linear relationship between independent and dependent variables was examined through a scatterplot of residuals and was determined to be adequate. Histograms of residuals showed that errors were normally distributed. Lastly, inspection of the scatter plots of standardized predicted residuals and the dependent variable indicated equal variance.

Descriptive Statistics

Means, standard deviations, and Cronbach's alphas for model variables are presented in Table 4. All scales demonstrated adequate internal consistency (Garson, 2009). In addition, intercorrelations between the measures used in the main analysis are presented in Table 5.

Table 4

Means, Standard Deviations, and Cronbach's α for Model Variables (n = 42)

Variable	M	S.D.	α
Time 1 K-SADS Depression Score	41.63	10.07	.78
Time 2 K-SADS Depression Score	24.78	6.79	.78
Cognitive Interventions Score	27.80	8.77	.93
T1 CTI Total Score	45.38	14.29	.89
T2 CTI Total Score	57.45	12.18	.92

Table 5

Pearson Product Moment Correlations among main analyses variables (n = 42)

Variable	1	2	3	4	5
1. T1 K-SADS score	1				
2. T2 K-SADS score	.10	1			
3. Cognitive Inter	.03	.06	1		
4. T1 CTI total	-.22	-.14	.30	1	
5. T2 CTI total	-.18	-.38*	.24	.40**	1

*Represents significance at the .05 level

**Represents significance at the .01 level

Demographic Variables and Total Depression Scores

Analyses were conducted to assess whether pre-treatment depression scores differed by any main demographic variables. The correlation between age and

pretreatment K-SADS depression scores was nonsignificant ($r = .191, p = .226$) which suggested that pretreatment depression scores did not differ by age. The correlation between learning disorder diagnoses and pre-treatment depression scores was also nonsignificant ($r = -.089, p = .575$), indicating that pretreatment K-SADS scores did not differ by the presence of a learning disorder. Analysis of Variance (ANOVA) was conducted to determine whether pretreatment K-SADS depression scores differed by grade. The results of the ANOVA were nonsignificant ($F[2, 39] = .457, p = .637$), which indicated that depression scores assessed at pretreatment did not differ by grade. ANOVA was also used to assess any potential differences between race/ethnicity and depression scores. Results of the ANOVA were nonsignificant ($F[4, 37] = .069, p = .991$), which demonstrated no significant differences in pretreatment depression scores by race/ethnicity. ANOVA was also used to determine whether T1 K-SADS depression scores differed by cohort. The results of the analysis were nonsignificant ($F[2, 39] = 1.117, p = .337$) showing that there were no differences in initial depression scores by cohort.

Further analyses were conducted to determine whether post-treatment depression scores differed by any main demographic variables. ANOVA was used to investigate whether post-treatment depression scores varied by group size. The results of the ANOVA were nonsignificant ($F[2,39] = .684, p = .511$), indicating that post-treatment K-SADS scores did not vary by group size. Additionally, an ANOVA was used to assess potential differences for participant attendance of intervention on post-treatment depression scores. Results of the ANOVA were significant ($F[2, 39] = 4.77, p = .014$),

suggesting a ‘dose’ affect in depression scores by coded sessions attended. Post-hoc analyses using a Tukey LSD correction suggested significant group mean differences in post-treatment depression scores between participants who attended 7-8 sessions ($M = 30.86$, $SD = 5.76$) and 9 sessions ($M = 21.13$, $SD = 4.67$) ($p = .012$) and significant group mean differences between participants who attended 7-8 sessions and 10 sessions ($M = 24.30$, $SD = 6.70$) ($p = .045$). This suggested that on average, participants who attended 7-8 sessions had significantly higher post-treatment K-SADS depression scores than participants who received 9 sessions and 10 sessions. The mean difference in post-treatment K-SADS scores between participants who attended nine sessions and ten sessions was nonsignificant ($p = .425$) (graph of mean post-treatment K-SADS scores by meeting attendance is displayed in Figure 4.1). It is important to note that this result pertains to attendance to the ten meetings that were coded, not attendance to all twenty sessions. As previously discussed, this apparent dose affect was captured through using the average cognitive intervention scores weighted by attendance in the main analysis. Further, an ANOVA was conducted to determine if any differences between group size and post-treatment K-SADS depression scores existed. Results of the ANOVA found no differences in depression scores at post-treatment for different group sizes, ($F[2, 39] = 0.06$, $p = .944$). Frequencies for participant attendance of coded sessions and group size is presented in Table 6. The correlation between age and post-treatment K-SADS depression scores was significant, $r = -.361$, $p = .019$, indicating that higher age was related to lower post-treatment depression scores (graph of mean post-treatment K-SADS scores by age is displayed in Figure 4.2). An ANOVA was conducted to determine

whether post-treatment K-SADS depression scores differed by cohort; results indicated no mean differences in post-treatment K-SADS depression scores by cohort ($F[5,36] = .268, p = .928$). This suggested that depression scores assessed at post-treatment did not differ by cohort. Finally, the correlation between presence of learning disorder diagnoses and post-treatment K-SADS scores was nonsignificant $r = -.005, p = .975$, indicating that post-treatment K-SADS scores did not differ by presence of a learning disorder.

In summary, pretreatment K-SADS depression scores did not vary by any of the demographic variables assessed: age, presence of a learning disorder, grade, race/ethnicity, and cohort. Post-treatment K-SADS depression scores was positively and significantly related to age. Therefore, age was considered as a potential control variable for this study's analyses. Further, post-treatment depression scores differed by group attendance so that girls who attended 7-8 sessions obtained higher post-treatment scores than girls who attended 9-10 sessions. To capture this apparent "dose effect," total cognitive interventions scores were averaged and weighted by attendance. Post-treatment K-SADS depression scores did not vary by group size, age, cohort, or presence of a learning disability.

Figure 4.1

Mean T2 K-SADS Scores by Number of Meetings Attended (N=42)

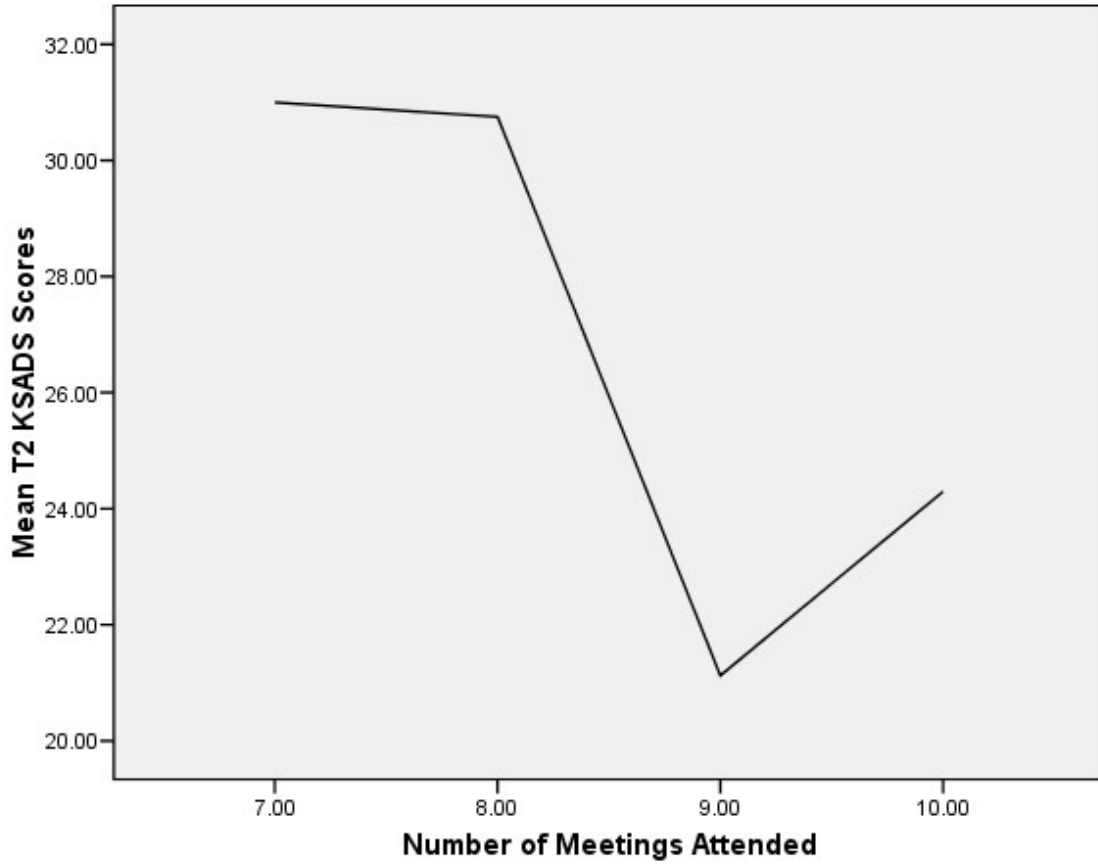


Figure 4.2

Mean T2 K-SADS Scores by Age (N=42)

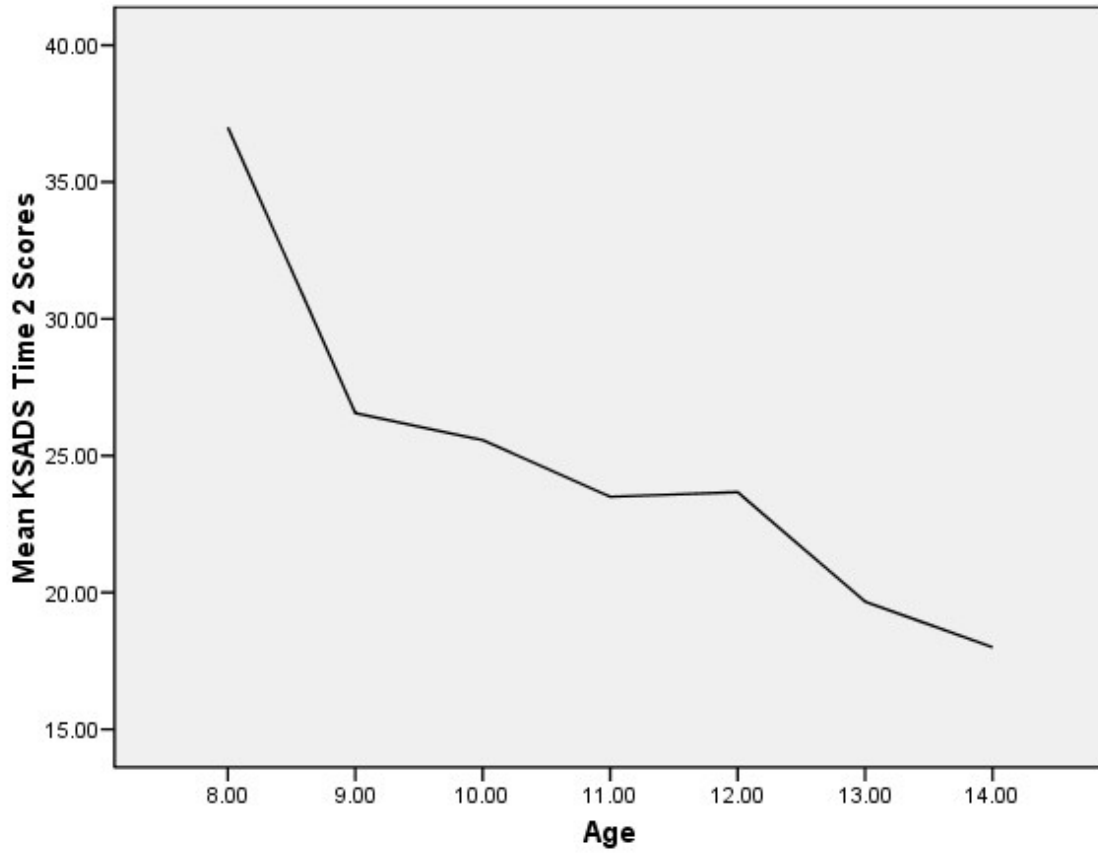


Table 6

Frequency of Attendance for Coded Sessions of Intervention

	Frequency	%
Coded Sessions Attended		
6	1	2.4
7	2	2.4
8	2	4.8
9	10	23.8
10	27	64.3
Group Size (Total Number of Groups)		
2 (4)	7	16.7
3 (5)	19	45.2
4 (4)	16	38.1

*Main Analysis**Hypothesis 1*

The first hypothesis was that higher levels of cognitive interventions would predict lower levels of depression at post-treatment, after controlling for levels of depression assessed at pre-treatment. Simultaneous multiple regression was used to determine whether scores on the cognitive interventions measure predicted post-treatment K-SADS scores, after controlling for pre-treatment K-SADS scores. The overall model was not statistically significant ($R^2 = .014$, $F[2, 39] = .268$, $p = .766$), and accounted for 1.4% of the variance in post-treatment K-SADS depression scores. The independent variable of cognitive interventions ($\beta = .060$, $t[39] = .374$, $p = .710$) was not a statistically significant predictor of post-treatment K-SADS depression scores. The effect size for cognitive interventions was negligible ($E.S. = .0035$), which demonstrated that it uniquely accounted for less than 1% of the variance in post-treatment K-SADS depression scores. Lastly, the control variable pretreatment K-SADS depression scores

did not significantly predict post-treatment K-SADS depression scores ($\beta = .098$, $t [39] = .618$, $p = .540$). The effect size for pretreatment K-SADS depression scores was also negligible (E.S. = .0096), and accounted for less than 1% of the variance in post-treatment K-SADS depression scores. The results of this regression are displayed in Table 7.

Table 7

Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.*
Cognitive Interventions	.060	.374	.710	.00
Pre-Treatment Depression	.098	.618	.540	.01

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Because the cognitive interventions variable was not a significant predictor of post-treatment K-SADS depression scores after controlling for pretreatment K-SADS scores, the meditational analysis was discontinued.

Exploratory Analysis

Rationale for Exploratory Analysis

Due to the lack of empirical information regarding how cognitive behavioral therapy exerts its therapeutic effects on depressive symptoms in youth, it was imperative to further examine the mechanisms of change of this intervention through exploratory analyses. The absence of significant findings in the main analysis could be due to several factors. First, although the internal consistency of the cognitive interventions scale was adequate ($\alpha = .93$), the inter-rater reliability for some items of the scale were inadequate (see Table 2). In order to increase the reliability and thus validity of the cognitive interventions scale and reduce error variance, it was thought to be important to conduct the main analysis again using the weighted average of items with inter-rater reliability of substantial ($\geq .60$) to outstanding ICC values ($\geq .80$) (Landis & Koch, 1977). Second, because the coding instrument has not been used with depressed youth, it would be important to explore its properties and the extent to which the coded items formed groups representing constructs discussed in the research literature. Further, the reduction of the cognitive interventions data into distinct groups or factors may help to elucidate the change process in CBT for depressed girls through closer examination of specific types of cognitive interventions and their potential effects on depressive symptoms. Third, there may have been insufficient power in the main analyses to detect significance due to inadequate sample size. Adding meaningful control variables to the model could reduce unexplained variance and increase statistical power (Mertler & Vannatta, 2005).

It was also deemed important to identify factors that might affect the level of cognitive interventions used by therapists. In addition, an examination of how cognitive interventions were implemented across sessions would be helpful in gaining insight into the therapeutic change process for this sample. An examination of the occurrence of different types of cognitive interventions over the course of treatment would provide useful information about how cognitive techniques were used by therapists to decrease depressive symptoms.

Main Analysis with Revised Cognitive Interventions Score

In order to reduce error variance in cognitive interventions scores related to possible inaccurate coding of items, scale items with inter-rater reliability ICC values below .60 were eliminated from the calculation of the weighted average cognitive interventions score. Specifically, items 4, 5, 9, 13, 14, and 15 (exploring underlying assumptions, ICC = .24; development of underlying assumptions, ICC = .40; testing beliefs prospectively, ICC = .30; empiricism, ICC = .38; didactic persuasion, ICC = .18; substituting positive thoughts, ICC = .31, respectively) were dropped. The remaining items 1, 2, 3, 6, 7, 8, 10, 11, 12, 16, 17, 18, 19, 20 (focusing on key cognitions, ICC = .61; relation of thoughts and feelings, ICC = .81; exploring personal meaning, ICC = .63; recognizing cognitive errors, ICC = .88; distancing beliefs, ICC = .82; examining available evidence, ICC = .78; searching for alternate explanations, ICC = .71; realistic consequences, ICC = .74; adaptive functional value, ICC = .77; practicing rational responses, ICC = .79; recording/monitoring thoughts, ICC = .82; building positive schema, ICC = .86; relating improvement to cognitive change, ICC = .60; application of

cognitive techniques, ICC = .63) were used to calculate the total level of cognitive interventions, which was then averaged and weighted by meeting attendance to account for the observed “dose” effect of degree of exposure to interventions. The internal consistency of the revised cognitive intervention scale was adequate (alpha = .93).

Assumptions of Multiple Regression

In order to test for violations of multiple regression assumptions, pre-data screening was conducted using inspection of histograms, scatterplots, and frequencies for all model variables. The analyses indicated no outliers. A scatter plot between predicted scores and residuals, and a probability plot was generated to assess normality. Further, for each variable, skewness and kurtosis was assessed. For all variables of interest there were no values skewness or kurtosis greater than the absolute value of one, and visual inspection of histograms indicated normal distributions; therefore, it was concluded that the assumption of normal distributions was met. The linear relationship between independent and dependent variables was examined through a scatterplot of residuals and was determined to be adequate. Histograms of residuals showed that errors were normally distributed. Lastly, inspection of the scatter plots of standardized predicted residuals and the dependent variable indicated equal variance.

Descriptive Statistics

Means, standard deviations, and Cronbach’s alphas for model variables are presented in Table 8. All scales demonstrated adequate internal consistency (Garson, 2009). In addition, intercorrelations between the measures used in the main analysis are presented in Table 9.

Hypothesis One

The hypothesis of the first exploratory analysis was that higher levels of cognitive interventions would predict lower levels of depression at post-treatment, after controlling for levels of depression assessed at pre-treatment. Simultaneous multiple regression was used to determine whether the revised cognitive interventions scores (excluding items with ICC values $< .60$) predicted post-treatment K-SADS scores, after controlling for pre-treatment K-SADS scores. The overall model was not statistically significant ($R^2 = .011$, $F[2, 39] = .209$, $p = .813$), and accounted for 1.1% of the variance in post-treatment K-SADS depression scores. The independent variable of cognitive interventions ($\beta = .024$, $t[39] = .623$, $p = .537$) was not a statistically significant predictor of post-treatment K-SADS depression scores. The effect size for cognitive interventions was negligible (E.S. = .0098), which demonstrated that it uniquely accounted for less than 1% of the variance in post-treatment K-SADS depression scores. Lastly, the control variable T1 K-SADS depression scores did not significantly predict post-treatment K-SADS depression scores ($\beta = .099$, $t [39] = .150$, $p = .881$). The effect size for pre-treatment K-SADS depression scores was also negligible (E.S. = .0010), and accounted for less than 1% of the variance in post-treatment K-SADS depression scores. The means, standard deviations, and Cronbach's alpha for the model variables are displayed in Table 9. The results of this regression are displayed in Table 10.

Table 8

Means, Standard Deviations, and Cronbach's α for Model Variables (n = 42)

Variable	M	S.D.	α
Time 1 K-SADS Depression Score	41.63	10.07	.78
Time 2 K-SADS Depression Score	24.78	6.79	.78
Revised Cognitive Interventions Score*	19.77	6.89	.93

*Excluded items with inter-rater reliability ICC values < .60.

Table 9

Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.**
Revised Cognitive Interventions*	.024	.623	.537	.00
Pre-Treatment Depression	.099	.150	.881	.00

*excluded items with inter-rater reliability ICC values < .60.

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)

Because the overall model was not significant with the inclusion of the revised cognitive intervention scores (which excluded items with inter-rater reliability ICC values < .60), it was decided that subsequent exploratory analyses would use the original

cognitive interventions scores (which included all 20 cognitive intervention items) in order to further explore the properties and predictive value of the cognitive interventions scale in its entirety.

Main Analysis with Additional Control Variables

In order to examine the possibility of insufficient power to reject the null hypothesis of the main analysis, a post-hoc power analysis was conducted. After inputting the R^2 , sample size of 42, and 2 predictor variables, it was determined that the power of the main analysis of Hypothesis 1 using multiple regression was extremely low (.05). In order to reduce error variance, potential control variables were considered for inclusion in the exploratory analyses. One factor was age, as it was found to be significantly and negatively related to post-treatment K-SADS depression scores. Age conceptually is an important factor to consider, as the cognitive development of participants likely influences their response to cognitive interventions. Presence of a learning disorder was another variable considered for addition to the model as difficulties with receptive language (e.g., reading, listening), comprehension, processing speed, memory, or expressive language (e.g., verbal, written) could affect the level of cognitive interventions elicited from the therapist and the effectiveness of those interventions. Learning disorder scores were dichotomous, with a score of “1” indicating presence of learning disorder and “0” indicating no diagnosis of learning disorder. The ratio of no diagnosis to diagnosis of learning disorders was 34:8 which does not exceed 90:10, and thus was considered an acceptable split for regression analysis. Another variable considered for inclusion in the model to reduce unexplained variance was behavioral

intervention scores. The effectiveness of cognitive interventions is thought to be influenced by behavioral interventions, as cognitive behavior therapy usually begins with behavioral interventions to first alleviate acute depressive symptoms and increase the client's ability to engage in cognitive interventions (e.g., Beck et al., 1979; J. Beck, 1995). Further, behavioral interventions are often used in conjunction with cognitive interventions to make cognitive interventions more concrete and therefore easier to understand for youngsters. In support of this, Patel (2009) found in this sample of participants, that after controlling for initial depression, behavioral interventions and cognitive interventions were significantly associated with post-treatment depression scores. Using simultaneous multiple regression, the overall model was significant $F(3, 38) = 5.49, p < .05$, and accounted for 30% of the variance in K-SADS scores at post-treatment ($R^2 = .302$). Higher levels of behavioral interventions significantly predicted lower levels of post-treatment depression scores ($b = -.674, \beta = -.662, p < .001$) while higher levels of cognitive interventions predicted higher levels of post-treatment depression scores ($b = .364, \beta = .447, p < .05$) (Patel, 2009).

A final control variable considered for addition to the model in order to increase statistical power was participants' mastery of therapeutic skills. Mastery of therapeutic skills is a critical variable as a primary goal of CB T is to help the participant learn and generalize skills to maximize therapeutic effects and to retain therapeutic gains over time. Clients' ability to effectively use skills across multiple situations is thought to increase the potency of cognitive interventions to decrease depressive symptoms. Participants were administered three therapeutic skills checks following meetings six, twelve, and

twenty. A measure was developed to score the skills checks according to the following therapeutic components: affective education, coping skills, problem solving, and cognitive restructuring. The Cohort 1 skills checks differed somewhat in content and format from Cohorts 2-6. Therefore the scoring system was developed to determine mastery level of concepts and skills assessed by both Cohort 1 and later cohort therapeutic skills checks. The affective education component assessed the degree to which participants could identify the cues to emotions using their own experiences while the coping skills items measured whether participants could name the five coping skills and identify an example of using a coping skill from their own experiences. The problem solving component tested the degree to which the participants could name and apply problem skills and the cognitive restructuring items assessed the extent to which participants demonstrated understanding that negative thoughts can be changed to improve mood, named two cognitive restructuring techniques, and identified a negative thought with a corresponding coping thought. The maximum score possible was 36, with higher scores indicating greater mastery. The scoring system is displayed in Appendix K. Missing data was imputed using maximum likelihood estimation. The following variables were entered into the analysis to obtain missing data probability estimates for seven participants: Skills Check Affective Education, Skills Check Coping Skills, Skills Check Problem Solving, and Skills Check Cognitive Restructuring items. The subtotal for Affective Education, Coping Skills, and Cognitive Skills Checks was used in the model to control for variance associated with mastery level of behavioral (which includes affective education and coping skills) and cognitive restructuring skills. Means, standard

deviations, and accuracy levels for the subscale and total skills checks scores are displayed in Table 10. Accuracy levels were calculated by dividing the mean score by the highest possible score. The maximum scores for each subscale and total composite were as follows: affective education subscale, 3 points; coping skills subscale, 6 points; cognitive restructuring subscale, 7 points; total, 16 points. Inspection of means and accuracy levels suggested that on average, girls were least accurate in responding to items assessing cognitive restructuring skills (58% accuracy) compared to the areas of affective education and coping skills (73% and 76%, respectively). Overall, girls demonstrated relatively low accuracy on all scales combined (68%).

Table 10

Means, Standard Deviations, and Accuracy for the Skills Check Measure (N = 42)

Subscale	M	S.D.	Accuracy*
Affective Education	2.20	1.01	73%
Coping Skills	4.57	1.32	76%
Cognitive Restructuring	4.09	1.66	58%
Total	10.86	3.11	68%

**Calculated by dividing mean score by maximum possible score (maximum scores for affective education = 3; coping skills = 6; cognitive restructuring = 7; total = 16) to obtain percentage of items answered correctly.*

Assumptions of Multiple Regression

In order to test for violations of multiple regression assumptions, pre-data screening was conducted using inspection of histograms, scatterplots, and frequencies for

all model variables. The analyses indicated no outliers. A scatter plot between predicted scores and residuals, and a probability plot was generated to assess normality. Further, for each variable, skewness and kurtosis was assessed. The behavioral interventions variable demonstrated both skew and kurtosis (with values greater than the absolute value of one). Further, the Shapiro-Wilk test statistic of normality was significant ($W = .904, p = .002$), indicating a non-normal distribution. Visual inspection of the histogram indicated a positive skew; therefore, a constant of one was added to each value after which a logarithmic transformation was performed to address the non-normal distribution for behavioral intervention scores. The Skills Check variable also demonstrated skew and kurtosis values more than the absolute value of one, and the Shapiro-Wilk test statistic of normality was significant ($W = .875, p = .000$). A visual inspection of the histogram indicated a negative skew. Therefore, to correct for the negative skew, all values were subtracted from the highest value plus one, prior to conducting a logarithmic transformation. The distribution of CTI post-treatment scores demonstrated skew and kurtosis (with values greater than the absolute value of zero). The Shapiro-Wilk test statistic of normality was significant ($W = .906, p = .002$). A visual inspection of the histogram indicated a negative skew; therefore, a constant (highest item value plus one) was added to each score prior to conducting a logarithmic transformation. For all other variables of interest there were no values for skewness or kurtosis greater than the absolute value of one, and visual inspection of histograms indicated normal distributions; therefore, it was concluded that the assumption of normal distributions was met. The linear relationship between independent and dependent variables was examined through a

scatterplot of residuals and was determined to be adequate. Histograms of residuals showed that errors were normally distributed. Lastly, inspection of the scatter plots of standardized predicted residuals and the dependent variable indicated equal variance.

Descriptive Statistics

Means, standard deviations, and Cronbach’s alphas for model variables are presented in Table 11. All scales demonstrated adequate internal consistency (Garson, 2009). In addition, intercorrelations between the measures used in the main analysis are presented in Table 12.

Table 11

Means, Standard Deviations, and Cronbach’s α for Exploratory Analysis (N = 42)

Variable	M	S.D.	α
Time 1 K-SADS Depression Score	41.63	10.07	.78
Time 2 K-SADS Depression Score	24.79	6.79	.78
Time 2 CTI Score	57.45	12.18	.92
Behavioral Interventions Score (Log)	1.44	.09	.89
Cognitive Interventions Score	27.80	8.77	.93
Age	10.52	1.37	--
Learning Disorders	0.07	.26	--
Skills Check Score (Log)	1.43	.06	.74

Table 12

Pearson Product Moment Correlations Among Main Analyses Variables (n =42)

Variable	1	2	3	4	5	6	7
1. T1 K-SADS Scores	1						
2. T2 K-SADS Scores	.10	1					
3. T2 CTI score	-.19	-.38*	1				
4. Age	.19	-.36*	.03	1			
5. Learning Disorder	.02	-.16	.16	-.18	1		
6. Skills Check Scores	.01	.00	-.06	.07	-.33*	1	
7. Behavioral Int (log)	.04	-.42**	.27	.26	-.15	.22	1
8. Cognitive Interventions	.03	-.06	.25	.03	.20	.09	.59** 1

**Represents significance at the .05 level*

***Represents significance at the .01 level*

Hypothesis Two

The hypothesis of the second exploratory analyses was that higher levels of cognitive interventions would predict lower levels of depression at post-treatment, after controlling for levels of depression assessed at pre-treatment, age, presence of learning disorders, behavioral interventions, and mastery of therapeutic skills. The negative relation between cognitive intervention scores and post-treatment K-SADS depression scores would be fully mediated by participants' cognitive triad; that is, higher cognitive intervention scores would predict lower CTI scores and in turn, lower CTI scores would predict lower K-SADS scores, after controlling for pretreatment K-SADS depression scores, age, presence of learning disorders, and mastery of therapeutic skills. Once the

relations between cognitive intervention scores and CTI scores, and CTI scores and post-treatment K-SADS depression scores are taken into account, the relation between cognitive intervention scores and post-treatment depression scores will no longer be significant. Thus, cognitive interventions will have an indirect effect on post-treatment depression scores, after controlling for pretreatment K-SADS depression scores, age, presence of learning disorders, and mastery of therapeutic skills.

Simultaneous multiple regression was used to determine whether cognitive interventions scores predicted post-treatment K-SADS scores, after controlling for pretreatment K-SADS scores, age, learning disorders, level of behavioral interventions, and Skills Check subtotal scores (measuring mastery of affective education, coping skills, and cognitive restructuring).

The overall model was statistically significant ($R^2 = .430$, $F[6, 35] = 4.396$, $p = .002$), and accounted for 43% of the variance in post-treatment K-SADS depression scores. The independent variable of cognitive interventions ($\beta = .450$, $t[35] = 2.804$, $p = .008$) was a statistically significant predictor of post-treatment K-SADS depression scores. The effect size for cognitive interventions was medium (E.S. = .1282), which demonstrated that it uniquely accounted for 12.8% of the variance in post-treatment K-SADS depression scores. The control variable pretreatment K-SADS depression scores did not significantly predict post-treatment K-SADS depression scores ($\beta = .162$, $t [35] = 1.246$, $p = .221$). The effect size for pretreatment K-SADS depression scores was also negligible (E.S. = .0253), and accounted for 2.5% of the variance in post-treatment K-SADS depression scores. The control variable of behavioral interventions ($\beta = -.600$,

$t[35] = -3.507, p = .001$). The effect size for behavioral interventions was medium (E.S. = .2007), and accounted for 20% of the variance in post-treatment K-SADS depression scores. The control variable age significantly predicted post-treatment K-SADS depression score ($\beta = -.290, t[35] = -2.084, p = .045$). The effect size for age was small (E.S. = .0708), and accounted for 7% of variance in post-treatment K-SADS depression scores. The control variable of learning disorders did not significantly predict post-treatment depression scores ($\beta = -.186, t[35] = -1.292, p = .205$). The effect size for learning disorders was negligible (E.S. = .0272), and accounted for 2.7% of the variance in post-treatment K-SADS depression scores. The control variable of mastery of therapeutic skills was not a significant predictor of post-treatment depression scores ($\beta = .058, t[35] = .407, p = .686$). The effect size for mastery of therapeutic skills was negligible (E.S. = .0027), and accounted for less than 1% of the variance in T2 K-SADS depression scores. The results of this regression are displayed in Table 13.

Table 13

Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.*
Cognitive Interventions Score	.450	2.804	.008	.1282
T1 K-SADS Depression Score	.162	1.246	.221	.0253
Age	-.290	-2.084	.045	.0708
Behavioral Interventions Score	-.600	-3.507	.001	.2007
Learning Disorders	-.186	-1.292	.205	.0272
Skills Check Score	.058	.407	.686	.0027

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Although the relation between cognitive intervention scores and post-treatment K-SADS depression scores was significant (after controlling for age, presence of learning disorder, mastery of therapeutic skills, pretreatment K-SADS depression scores), it was in the opposite direction of that hypothesized. Despite the fact that cognitive intervention scores were positively associated with post-treatment depression scores, it was deemed important to explore whether this relation was mediated by girls' cognitive triad, as proposed by Beck's theory of depression.

In the next step, simultaneous regression was used to determine whether higher levels of cognitive intervention scores predicted higher post-treatment CTI scores (more negative cognitive triad) after controlling for pretreatment K-SADS depression scores, age, learning disorders, and mastery of therapeutic skills. The overall model was

nonsignificant ($R^2 = .145$, $F[6, 35] = .990$, $p = .447$), and accounted for 14.5% of the variance in post-treatment CTI scores. Cognitive interventions ($\beta = .125$, $t[35] = .639$, $p = .527$) was not a significant predictor of post-treatment CTI scores. The effect size of cognitive interventions was negligible ($E.S. = .0100$), indicating that it uniquely accounted for 1% of the variance in post-treatment CTI scores. The independent variable pretreatment K-SADS depression ($\beta = -.211$, $t[35] = -1.323$, $p = .194$) was not a statistically significant predictor of post-treatment CTI scores. The effect size for pretreatment K-SADS depression score was negligible ($E.S. = .0428$), which demonstrated that it uniquely accounted for 4.3% of the variance in post-treatment CTI scores. The independent variable age ($\beta = .033$, $t[35] = .196$, $p = .846$) was not a significant predictor of post-treatment CTI scores. The effect size for age was negligible ($E.S. = .0001$) indicating it uniquely accounted for less than 1% of the variance in post-treatment CTI scores. Behavioral interventions ($\beta = .205$, $t[35] = .981$, $p = .333$) did not significantly predict post-treatment CTI scores. The effect size was negligible ($E.S. = .0234$), suggesting that it uniquely accounted for less than 2.3% of the variance in CTI scores assessed at post-treatment. The independent variable learning disorders ($\beta = .072$, $t[35] = .409$, $p = .685$) was not a significant predictor of post-treatment CTI scores; the effect size was negligible ($E.S. = .0041$), indicating it uniquely accounted for less than 1% of post-treatment CTI scores. Finally, mastery of therapeutic skills was not a significant predictor of post-treatment CTI scores was not a significant predictor of post-treatment CTI scores; the effect size was negligible ($E.S. = .0077$), indicating it uniquely accounted for less than 1% of post-treatment CTI scores. The means, standard deviations,

and Cronbach's alpha for the model variables are displayed in Table 10. The results of this regression are displayed in Table 14. Because the relation between cognitive intervention scores and post-treatment depression scores were nonsignificant, the mediation analysis was discontinued.

Table 14

Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment CTI Scores (N = 42)

Variable	β	t	p	E.S.*
Cognitive Interventions Score	.125	.639	.527	.0010
T1 K-SADS Depression Score	-.211	-1.323	.194	.0428
Age	.033	.196	.846	.0001
Behavioral Interventions Score	.205	.981	.333	.0234
Learning Disorders	.072	.409	.685	.0041
Skills Check Score	-.097	-.561	.578	.0077

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Exploratory Factor Analysis

In order to examine the properties of the cognitive interventions coding scale, exploratory factor analysis was conducted. Principle axis factoring was used as the extraction method, as it attempts to maximize shared variance while eliminating unique and error variance (Tabachnick & Fidell, 2007). Varimax rotation was used as it maximizes variance of loadings on each factor and is the most common method used in

exploratory factor analysis (Tabachnick & Fidell, 2007). Results indicated three discrete factors (Eigenvalue greater than 1) which accounted for 70.60% of the variance in cognitive intervention scores. Factor 1 included items 1 (Focusing on Key Cognitions), 3 (Exploring Personal Meaning), 7 (Distancing), 8 (Examining Available Evidence), 16 (Practicing Rational Responses), 13 (Empiricism), 14 (Didactic Persuasion), 18 (Building Positive Schema), and 20 (Application of Cognitive Techniques). All the items had adequate factor loadings (.828, .827, .464, .629, .913, .839, .774, .679, .899, respectively). Factor 2 included items 2 (Relating Thoughts and Feelings), 10 (Searching for Alternate Explanations), 12 (Adaptive Functional Value of Beliefs), 17 (Record/Monitor Thoughts), 19 (Relate Improvement to Cognitive Change), and 15 (Substituting Positive Thoughts). These items showed adequate factor loadings (.688, .730, .690, .674, .583, .831, respectively). Factor 3 was comprised of item 4 (Exploring Underlying Assumptions), 5 (Development of Underlying Assumptions), 6 (Recognizing Cognitive Errors), and 9 (Testing Beliefs Prospectively). The items also had adequate factor loadings (.911, .747, .578, .847, respectively). An additional factor was found, but as it was comprised of only one item (item 11 Realistic Consequences, factor loading of .775) and accounted for only 6.69% of variance in cognitive intervention scores, it was dropped from the solution.

The factors appeared meaningful and consistent with CBT theory. Factor 1 was labeled Meaning-Making (MM) as these interventions are critical to the guided discovery process of objectively examining beliefs to create new meaning and thus alter maladaptive depressogenic schemas. Factor 2 was named Psychoeducation (PsyEd) as

these techniques educate the child regarding links between thoughts and feelings, the utility of maladaptive versus adaptive thoughts, and how to generate more adaptive thoughts. Factor 3 was labeled Processing (Proc) as these interventions help the child to identify, better understand, and alter their own negatively biased information processing. Factor 1 was revised; Items 1 (Focusing on Key Cognitions), 3 (Exploring Personal Meaning), 13 (Empiricism), 14 (Didactic Persuasion), and 20 (Application of Cognitive Techniques) were dropped from the Factor 1 solution, as they measure therapist skill in implementing cognitive techniques in general. Although these items are critical for the restructuring of embedded schemata, they measure important ingredients including the collaborative exploration and skilled targeting of maladaptive thoughts inherent in the CBT approach. These items are also scored when cognitive intervention items represented by the other two factors (PsyEd, Proc) are scored as a holistic measure of skill level demonstrated by the therapist in implementing cognitive techniques. Therefore, a fourth Factor was formed with these items, representing therapist skill (Factor 4, SKILL) in using cognitive techniques.

Assumptions of Multiple Regression

In order to test for violations of multiple regression assumptions, pre-data screening was conducted using inspection of histograms, scatterplots, and frequencies for all model variables. The analyses indicated no outliers. A scatter plot between predicted scores and residuals, and a probability plot was generated to assess normality. Further, for each variable, skewness and kurtosis was assessed. Factors 1 (MM) and Factor 3 (Proc) demonstrated both skew and kurtosis (with values greater than the absolute value of one).

Further, the Shapiro-Wilk test statistic of normality was significant for MM ($W = .903$, $p = .002$) and Proc ($W = .898$, $p = .001$). Visual inspection of the histogram indicated a positive skew for the MM distribution and a negative skew for Proc. Logarithmic transformations were performed to address the nonnormal distributions for Factor 1 (MM) and Factor 3 (Proc). For all other variables of interest there were no values for skewness or kurtosis greater than the absolute value of one, and visual inspection of histograms indicated normal distributions; therefore, it was concluded that the assumption of normal distributions was met. The linear relationship between independent and dependent variables was examined through a scatterplot of residuals and was determined to be adequate. Histograms of residuals showed that errors were normally distributed. Lastly, inspection of the scatter plots of standardized predicted residuals and the dependent variable indicated equal variance. Further, because the intercorrelation between Factor 1 (MM) and Factor 4 (SKILLS) exceeded .80 (see Table 15), this indicated a possible problem with multicollinearity between these independent variables in the regression analysis. Inspection of the VIF values (all VIF values < 4.0) and tolerance values (all tolerance values $> .20$) indicated no problem with multicollinearity.

Descriptive Statistics for Exploratory Analysis

Means, standard deviations, and Cronbach's alphas for the variables used in the exploratory analysis are presented in Table 15. Factor intercorrelations for the exploratory factor analysis for the cognitive interventions measure are presented in Table 16. The structure matrix with factor loadings for the exploratory factor analysis of the

cognitive interventions measure is presented in Table 17. Finally, the intercorrelations between measures used in the exploratory analysis are presented in Table 18.

Table 15

Means, Standard Deviations, and Cronbach's α for Exploratory Analysis (N = 42)

Variable	M	S.D.	α
Time 1 K-SADS Continuous Depression Score	41.63	10.07	.78
Time 2 K-SADS Continuous Depression Score	24.78	6.79	.78
Behavioral Interventions Score (log)	28.23	6.67	.89
Cognitive Interventions Factor 1 (MM) (log)	5.54	2.04	.85
Cognitive Interventions Factor 2 (PsyEd)	7.45	3.67	.88
Cognitive Interventions Factor 3 (Proc) (log)	1.34	1.30	.79
Cognitive Interventions Factor 4 (SKILL)	11.65	3.13	.90
Age	10.52	1.37	--
Learning Disorders	0.07	.26	--
Skills Check Score (log)	1.43	.06	.74

Table 16

Factor Correlations for Exploratory Factor Analysis (N = 42)

Cognitive Interventions Factors	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1 (Meaning Making)	1.00			
Factor 2 (Psychoeducation)	.685	1.00		
Factor 3 (Processing)	.575	.578	1.00	
Factor 4 (Therapist Skills)	.809	.670	.372	1.00

Table 17

Pattern Matrix Factor Loadings for Exploratory Factor Analysis (N = 42)

Cognitive Intervention Items	Factor 1	Factor 2	Factor 3
Focusing on Key Cognitions	.828	.456	-.130
Relating Thoughts and Feelings	.500	.688	-.047
Exploring Personal Meaning	.827	.348	.221
Exploring Underlying Assumptions	-.023	.111	.911
Development of Underlying Assumptions	.110	.071	.747
Recognizing Cognitive Errors	.238	.459	.578
Distancing Beliefs	.464	.389	.366
Examining Available Evidence	.629	.460	.298
Testing Beliefs Prospectively	.019	.184	.847
Searching for Alternate Explanations	.233	.730	.174
Adaptive Functional Value	-.075	.690	.427
Empiricism	.913	.247	-.098
Didactic Persuasion	.839	-.388	-.088
Substituting Positive Thoughts	.563	.674	.037
Practicing Rational Responses	.774	.079	.294
Recording/Monitoring Thoughts	.189	.583	.524
Building Positive Schema	.679	.335	.338
Relating Improve to Cognitive Change	.213	.813	.254
Application of Cognitive Techniques	.899	.196	.051

Extraction Method: Principle Axis Factoring

Rotation Method: Varimax

Table 18

Pearson Product Moment Correlations Among Exploratory Analysis Variables (N = 42)

Variable	1	2	3	4	5	6	7	8	9	10
1. T2 K-SADS	1									
2. T1 K-SADS	.10	1								
3. Age	-.36*	.19	1							
4. Learn. Disorder	-.16	-.02	-.18	1						
5. Skills Check	-.02	.01	.07	-.32*	1					
6. Behavior Interv	-.42**	.04	.26	.15	.22	1				
7. Factor 1 (MM)	-.06	-.03	-.02	.20	.05	.63**	1			
8. Factor 2 (PsyEd)	.06	.08	.09	.14	.06	.51**	.69**	1		
9. Factor 3 (Proc)	-.03	-.13	-.15	.34*	.11	.41**	.58**	.58**	1	
10. Factor 4 (SKILLS)	.11	-.00	.05	.16	.05	.48**	.81**	.67**	.37	1

*Represents significance at the .05 level

**Represents significance at the .01 level

Hypothesis 3

The third exploratory hypothesis was that higher levels of Meaning Making cognitive interventions (Factor 1 from exploratory analysis), Psychoeducation cognitive interventions (Factor 2 from exploratory analysis), Processing cognitive interventions (Factor 3 from exploratory analysis) will predict lower post-treatment K-SADS depression scores, after controlling for pre-treatment depression, age, learning disorders,

level of behavioral interventions, girls' mastery level of therapeutic skills (affective education, coping skills, cognitive restructuring), and therapist skill level. Simultaneous regression was used to determine whether Factor 1 (MM) cognitive interventions, Factor 2 (PsyEd) cognitive interventions, and Factor 3 (Proc) cognitive interventions predicted post-treatment K-SADS total depression scores, after controlling for participants' age, pre-treatment K-SADS depression scores, presence of learning disorders, and skills check scores (assessing mastery of affective education, coping skills, and cognitive restructuring).

The overall multiple regression was statistically significant ($F[9, 32] = 2.978, p = .011$). The effect size of the overall model was large ($R^2 = .456$), indicating that the model accounted for 45.6% of the variance in post-treatment depression scores. The four variables of interest, Meaning Making (MM) cognitive interventions, Psychoeducation (PsyEd) cognitive interventions, Processing (Proc), and Therapist Skill (SKILL) cognitive interventions were not significantly related to post-treatment depression scores. The standardized regression coefficient (β) for MM was $-.215$ ($t[32] = -.751, p = .458$). The effect size of this variable was negligible (E.S. = .0096), indicating that it uniquely accounted for less than 1% of the variance in post-treatment depression scores. The standardized regression coefficient (β) for PsyEd was $.185$ ($t[32] = .876, p = .387$). The effect size of PsyEd was negligible (E.S. = .0130), indicating this variable uniquely accounted for 1.3% of the variance in post-treatment depression scores. The standardized regression coefficient (β) for Proc was $.077$ ($t[32] = .391, p = .698$). The effect size of Proc was also negligible (E.S. = .0026), indicating this variable uniquely accounted for

less than 1% of the variance in post-treatment depression scores. Finally, the standardized regression coefficient (β) for SKILL was .428 ($t[32] = 1.735, p = .092$). Although not statistically significant, this variable approached significance with a small effect size (E.S. = .0511), indicating this variable uniquely accounted for 5.1% of the variance in post-treatment depression scores.

Of the control variables, age was significantly associated with post-treatment depression scores ($\beta = -.301 (t[33] = -2.046, p = .049)$). This variable had a small effect size (E.S. = .0724), indicating it uniquely accounted for 7.2% of the variance in post-treatment depression. Behavioral intervention scores were significantly associated with post-treatment K-SADS scores. The standardized regression coefficient (β) for behavioral interventions was $-.592 (t[33] = -3.351, p = .002)$. This variable had a medium effect size (E.S. = .1296), and accounted for 12.9% of the variance in post-treatment depression scores. Learning disorders was not significantly related with post-treatment depression scores. The standardized coefficient (β) for learning disorders was $-.163 (t[33] = -1.048, p = .302)$. The effect size of this variable was negligible (E.S. = .0190), and accounted for 1.9% of the variance in post-treatment depression scores. Pre-treatment level of depression was not statistically significant ($\beta = .155, t[33] = 1.130, p = .266$). Furthermore, the effect size of this variable was negligible (E.S. = .0222), indicating it uniquely accounted for 2.2% of the variance in post-treatment depression scores. Lastly, the control variable of mastery of therapeutic skills was nonsignificant. The standardized regression coefficient (β) for Skills Check scores was $.075 (t[33] = .502, p = .619)$. This variable had a negligible effect size (E.S. = .0044), indicating it uniquely accounted for

less than 1% of the variance in post-treatment depression. The results of this analysis are displayed in Table 19.

Table 19

Summary of Simultaneous Regression Analysis for Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.*
Factor 1 (Meaning Making)	-.215	-.751	.458	.0096
Factor 2 (Psychoeducation)	.876	.876	.387	.0130
Factor 3 (Processing)	.077	.391	.698	.0026
Factor 4 (Therapist Skill)	.428	1.735	.092	.0511
T1 K-SADS Depression Score	.167	1.227	.229	.0222
Age	-.329	-2.230	.033	.0724
Learning Disorders	-.190	-1.225	.230	.0190
Skills Check Score	.061	.411	.684	.0044
Behavioral Interv Score	-.523	-2.761	.009	.1296

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Because the four cognitive interventions factors were not significant predictors of post-treatment depression scores after controlling for pre-treatment depression levels, age, learning disorders, and mastery level of therapeutic skills, the subsequent exploratory analyses used the total cognitive interventions scores to reduce the number of independent variables in the model and potentially increase statistical power.

Interactions

It was decided that exploration of possible interactions between behavioral and cognitive interventions would be useful in further elucidating how these interventions work to influence depressive symptoms. As previously discussed, behavioral interventions are typically implemented prior to and in conjunction with cognitive interventions to alleviate acute symptoms of depression and to thus bolster the effectiveness of cognitive strategies. Therefore, the success of cognitive interventions may depend on the degree of behavioral interventions a participant receives. In addition, because the effectiveness of cognitive interventions may differ by level of cognitive development, interactions between age and cognitive interventions and their relations to post-treatment K-SADS scores were explored. Finally, as the therapeutic effects of cognitive interventions may depend upon how well participants master therapeutic skills, it was decided that potential interactions between cognitive intervention scores and skills check scores would be important to assess. Prior to the analyses, all independent variables entered into the model were centered in order to address multicollinearity (Aiken & West, 1991). Interaction variables were then created by multiplying centered variables of interest to create cross-product terms. Using multiple regression analysis, the interaction variable was entered in a separate step after all other predictors were entered. The F statistic of the R^2 change of the model with the added interaction term was examined to determine the significance of the interaction in predicting post-treatment K-SADS scores (Keith, 2006).

Descriptive Statistics

Means, standard deviations, and Cronbach's alphas for the variables used in the exploratory analysis are presented in Table 20.

Table 20

Means, Standard Deviations, and Cronbach's α for Exploratory Analysis (N = 42)

Variable	M	S.D.	α
Time 1 K-SADS Score (Centered)	.00	10.07	.78
Time 2 K-SADS Score	24.78	6.79	.78
Behavioral Interv Score (log) (Centered)	.00	.09	.89
Cognitive Interventions Score (Centered)	.00	8.77	.92
Skills Check Score (log) (Centered)	.00	.06	.74
Age (Centered)	.00	1.37	--
Learning Disorders (Centered)	.00	.26	--
Beh Interv (log) X Cognitive Interv (Centered)	.48	.91	--
Age X Cognitive Interv (Centered)	.37	10.73	--
Skills Check (log) X Cognitive Interv (Centered)	.05	12.62	--

Hypothesis Four

The fourth hypothesis of the exploratory analysis was that after controlling for age, pre-treatment depression, learning disorders and mastery of therapeutic skills, cognitive interventions would predict post-treatment depression scores, depending on the level of behavioral interventions received. Specifically, participants who received higher

levels of cognitive interventions and lower levels of behavioral interventions would have higher post-treatment K-SADS scores while participants with higher levels of cognitive interventions and higher levels of behavioral interventions would have lower post-treatment K-SADS depression scores, after controlling for age, pretreatment K-SADS scores, presence of learning disorder, and mastery level of therapeutic skills.

First, the centered predictor variables of age, pretreatment K-SADS scores, presence of learning disorders, skills check scores, behavioral intervention scores, cognitive intervention scores were regressed onto post-treatment K-SADS scores. The model comprised of predictors in the first block was statistically significant, ($F[6, 35] = 4.396, p = .002$). The effect size of this model was large ($R^2 = .430$), indicating that it accounted for 43.0% of the variance in post-treatment depression scores. The R^2 change with the addition of the interaction variable to the model was not significant (R^2 change = .004, $F = .265, p = .610$). This suggests that effects of cognitive interventions did not vary by levels of behavioral interventions. The overall model (including all variables) was statistically significant ($F[7,34] = 3.726, p = .004$) and had a large effect size ($R^2 = .434$), suggesting it accounted for 43.4% of the variance in post-treatment. Table 21 displays the results of the sequential regression; results of the overall regression model are displayed in Table 22.

Table 21

Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Mastery of Therapeutic Skills, and Cognitive Interventions X Behavioral Interventions Interaction on T2 K-SADS Depression Scores (N=42)

Block	ΔR^2	<i>p</i>
1. Block One	.430	.002
Age (Centered)		
T1 K-SADS Score (Centered)		
Behavioral Interventions (Centered)		
Cognitive Interventions (Centered)		
Learning Disorders (Centered)		
Skills Check Score (Centered)		
2. Block Two		
Behavioral Interv X Cognitive Interv (Centered)	.004	.610

Table 22

Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.*
Time 1 K-SADS Score (Centered)	.174	1.304	.201	.0282
Behavioral Interv Score (Centered)	-.560	-2.954	.006	.1451
Cognitive Interventions Score (Centered)	.433	2.616	.013	.1136
Skills Check Score (Centered)	.070	.484	.632	.0038
Age (Centered)	-.305	-2.122	.041	.0751
Learning Disorders (Centered)	-.182	-1.251	.220	.0259
Beh Interv X Cog Interv (Centered)	-.077	-.515	.610	.0044

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Hypothesis Five

The hypothesis of the fifth exploratory analysis was that after controlling for pre-treatment depression, presence of learning disorders, mastery of therapeutic skills, and behavioral interventions, cognitive interventions would predict post-treatment depression scores, depending on the age of the participant. Specifically, older participants who received higher levels of cognitive interventions would have lower post-treatment K-SADS scores while younger participants with higher levels of cognitive interventions would have higher post-treatment K-SADS depression scores, after controlling for pretreatment depression, presence of learning disorders, behavioral interventions, cognitive interventions, and mastery of therapeutic skills.

First, the centered predictor variables of pretreatment K-SADS scores, age, presence of learning disorders, skills check scores, behavioral intervention scores, cognitive intervention scores were regressed onto post-treatment K-SADS scores. The results indicated that the first model (including variables in block one) was significant (R^2 change = .430, $F[6,35] = 4.396$, $p = .002$), and accounted for 43% of the variance in post-treatment K-SADS depression scores. The R^2 change with the addition of the interaction variable to the model was not significant (R^2 change = .004, $F[6,35] = .225$, $p = .638$), and accounted for an additional .4% of the variance in post-treatment depression scores, above and beyond the variance accounted for by pretreatment K-SADS scores, age, presence of learning disorders, skills check scores, behavioral interventions scores, and cognitive interventions scores. This suggests that effects of cognitive interventions did not vary by participants' age. The overall model (including all variables) was statistically significant ($R^2 = .433$, $F[7, 34] = 3.716$, $p = .004$) and accounted for 43.3% of the variance in post-treatment K-SADS depression scores. Table 23 displays the results of the sequential regression; results of the overall regression model are displayed in Table 24.

Table 23

Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Mastery of Therapeutic Skills, and Cognitive Interventions X Age Interaction on T2 K-SADS Depression Scores (N=42)

Block	ΔR^2	<i>p</i>
1. Block One Age (Centered) T1 K-SADS Score (Centered) Behavioral Interventions (Centered) Cognitive Interventions (Centered) Learning Disorders (Centered) Skills Check Score (Centered)	.418	.003
2. Block Two Age X Cognitive Interv Interaction (Centered)	.004	.638

Table 24

Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores (N = 42).

Variable	β	t	p	E.S.*
T1 K-SADS Score (Centered)	.182	1.317	.197	.0289
Behavioral Interv Score (Centered)	-.624	-3.461	.001	.1998
Cognitive Interventions Score (Centered)	.482	2.738	.010	.1246
Skills Check Score (Centered)	.052	.363	.719	.0022
Age (Centered)	-.271	-1.844	.074	.0566
Learning Disorders (Centered)	-.199	-1.343	.188	.0299
Age X Cog Interv (Centered)	-.703	-.474	.638	.0037

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Hypothesis Six

The hypothesis of the sixth exploratory analysis was that after controlling for age, pre-treatment depression, presence of learning disorders, and behavioral interventions, cognitive interventions would predict post-treatment depression scores, depending on the level of therapeutic skills mastery of the participant. Specifically, participants who received higher levels of cognitive interventions and who also demonstrated greater mastery of therapeutic skills would have lower post-treatment K-SADS scores while participants with higher levels of cognitive interventions who demonstrated lower mastery levels of therapeutic skills would have higher post-treatment K-SADS depression scores, after controlling for pretreatment depression, presence of learning disorders, behavioral interventions, and age.

First, the centered predictor variables of pre-treatment K-SADS depression scores, age, presence of learning disorders, skills check scores, behavioral intervention scores, cognitive intervention scores were regressed onto post-treatment K-SADS scores. This regression model was statistically significant ($F[6,35] = 4.396, p = .002$) and had a medium to large effect size ($R^2 = .430$). This indicated that the first block of variables accounted for 43% of the variance in post-treatment K-SADS depression scores. The R^2 change with the addition of the interaction variable to the model was not significant ($F[1,34] = .365, p = .549$); the R^2 change was .006, indicating that the interaction variable accounted for less than 1% of the variance of post-treatment depression scores, above and beyond pretreatment K-SADS depression scores, age, presence of a learning disorder, mastery of therapeutic skills, and behavioral and cognitive interventions. This suggests

that effects of cognitive interventions did not vary by participants' mastery of therapeutic skills. The overall model (including all variables) was statistically significant ($F[7,34]=3.752, p=.004$); the effect size was large ($R^2 = .436$), indicating that it accounted for 43.6% of the variance in depression scores assessed at post-treatment. Table 25 displays the results of the sequential regression; results of the overall regression model are displayed in Table 26.

Table 25

Effects of Age, K-SADS TI Depression Scores, Behavioral Interventions, Cognitive Interventions, Learning Disorders, Skills Check Scores, and Cognitive Interventions X Skills Check Scores Interaction on T2 K-SADS Depression Scores (N=42)

Block	ΔR^2	<i>p</i>
1. Block One Age (Centered) T1 K-SADS Score (Centered) Behavioral Interventions (Centered) Cognitive Interventions (Centered) Learning Disorders (Centered) Skills Check Score (Centered)	.430	.002
2. Block Two Skills Check X Cognitive Int Interaction (Centered)	.006	.549

Table 26

Summary of Sequential Regression Analysis for Overall Model Variables Predicting Post-Treatment Depression Scores (N = 42)

Variable	β	t	p	E.S.*
Time 1 K-SADS Score (Centered)	.177	1.324	.194	.0292
Behavioral Interv Score (Centered)	-.561	-3.050	.004	.1544
Cognitive Interventions Score (Centered)	3.448	.695	.492	.0081
Skills Check Score (Centered)	.026	.172	.864	.0005
Age (Centered)	-.312	-2.150	.039	.0767
Learning Disorders (Centered)	-.227	-1.415	.166	.0031
Skills Check X Cog Interv (Centered)	-3.011	-.605	.549	.0061

**effect size was calculated by squaring the semipartial correlations and interpreted as the unique variance that the independent variable explains in the dependent variable (Keith, 2006)*

Demographic Variables and Cognitive Intervention Scores

To gain a better understanding of how cognitive interventions were implemented in this treatment protocol for depressed girls, exploratory analyses examining whether cognitive interventions scores differed by any main demographic variables were conducted. The correlation between age and cognitive intervention scores was nonsignificant ($r = .031$, $p = .843$) which suggested that cognitive intervention scores did not vary by age. The correlation between learning disorder diagnoses and cognitive interventions scores was also nonsignificant ($r = .199$, $p = .208$), indicating that cognitive intervention scores did not differ by the presence of a learning disorder. ANOVA was also used to assess any potential differences between race/ethnicity and cognitive

intervention scores. Results of the ANOVA were nonsignificant ($F[4, 37] = .069, p = .991$), which demonstrated no differences in cognitive intervention scores by race/ethnicity. An ANOVA was conducted to determine whether level of cognitive interventions differed by cohort. The results of the ANOVA were significant ($F[5, 36] = 2.729, p = .034$) which suggested that cognitive intervention scores differed by cohort. Post-hoc analysis using a Tukey HSD correction showed significant differences in cognitive intervention scores between cohort one ($M=21.60, SD=3.62$) and cohort six ($M=35.66, SD = 4.96$), $p = .036$. This indicated that significantly higher levels of cognitive interventions were used in cohort six versus cohort one. Finally, pre-treatment K-SADS depression scores were not significantly related to cognitive intervention scores ($r = .028, p = .859$), which suggested that levels of cognitive interventions did not vary by pre-treatment depression scores.

Cognitive Interventions Across Treatment

Exploratory analyses were conducted to examine how cognitive interventions were applied across treatment. As previously discussed, cognitive interventions are usually used later in treatment, after acute symptoms have been alleviated through behavioral interventions. Further, in the ACTION treatment manual, more active restructuring techniques are not formally introduced to girls until mid-treatment (meeting ten). However, psychoeducation (relation between thoughts and feelings, thought replacement) and processing techniques (altering biases in information processing) are outlined earlier in the protocol (meeting three). Despite the structured nature of the treatment manual, therapists were free to use their discretion in carrying out CBT

interventions as clinically indicated. Therefore, it was deemed important to determine the extent to which various types of interventions were used during different phases of treatment. Repeated measures ANOVA was used to determine whether there were significant mean differences between: 1) the factor cognitive interventions scores for the first half versus second half of treatment (for each of the four factors), and 2) the factor cognitive intervention scores, across the first half of treatment and the second half of treatment.

Prior to the analysis, the assumption of homogeneity (equality) of variance for repeated measures ANOVA was examined. The statistic for Mauchly's Test of Sphericity was significant ($p < .001$) indicating that the variances between the factor scores could not be assumed to be equal. Since the assumption of sphericity must be met to interpret an ANOVA, a Bonferroni adjustment was used to address the lack of sphericity. Results of the repeated measures ANOVA indicated that overall, cognitive intervention scores differed significantly by factors (averaged across treatment segments) $F [3,38] = 238.92$, $p = .000$, with a large effect size (eta squared = .854). Overall, cognitive interventions scores also differed significantly by treatment segment (averaged across factors), $F [1,40] = 42.28$, $p = .000$, with a large effect size (eta squared = .501). Further, cognitive intervention scores differed by treatment and factors, $F [3,38] = 14.09$, $p = .001$, with a medium effect size (eta-squared = .26).

Post hoc analysis using a Bonferroni adjustment indicated: 1) significantly higher levels of Factor 1 (MM) cognitive interventions in the second half of treatment ($M = 3.70$, $SD = 1.58$) versus the first half of treatment ($M = 1.83$, $SD = .72$), $p = .000$; 2)

significantly higher levels of Factor 2 (PsyEd) in the second half ($M = 4.49$, $SD = 2.3$), versus first half of treatment ($M = 2.96$, $SD = 1.92$), $p = .000$; 3) significantly higher levels of Factor 3 (Proc) in the second half ($M = .88$, $SD = .80$) versus first half of treatment ($M = .45$, $SD = .61$), $p = .000$; and 4) significantly higher levels of Factor 4 (SKILLS) in the second half ($M = 7.53$, $SD = 1.99$) versus first half of treatment ($M = 5.57$, $SD = 2.23$), $p = .000$. Therefore, higher levels of all four cognitive intervention factors were used in the last ten sessions of treatment, in comparison to the first ten sessions.

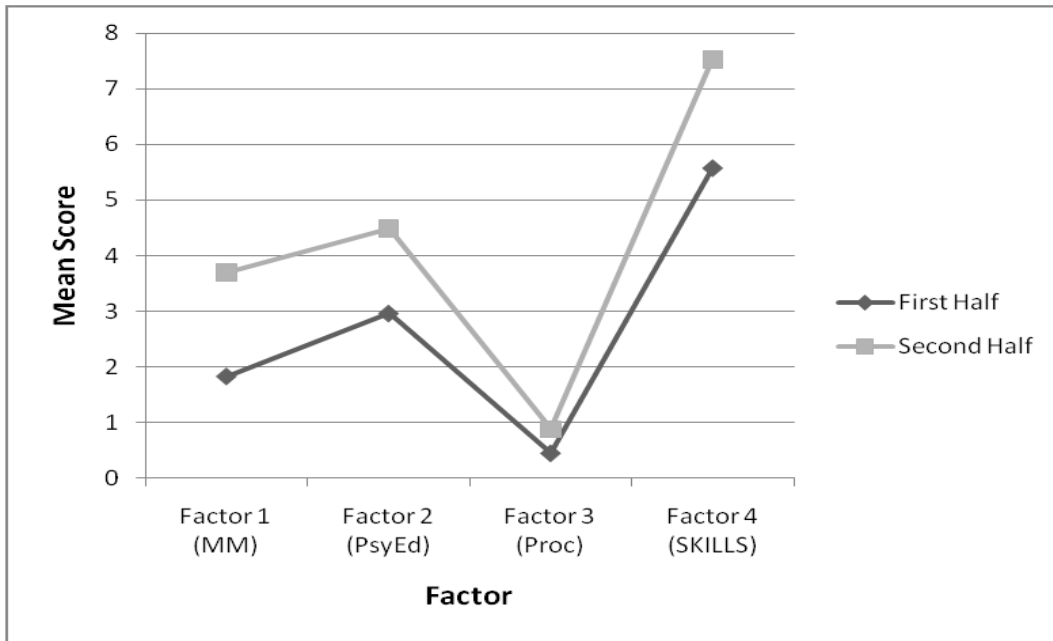
Post hoc pair-wise comparisons also suggested that during the first and second halves of treatment, there were significant differences between each of the three factors scores. During the first segment of treatment there was a significant mean difference between MM ($M = 1.83$, $SD = .72$) and PsyEd ($M = 2.96$, $SD = 1.92$), $p = .000$; between MM ($M = 1.83$, $SD = .72$) and Proc ($M = .45$, $SD = .61$), $p = .000$; and lastly between PsyEd ($M = 2.96$, $SD = 1.92$) and Proc ($M = .45$, $SD = .61$), $p = .000$. This indicated that in the first ten sessions of the intervention, PsyEd cognitive interventions were used at the highest levels, followed by MM interventions, and lastly, Proc interventions.

Post hoc analyses also indicated that during the second half of treatment there were significant mean differences between each of the three factor scores. During the second segment of treatment there was a significant mean difference between MM ($M = 3.70$, $SD = 1.58$) and PsyEd ($M = 4.49$, $SD = 2.3$), $p = .000$; between MM ($M = 3.70$, $SD = 1.58$) and Proc ($M = .88$, $SD = .80$), $p = .000$; and lastly between PsyEd ($M = 4.49$, $SD = 2.3$) and Proc ($M = .88$, $SD = .80$), $p = .000$. This indicated that a similar pattern was

exhibited in the second half of treatment as the first half; during the last 10 sessions, PsyEd cognitive interventions were used at the highest levels, followed by MM interventions, and lastly, Proc interventions were used at the lowest levels. A graph of the post hoc analyses of the repeated measures ANOVA are displayed in Figure 4.1.

Figure 4.2

Cognitive Interventions Mean Scores By Treatment Segments (N=42)



CHAPTER 5

Discussion

Depression has become increasingly problematic among youth (Lewinsohn et al., 1989). Childhood depression has been associated with a longer and more impairing course (Lewinsohn et al., 1999; Gotlib, Lewinsohn, & Seeley, 1998; Kandel & Davies, 1986; Weisz, McCarty, & Valeri, 2006). Depressed individuals have negative beliefs about the self, world, and future (Beck, 1967). This “cognitive triad” is thought to mediate the individual’s response to life stress. Several studies have provided empirical support for Beck’s theory of cognitive vulnerability to depression (e.g. Abela & D’Allesandro, 2002; Hankin et al., 2004). CBT is purported to alter these negative cognitions through the implementation of cognitive interventions (J. Beck, 1995).

There is increasing empirical evidence that CBT is a promising treatment for depression in youth (Weisz et al., 2006); however, it is still unclear, how and why CBT works. There is a paucity of research studies that have examined mechanisms of change of CBT including mediators and treatment-specific interventions (e.g., cognitive interventions). Therefore, this study investigated: 1) whether specific cognitive techniques were related to depressive symptom reduction in depressed girls, and 2) if improvements in depressive symptoms were mediated through changes in the cognitive triad of depressed girls.

Overview of Findings

This study's findings provide information that supports and expands literature regarding cognitive behavioral therapy for depressed youth, including the mechanisms of change of CBT that are believed to alleviate depressive symptoms. Results of the first analysis did not support the primary hypothesis. After controlling for pre-treatment levels of depressive symptoms, cognitive interventions did not predict post-treatment depression. Because this relation between cognitive interventions and post-treatment depression was nonsignificant, analyses to test for the mediation of this hypothesized relation through the cognitive triad could not be conducted. The results of this analysis should be viewed with caution, as insufficient power to detect possible significance was a likely source of the lack of findings.

Due to the lack of significant findings in the main analysis, exploratory analyses were conducted to further investigate how cognitive behavioral therapy exerts therapeutic effects in depressed youth. In the first exploratory analyses, the main analysis was conducted again with a revised total of the cognitive interventions. In order to reduce error variance associated with possible inaccurate coding of items, cognitive intervention items with low inter-rater reliability ($ICC < .60$) were excluded from the calculation of total cognitive intervention score. The results of this analysis were also non-significant; after controlling for pretreatment severity of depression, the revised cognitive intervention scores did not predict post-treatment depression levels. The subsequent analyses used the full total of cognitive interventions so that the properties of the cognitive interventions scale could be explored in its entirety.

In order to reduce error variance, relevant control variables were added to the model to increase its ability to predict post-treatment depression scores. After the addition of age, presence of a learning disorder, therapeutic skills mastery level, and behavioral interventions scores, the cognitive interventions variable was found to have a significant and positive relation to depressive symptoms assessed after treatment. The magnitude of this relation was medium. Although significant, it was surprising that this relation was in the opposite direction than that hypothesized. This finding suggests that therapists used higher levels of cognitive interventions with girls who had more severe and persistent symptoms. Of the control variables, only age and behavioral interventions were significantly related to post-treatment depression; both relations were negative indicating that older participants had lower post-treatment depression levels and girls with higher levels of behavioral interventions also had less depressive symptoms after treatment. The magnitude of the effect of age and behavioral interventions on post-treatment depression was small and medium, respectively. Lastly, although mastery level of therapeutic skills was not a significant predictor of post-treatment depression, inspection of means and response accuracy on subscales and total skills check scores suggested that overall, girls showed relatively low level of mastery in the areas of affective education, coping skills, and cognitive restructuring, with particular low levels of mastery of cognitive restructuring skills. This was not surprising, as cognitive interventions may be especially difficult for children to comprehend due their abstract nature.

Despite the fact that higher cognitive interventions was significantly related to higher post-treatment depression scores, it was determined that it would be important to continue the meditational analysis to test Beck's cognitive theory of depression (i.e., that cognitive interventions have an indirect effect on depressive symptoms through changes in the cognitive triad). Results from this second step of meditational analysis were nonsignificant; after controlling for pretreatment depression levels, age, presence of learning disorder, mastery of therapeutic skills, and behavioral interventions, cognitive interventions did not significantly predict CTI scores at post-treatment. Therefore, the meditational analysis was discontinued at this point.

In order to further investigate the positive relation between cognitive interventions and post treatment depression levels, several exploratory analyses were conducted. First, the properties of the cognitive interventions scale were further examined through exploratory factor analyses. The factor analyses yielded three factors representing concepts consistent with CBT theory. The first factor included items critical to the direct restructuring of core beliefs, the second factor consisted of items involved in psychoeducation regarding thoughts and their functions and basic thought-replacement techniques, while items of the third factor dealt with the alteration of maladaptive information processing. A fourth factor was formed from items that originally loaded onto factor 1, as these items rate holistic skill level exhibited by the therapist in implementing all cognitive techniques, not just those represented by factor 1; thus this factor represented therapists' competence in using cognitive interventions in a given session.

A simultaneous regression was conducted to assess the direct effects of the four cognitive intervention factors on post-treatment depression levels after controlling for pre-treatment depression, age, presence of learning disorder, mastery of therapy skills, behavioral interventions, and therapists' skill in implementing cognitive strategies. The results of the analysis indicated that none of the cognitive interventions factors were significantly related to post-treatment depression; however, the factor representing therapists' skill approached statistical significance and showed a positive relation with post-treatment depression levels. The magnitude of the relation between therapist's competence in using cognitive interventions and post-treatment depression was small. This finding may indicate that therapists were using cognitive interventions more extensively and in greater depth with girls with depressive symptoms of greater severity or persistence. Of the control variables, age and behavioral interventions were significantly and negatively related to post-treatment depression scores; the magnitude of these relations were small and medium, respectively.

Subsequent exploratory analyses focused on possible interactions between total cognitive intervention scores and variables of interest: behavioral interventions scores, age, and mastery level of cognitive interventions. In the three analyses, no significant interactions were found; the relation between cognitive interventions and post treatment depression scores did not vary by levels of behavioral interventions, age, or mastery level of therapeutic skills. These findings were not expected as the effectiveness of cognitive interventions are thought to be influenced by the implementation of behavioral interventions, as behavioral techniques are used prior to cognitive interventions to

enhance clients' ability to engage in cognitive interventions, and are also used in conjunction with cognitive techniques to help make cognitive interventions more concrete for children and thus easier to grasp. Age was also expected to interact with level of cognitive interventions as level of cognitive development is believed to effect children's ability to benefit from interventions that involve higher level cognitive abilities such as logic, critical thinking, and planning. It was surprising that variations in mastery of therapeutic skills did not influence the relation between cognitive interventions and depression levels, as it is thought that children's ability to generalize skills increases the potency of cognitive interventions and lead to more substantial gains. It is important to note that due to insufficient statistical power, the power to detect potential interactions may have been lacking.

Finally, exploratory analyses were conducted to gain a better understanding of how cognitive interventions were used in this treatment intervention. First, factors that might affect the use of cognitive interventions were explored. Age, presence of learning disorder, ethnicity, cohort, pre-treatment depression levels were variables examined in these analyses. Cohort was found to have a significant relation with implementation of cognitive techniques; specifically, the first cohort used significantly lower levels of interventions than the sixth cohort. This may indicate that therapists became more skilled in using cognitive interventions and the nature of training changed as the intervention progressed. None of the other variables examined exhibited significant relations with levels of cognitive interventions.

To more closely examine how therapists used cognitive interventions across treatment, analyses were conducted to determine whether significant differences existed between the use of various cognitive interventions during the first and second segments of treatment. For all four cognitive interventions factors (restructuring of schemas, psychoeducation, altering faulty information processing, therapist skill), higher levels were used in second segment of treatment versus the first segment. These results were expected, as CBT interventions usually begin with an emphasis on behavioral interventions while cognitive interventions are usually used more intensively in the second half of treatment. Further analyses indicated that in both the first and second segments of treatment, psychoeducation techniques were used at the highest level, followed by strategies that directly alter maladaptive schema, while interventions that seek to change negatively biased processing were used at the lowest levels. This was an interesting finding, as a shift to higher levels of interventions that directly alter schemas and information processing (relative to use of psychoeducation strategies) during the second half of treatment would be expected, as more intensive restructuring techniques become the focus of sessions in the second half of this treatment protocol. This indicates that therapists continued to incorporate psychoeducation techniques with more intensive strategies in the second half of treatment. This may have been important for conducting CBT with youth, as psychoeducation techniques make the process of cognitive change more overt to children (e.g., highlighting success of interventions by comparing thoughts before and after the use of more intensive techniques).

Integration of Findings with Previous Research

The finding of the larger study supported CBT as an effective treatment for depressed youth; after participating in the CBT-only condition of this protocol, 90% of the girls no longer met DSM-IV criteria for a diagnosis of depression (Curry, 2001; Weersing & Brent, 2005; Weisz et al., 2006). This study investigated the mechanisms by which CBT exerts such therapeutic effects and found, however, that higher levels of cognitive interventions were significantly related to higher levels of depression at post-treatment, after controlling for pre-treatment levels of depression, age, presence of a learning disorder, mastery of therapeutic skills, and levels of behavioral interventions. This was a bewildering result, as Beck's (1967) theory of depression holds that cognitive interventions are principal agents of therapeutic change in CBT for depressed individuals. Further, empirical studies conducted with youth (e.g., Gillham, Reivich, Jaycox, & Seligman, 1994) have supported the utility of cognitive interventions in alleviating depressive symptoms. In a dismantling component analyses, Gillham and colleagues (1994) found that children receiving cognitive interventions exhibited significantly more positive attributional style and less depressive symptoms than a matched control group at post-treatment and at two-year follow up. In the cognitive intervention condition, children learned techniques such as identifying and evaluating negative beliefs by examining evidence, developing more realistic alternatives, and using a more optimistic attributional style in response to negative events (Gillham et al., 1994). Further, in a sample of depressed youth ages 9-12, Stark and colleagues (1987) found that both cognitive intervention and behavioral problem solving groups showed significant

improvements in self-worth at post-treatment assessment; however, the cognitive condition showed greater increases in self-worth than the behavioral condition. The cognitive condition targeted cognitive events through self-monitoring pleasant cognitions and positive self-statements, and by teaching a more adaptive attributional style (Stark et al., 1987). Thus, using cognitive interventions similar to those used in the ACTION treatment protocol, these studies demonstrated that cognitive techniques are related to improvements in depressive symptoms for youth.

Although one possible interpretation of this study's data is that cognitive interventions increased depression in this sample of depressed girls, it would be premature to come to this conclusion. When other factors are taken into account, other interpretations become apparent. First, because the design of this study was not experimental, the direction of the observed positive relation between cognitive interventions and depression levels cannot be ascertained. It is highly possible that therapists used higher levels of cognitive interventions with girls who exhibited more severe and persistent symptoms of depression. Further, Patel (2009) demonstrated that in this sample of depressed girls, a significant amount of decline in depression occurred during the first half of treatment after which levels of depression stabilized and remained at consistently lower levels until post-treatment assessment (see Appendix M). In accordance with CBT theory (J. Beck, 1995), the primary focus of the first ten sessions of this protocol was placed on affective education and behavioral interventions (e.g., coping skills, mood monitoring). During the last ten sessions, cognitive interventions were the focal point of groups. Therefore girls whose depression did not remit by mid-treatment

following the behavioral component likely received higher levels of cognitive interventions from therapists during the second half of treatment, during which time cognitive strategies were of primary focus. This would also have been clinically indicated, as symptoms that persist at high levels may indicate more rigid, pervasive, and hypervalent (more easily activated) maladaptive schemata (Beck, 1976), thus requiring more incisive and intensive cognitive treatment.

A second finding of this study that is important to discuss was that cognitive interventions were not significantly related to post-treatment measures of the cognitive triad (after controlling for pre-treatment depression, age, presence of learning disorder, mastery of therapeutic skills, behavioral interventions). This finding is inconsistent with Beck's (1967) cognitive theory of depression and findings from CBT outcome studies that included cognitive processes as dependent variables. Stark and colleagues (1987) found that depressed children assigned to a cognitive interventions group showed significant improvements in self-worth. Also, in meta-analysis of CBT outcome studies with depressed youth, a significant, small effect size ($E.S. = .35$) was found for changes in cognitive processes (e.g., self-esteem, attributional style) (Chu & Harrison, 2007). Lack of significant findings may be due to low statistical power, insufficient measurement of the cognitive triad, or that another pathway of change (other than cognitive mediation) existed for this sample. Some researchers hypothesize that non-specific factors such as empathy, therapist collaboration are more likely candidates for therapeutic change (e.g., Burns & Nolen-Hoeksema, 1992; Kolko et al., 2000). It may also be possible that other types of cognitions mediate the change in depressive

symptoms (e.g., attributional style) or that other interventions not included in the model may have had stronger relations to the CTI scores (e.g., problem solving interventions).

A third finding of this study that requires further discussion was that age significantly predicted post-treatment depression levels. Specifically, older children showed lower levels of depression than younger children after participating in this treatment protocol. This finding is consistent with the CBT outcome literature for children. Through a meta-analysis of 64 outcome studies on CBT for youth, Durlack and colleagues (1991) investigated potential moderators of treatment outcome, including age. Results showed the largest effect size ($E.S. = .92$) for children ages 11-13, nearly twice as large as that for children ages 7-11 ($E.S. = .55$) (Durlak, Fuhrman, & Lampman, 1991). Further, according to some researchers, younger children who lack cognitive abilities associated with higher levels of cognitive development (i.e., formal operations stage) are considered less able to fully benefit from cognitive interventions delivered in CBT packages (e.g., Grave & Blissett, 2004; Southam-Gerrow & Kendall, 2000). Another finding of interest was that levels of cognitive interventions used by therapists did not vary by age. This suggests that therapist used similar levels of cognitive interventions for all participants, regardless of age. Although the ACTION protocol was created to meet the developmental needs of children, further adjustments may have been necessary for the youngest children in this sample, for as discussed above, younger children showed higher levels of depression at post-treatment.

A fourth finding that needs further attention concerns girls' mastery level of therapeutic skills. Although mastery level of therapeutic skills (affective education,

coping skills, cognitive restructuring) was not a significant predictor or moderator of post-treatment depression (likely due to inadequate statistical power), girls of this sample showed low mastery of cognitive restructuring skills. According to the literature, when children learn therapy skills and are able to effectively use them on their own, they should experience greater symptom relief that is longer lasting (J. Beck, 1995; Weersing & Brent, 2006). For instance, continued and extensive practice of therapeutic skills outside of session is prescribed for relapse prevention in depressed youth (Kennard, Stewart, Hughes, Jarrett, & Emslie, 2007). Thus if girls did not adequately learn cognitive intervention skills they likely experienced less symptom relief in association with these strategies. A viscous cycle may have been set in motion where, because they did not experience success with using interventions outside of session, they were less likely to use them and gain greater competence. Further, cognitive interventions were primarily used in the second half of treatment. Although this progression is in line with CBT theory (J. Beck, 1995), being the last component added to the protocol, children may have had greater difficulty learning the skills as they may still have been attempting to master the preceding skills and had less time in treatment to do so. Further, if more behaviorally-based interventions were easier to comprehend and master, and more rewarding for children to use (J. Beck, 1995), they may have been less motivated to learn cognitive techniques. Being supposedly the most challenging of all components, it may have been beneficial to introduce the skills slightly earlier and in greater isolation from other skills (if clinically indicated). In addition, therapists may have used cognitive interventions at higher levels with these children who showed a lack of comprehension

and competence in using the skills; this response by therapists may also help explain the positive relation between cognitive interventions and post-treatment depression.

Although therapists may have used these skills at higher levels with girls who showed lower mastery of cognitive restructuring skills, it does not necessarily mean they spent more time overtly teaching the strategies to them. Teaching strategies to children without tying them to presenting problems of the child were not coded in this study. Future studies may need to monitor levels at which skills are taught to children to gain a more accurate measurement of effectiveness of cognitive interventions in CBT in association with skill mastery.

A fifth significant finding was that implementation of cognitive interventions varied by cohort; the last cohort used cognitive interventions at higher levels than the first cohort. As pre-treatment depression scores did not vary cohort, this result may indicate a relation between therapists' change in skill over the course of the ACTION protocol (rather than higher level of use due to elevated symptoms). Although there were no therapists in cohort six that were also therapists in cohort one in the CBT-only condition, many of the therapists ran more than one group. It could be that as therapists became more skilled, the nature of overall training changed as well to meet the needs of their increasing sophistication. It is also possible that more advanced students participated in cohort 6 than cohort 1. This idea is supported by a study conducted by Plummer (2001), who found that in a sample of clinical psychology graduate students, CBT quality, treatment adherence, and non-specific skills increased after a semester course in CBT.

A sixth area that should be further discussed regards the cognitive interventions factors that emerged from the exploratory factor analyses. The first factor consisted of items critical to the techniques involved in challenging maladaptive beliefs and altering underlying depressogenic schemata (J. Beck, 1995). The second factor consisted of items involved in psychoeducation regarding thoughts and their effects on functioning, and teaching skills such as thought replacement; together, these strategies are referred to some as “compensatory skills” (Hollon, et al., 1988). Items of the third factor assessed strategies involved in altering faulty information processing (J. Beck, 1995). The factors, in line with CBT theory, target three hypothesized components of cognition: schemata, processes or operations, and products (i.e., automatic thoughts) (Hollon, et al., 1988). A fourth factor was formed to represent therapists’ overall skill in implementing cognitive interventions; these skills are considered a hallmark of CBT, by which the therapist collaboratively guides the client in exploring and testing key maladaptive cognitions (J. Beck, 1995). An interesting finding regarding these factors was that processing interventions were used at the lowest levels (relative to the restructuring and psychoeducation factors) throughout treatment. One reason for this finding may be that these interventions were difficult for the girls to comprehend and incorporate as they require abilities that could be beyond their developmental capacity. For instance, “Exploring Underlying Assumptions” requires the child to first identify a cognitive error in their presenting problem and link the same error to other situations in their past. Comprehension of what a cognitive error is may already be challenging, but seeing a pattern of cognitive errors amongst situations that are accessed through memory (not

readily apparent) may make the intervention even more difficult for children to grasp. “Development of Underlying Assumptions” requires the child to see how errors in thinking may have arisen through early childhood experiences; again, accessing memories and applying abstract concepts to them may have been too hard for children. If these early developmental experiences were with attachment figures, altering the maladaptive cognitions may have been especially difficult. For instance, if the child had been internalizing blame for a parent’s irresponsible behavior, it would be too threatening for a child to then externalize blame and see their parent (who is their protector and caregiver) more realistically (i.e., as acting selfishly). “Recognizing Cognitive Errors” may have been implemented at lower levels because again, it may have been too abstract. In order to be successful, “Testing Beliefs Prospectively” requires high amounts of structured planning on the part of the therapist and the ability to comply and independently use skills from the child. Without additional support from adults outside of session, it may be difficult for children to complete and achieve desired results. If the manual contained more concrete heuristics and structure regarding implementation for these interventions, therapists may have increased their level of use. Use of restructuring and psychoeducation techniques appear to be outlined in greater depth and with more structure in the ACTION manual, which may account for differences in intervention application that were observed. Also in line with CBT theory (J. Beck, 1995), lower levels of cognitive interventions were used during the first half of treatment; however, relatively high levels of psychoeducation and restructuring also occurred in the first half of treatment. It is important to note that items from the psychoeducation factor

overlapped with behavioral items, which likely accounts for their elevated use during the first half of the intervention.

In addition, the fact that restructuring items were used at relatively high levels during the first half of treatment likely indicates that therapists were individualizing treatment to address the needs of clients. More intensive use of cognitive interventions such as restructuring is recommended earlier in treatment if clinically indicated and if symptoms are at a moderate level (J. Beck, 1995). Further, behavioral techniques are often used in vivo or assigned as practice outside of session as springboards for cognitive interventions (J. Beck, 1995). For instance, after a child is successful in using a coping skill to improve mood or has used a planned, structured behavior to positively alter a stressful situation, the therapist may then launch into a cognitive intervention that challenges negative beliefs regarding helplessness, hopelessness, or unworthiness. It may be that when evidence applied in cognitive interventions is concrete and immediately accessible in children's memories, it is more convincing and the potency of the cognitive intervention is increased. This may be a possibility, as children in the operational stage of cognitive development are thought to have difficulties processing abstract, hypothetical ideas. The use of more concrete, experiential interventions has been identified as an important developmental adaptation to increase the effectiveness of CBT interventions with children (Weersing & Brent, 2006). Again, Patel (2009) found a significant decrease in depression scores at mid-treatment in this sample; although behavioral interventions were of primary focus during this treatment segment, it cannot be ruled out that some improvement may have been due to the use of these cognitive interventions that occurred

in the beginning of therapy. In fact, this combination of behavioral interventions with some cognitive interventions may be key to the effective relief of symptoms (as observed during the first segment of treatment). Future studies should investigate the integrated use of CBT interventions and their relations to symptom change across the course of treatment to better ascertain mechanisms of change as they occur over time.

In addition, when the four factors were regressed onto post-treatment depression (after accounting for pre-treatment depression, age, presence of learning disorder, mastery of therapeutic skills, behavioral interventions), none were significant predictors of depression assessed after treatment. The therapist skill factor did approach significance, and was positively related to post-depression. This provides further support for the possibility that therapist used cognitive interventions in greater depth and in a more focused manner with children who presented with more severe depression.

A final point for discussion regarding the cognitive intervention factors is that the significant differences between three types of interventions may have had some influence on the overall efficacy of cognitive interventions. In order to better comprehend, gain competence in, and benefit from cognitive interventions, children may require a more overt, overarching schematic of how information processing works, and thus how cognitive interventions work to improve mood. This may be particularly important, as concepts regarding cognition and associated interventions are likely foreign to children; thus it is paramount that they first have a sound foundation upon which they can build skills and integrate the interventions (Grave & Blissett, 2004). It appeared that children received extensive interventions targeting cognitive products (thoughts in immediate

awareness) and schemas (underlying beliefs), but lacked interventions targeting the intermediate component (processing). This discrepancy may have rendered the overall cognitive component more fragmented and thus less coherent for children. Learning more about the causal chain of cognition and receiving a more equal distribution of interventions (using clinical discretion) may also help to increase children's understanding of the purpose of cognitive interventions. Consequently, engagement in cognitive interventions may become more meaningful and rewarding, and effective application outside of sessions may become more likely. Further, alleviation of depressive symptoms may come about more readily when all components of cognition are targeted in a more equally distributed and cohesive manner; further research is needed in this area to ascertain whether certain combinations of interventions are necessary for cognitive change to occur.

Lastly, although originally not a main variable of interest, it is important to discuss the finding that behavioral interventions were negatively related to post-treatment depression, and played the largest role (relative to other model variables as indicated by its effect size) in predicting decreases in depressive symptoms, even after controlling pretreatment depression, age, presence of learning disorder, mastery of therapeutic skills, and cognitive interventions. This finding is consistent with CBT outcome literature in adults (Dimidjian et al., 2006). Some researchers hold that behavioral interventions are the primary mechanism of change in CBT for depression (Jacobson et al., 1996). The mechanisms of behavioral interventions thought decrease in depressed mood include by: 1) increasing reinforcement from the environment (J. Beck, 1995); 2) challenging

maladaptive cognitions through experiential interventions (Persons et al., 2001); 3) providing a sense of efficacy over depressive mood thus stimulating reappraisals of the self as helpless (Abramson et al., 1978). Developmentally, children may prefer interventions that are active, concrete and focused on external events over those that are more verbal, abstract, and focused on internal events (Johnson, 1983). Such active, concrete, externally-focused behavioral interventions may also work by interrupting the ruminative coping style found by researchers to be characteristic of young girls (Abela, Vanderbilt, & Rochon, 2004). More specifically, behavioral interventions may work by directly altering the maladaptive information processing by shifting attention. When attention is shifted to engagement in constructive, pleasant, relaxing, fun activities, positive schemata may be activated, causing depressive schema to become latent. Once activated, positive schemata may further filter out negatively biased information and thus become strengthened through processing more adaptive incoming information (e.g., appraisals of efficacy, worthiness, hope for change). Behavioral interventions may also buffer the negative interpretation of negative life events by reducing distress associated with stressors. Therefore, Beck's theory of depression may still be applicable to depression in youth, despite the fact that cognitive interventions may not be a primary change mechanism for children. Although cognitive interventions were not found to be related to declines in depression or changes in the proposed cognitive mediator (cognitive triad) it is still possible that the primary causal, mediating agents of the etiology and maintenance of depression are maladaptive cognitions. For children, behavioral interventions may be especially helpful in changing depressogenic cognitions (e.g., by

providing concrete evidence of self control, experiential opportunities for more adaptive attributions, buffering the impact of negative life events). Cognitive interventions may be beneficial with certain modifications to instruction (e.g., less interference from other components, more time to learn and practice skills, more concrete and coherent presentation) and implementation (e.g., integration with behavioral techniques, increased emphasis on processing/attribution, and making interventions more immediately rewarding).

Limitations

There are several limitations that should be considered when interpreting the results of this study. First, lack of statistical power due to small sample size (N=42) may have led to decreased ability to detect potential significant relations. Although the statistical power appeared to increase with the addition of relevant control variables, a larger sample size and the addition of more relevant predictors to the model is likely necessary to detect significant relations.

A second significant limitation of this study was that because it was not experimental in design, causal relations could not be determined. Future studies should consider using an experimental methodology as investigating mechanisms of change would necessitate making causal inferences. Further because these findings have clinical implications, it would be important to be able to make assertions from results with the greatest degree of confidence possible.

A third limitation was that the sample of tapes coded may not have been representative of how cognitive interventions were actually implemented in this treatment protocol. Although half of the group therapy sessions were coded (exceeding the quantity coded for all existing CBT process-outcome studies), coding the entire set of sessions may have been necessary to obtain greater variance and a more accurate picture of how change occurred for these girls. A similar limitation was that individual sessions were not coded. It may have been that more salient and core issues were brought up and treated in individual sessions due to increased confidentiality; thus, opportunities to capture the effectiveness of cognitive interventions in these contexts were missed.

A fourth limitation concerned the psychometric properties of the cognitive interventions scale. Although the overall internal consistency was good (including that for cognitive interventions factors), the inter-reliability for certain items was poor. This likely introduced error variance related to inaccurate measurement of cognitive interventions. The reason for these discrepancies in ratings was likely to do differences in rater's clinical experience and the taxing nature of coding tapes for four components of treatment (cognitive, behavioral, problem solving, and relational interventions).

A fifth limitation regarded the cognitive scale items. It may have been important to include an item that measured success of interventions (as evidenced by degree of belief in new thoughts and improvement in mood). No matter at what level cognitive interventions were implemented or how skillfully therapists delivered cognitive interventions, effectiveness cannot fully be determined unless the subjective experience of the child is taken into account. Similarly, degree to which interventions were taught to

children (without applying them to presenting problems) may have been important in measuring effectiveness of cognitive interventions in relieving depression, as skill mastery is thought to be an important moderator.

Another important limitation was that cognitive interventions scores reflected level of cognitive intervention used. It did not measure how frequently therapists used these techniques. The impact of cognitive interventions may be related to how frequently maladaptive thoughts were treated in addition to intensity levels. Low grade but frequent cognitive interventions may have been an important change mechanism that was not measured due to deficiencies in the coding procedure.

An additional important limitation was that the coding system did not assess the extent to which the girls' maladaptive schemas were targeted by the cognitive interventions. Therefore, despite the fact that therapists were skillfully using cognitive techniques at high levels, if they were not treating the girls' unique underlying pathogenic schemas and related cognitions, the interventions would not be successful in decreasing depression.

A final limitation regarding assessment regards the instrument used to measure skill mastery. The extent to which it measured girls' competence in using therapeutic skills (viz. cognitive interventions) was limited. Many of the items do assess whether girls can identify types of interventions and to some extent level of comprehension of the rationales for using interventions. Few items, however, looked at the extent to which girls could actually apply the skills to their own issues. For the cognitive restructuring section, girls' ability to use cognitive restructuring (e.g., examining evidence to challenge a

maladaptive belief) was not assessed. This was in part due to the fact that the first cohort used a different skills check measure than later cohorts. Therefore, the skills check measure used for this study could only include items that measured the same constructs across cohorts. Items that tapped application skills were excluded if they were not assessed in both the original and revised forms.

Other limitations regarded the generalizability of findings. Because this study was conducted in a research context, the results may not readily apply to clients treated in a community setting. Further, because the sample included only early adolescent girls, the findings may not generalize to boys or girls of different age groups. Lastly, the group format may have had change mechanisms (e.g., group facilitative behavior) with therapeutic effects that are not present in individual therapy format. Therefore, the generalizability of findings may be limited to cognitive behavioral group therapy.

Lastly, this study did not include other important components of the ACTION treatment protocol. Specifically, problem-solving interventions and relational interventions such as therapists' use of empathy and interpersonal effectiveness were not included in the model. These components may be important predictors to include in analyzing the effectiveness of cognitive interventions in relieving depressive symptoms.

Implications

In the CBT outcome literature for youth, there are no published studies investigating the efficaciousness of specific treatment processes as they occur within session, across treatment. As this area of research is in its infancy, further investigation is needed to expand understanding of how and why CBT works. Based upon this study's findings, there are several directions that such research can take, especially with regard to cognitive interventions.

First, the surprising finding of the positive relation between cognitive interventions and post-treatment depression indicates that it may be necessary to gain a better grasp of how maladaptive cognitions develop throughout childhood (e.g., how normative biases in cognition such as dichotomous thinking become pathogenic); there is a dearth of literature that seeks to shed light on this process (Grave & Blissett, 2004). It would be critical to gain a more thorough understanding of how information processing goes awry in children in order to determine how depressogenic cognitions and depressive symptoms are best treated. Downward extensions of adult models of cognitive therapy may be one of many types of models that could alleviate depression in children.

Second, because levels of cognitive interventions were not related to post-treatment CTI scores, future research might investigate other types of interventions that could influence cognitive change (e.g., problem solving, therapeutic relationship). Studies that investigate whether cognitive interventions help to alter other pathogenic cognitions (e.g., automatic thoughts, negative attributional style) and whether changes in these cognitions lead to decreases in depression would be informative. In addition, it may be

useful to explore whether other interventions (e.g., problem solving, non-specific factors) lead to changes in the negative cognitive triad.

Third, it may be useful to continue to investigate whether significant interactions exist between cognitive and behavioral interventions, as lack of findings in the study are likely due to inadequate power. Behavioral techniques are often used in vivo or assigned as practice outside of session as springboards for cognitive interventions (J. Beck, 1995). For instance, after a child is successful in using a coping skill to improve mood or has used a planned, structured behavior to positively alter a stressful situation, a therapist may then launch into a cognitive intervention that challenges negative beliefs regarding helplessness, hopelessness, or unworthiness. It may be that when evidence applied in cognitive interventions is concrete and immediately accessible in children's memories, it is more convincing and the potency of the cognitive intervention is increased. In addition, identifying whether improvements related to these types of integrated interventions are mediated by cognitive change (e.g., attributional style, self-esteem) would be beneficial.

Fourth, improvements in assessment of cognitive interventions may help to gain a better understanding of their role in CBT change processes. It would be important to include items that measure how well therapists target girls' maladaptive schemas. When coding for this, researchers would need to refer to the therapists' conceptualization of the individual child. In addition, it would be useful to determine the extent to which interventions were successful in alleviating depressed mood for children (e.g., obtain ratings on subjective measures of degree of belief in a thought and degree of change in mood). Even if interventions were delivered with savvy and at high intensities, they may

not have been successful in providing relief for girls' depressed mood. Further, the extent to which therapists teach skills (through didactic training, not clinical intervention) may be an important factor to code, as this may influence the efficacy of subsequent cognitive interventions.

Fifth, because age was found to be negatively related to post-treatment depression (i.e., older children appeared to benefit more from treatment), future research could help explain whether it is necessary to make additional developmental adjustments for younger children (e.g., ages 8-10) in CBT protocols for depression. Specifically, because implementation of cognitive interventions did not vary by age, future research can clarify whether making these types of interventions even more simple, concrete, immediately rewarding, and structured both inside and outside of session (e.g., through parent supervision of homework assignments, etc.) increase treatment gains for younger depressed children.

Sixth, the girls in this study appeared to have low mastery of cognitive interventions skills. Although this study did not find mastery of therapeutic skills to be a significant predictor or moderator of depression levels at post-treatment, future studies might further explore these potential relations through use of better measures of skill mastery. The measure used in the study was limited in its ability to assess the degree of girls' ability to apply cognitive skills (e.g., did not ask girls to show how they would use cognitive restructuring to change a negative belief). If higher mastery of cognitive interventions skills are related to increased alleviation of depression, it may be beneficial for clinicians to more frequently assess children's comprehension and application of

cognitive interventions to ensure mastery, as they are developmentally more challenging than other interventions. Also, adequate time in session to teach and practice skills may then be clinically indicated. Lastly, future research could investigate whether cognitive interventions formally introduced at an earlier point in treatment or taught with less interference from other skill building influences changes in depression symptoms. For instance, as the cognitive interventions were the last component of treatment, children may have been saturated and had limited ability or motivation to learn these more challenging skills (e.g., they may have begun to develop a preference for more behaviorally-based skills which are easier to understand, use, and more immediately rewarding).

An additional important implication stems from the finding that the implementation of cognitive interventions varied by cohort, such that the sixth cohort used cognitive interventions at significantly higher levels than the first cohort. Because levels of depression did not vary by cohort, this raises questions regarding whether this difference was due to factors such as therapist skill level (due to repeated implementation of the protocol or stage in graduate training) and whether the nature of training changed to meet the needs of their increasing sophistication. Further research is needed in this area, as these variables may play a key role in therapeutic change for CBT with youth.

Significant differences were found between the implementation of the cognitive interventions factors across treatment. Further there was a lack of therapeutic gain associated with these cognitive interventions when included in the model as separate factors. Future studies could focus on whether certain permutations of cognitive

interventions increase their therapeutic value for depression children. For example, a more balanced use of thought replacement, correcting cognitive errors, and restructuring beliefs may lead to greater decreases in depressive symptoms.

Finally, this study's findings indicated that behavioral interventions predicted decreases in depression assessed after treatment ended. This implies that efficacious treatment for depressed youth would include encouragement of the engagement in behaviorally-based interventions. The next step for research in this area may include identification of specific behavioral interventions that contribute to their efficaciousness and moderators that maximize their utility. It would also be useful to know if behavioral interventions modify underlying cognitive mechanisms and whether levels of these associated changes are sufficient in producing long-lasting symptom relief.

Conclusions

This study was conducted to investigate the mechanisms of change in CBT for depressed girls. More specifically, it sought to test Beck's (1967) theory of depression which holds that cognitive vulnerabilities (negative cognitive triad) mediate an individual's response to life stress, thus engendering depression. Thus CBT applies cognitive interventions to alter these mediating pathogenic cognitions and thus ameliorate depressive symptoms. This study examined whether cognitive interventions decreased depressive symptoms and if these improvements were mediated through the cognitive triad. The results of this study did not provide support for Beck's (1967) cognitive theory of depression. The study yielded new and important findings that stimulate further

questions about how and why CBT works, provide directions for future research and some recommendations for clinical application.

First, after accounting for relevant predictors (pre-treatment levels of depression, age, presence of a learning disorder, mastery of therapeutic skills, behavioral interventions) levels of cognitive interventions were significantly related to higher levels of depression. Due to the nature of the study's design, causality could not be asserted; it was possible that therapists used cognitive interventions at higher levels for girls' with more severe and persistent depressive symptoms. As no studies in the child CBT outcome literature have explored cognitive interventions and their relation to depressive symptoms at this level of specificity, this was an interesting and important finding that calls for further research in this area, including empirical studies that examine the development of maladaptive cognitions in youth as well as studies with experimental designs.

Second, levels of cognitive interventions did not predict scores on a measure of the cognitive triad (CTI) at post-treatment (after controlling for pretreatment depression scores, age, presence of a learning disorder, mastery of therapy skills, behavioral interventions). Thus, cognitive interventions did not appear to influence change in the cognitive triad, the proposed mediating mechanism of depression (Beck, 1976). This was a second finding that did not support Beck's cognitive theory of depression. A lack of adequate statistical power may have reduced the ability to detect a significant relation. This result was inconsistent with the existing literature regarding CBT outcomes for depressed youth and raises questions about whether other interventions not included in the model are responsible for changes in the cognitive triad, whether cognitive

interventions affect other types of maladaptive cognitions such as negative attributional style, and whether such other types of cognitions mediate changes in depression.

Third, the finding that age was negatively related with post-treatment depression was consistent with the CBT for youth outcome literature which indicates that older children tend to benefit from CBT almost twice as much as younger children. Another finding showed that cognitive interventions scores did not vary by age. Further research is necessary to decipher whether and to what extent developmental adjustments are needed for children of different age groups to obtain maximum benefit from CBT, especially cognitive interventions which are more developmentally challenging.

Fourth, because this was the first study in which this coding scale was used in a child CBT intervention, several concerns arose regarding the cognitive interventions rating scale. Inclusion of items that measure how well therapists target girls' maladaptive schemas, the success of interventions (e.g., degree to which a new thought is believed), and how extensively interventions skills were taught may be important items to add to the scale to increase variance and validity of the scale.

Fifth, the mastery of therapeutic skills was not significantly related to post-treatment depression scores. Improved measurement for mastery of therapeutic skills, especially with regard to skill application, is needed to better assess the relation between levels of skill mastery and remission from depression. Girls in this study appeared to have low mastery of cognitive interventions skills. Providing adequate time in session and across treatment to teach and practice cognitive intervention skills, more frequent assessment to guide instruction are areas of research that are needed.

Cognitive interventions were used at higher levels in the sixth cohort than the first cohort; further, levels of depression did not vary by cohort. Variations in therapist skill, changes in quality of training and their effects on therapy outcome were identified as important areas for further investigation.

Consistent with CBT literature, cognitive interventions were used at higher levels during the second half of treatment. Significant differences were also found between the implementation of the cognitive interventions factors across treatment. Further there was a lack therapeutic gain associated with these cognitive interventions when entered into the model as separate factors. Future studies could focus on whether certain combinations of cognitive interventions increase their efficacy in treating depression in children.

Finally, this study's findings indicated that behavioral interventions predicted decreases in depression assessed after treatment ended. This implies that efficacious treatment for depressed youth would include behaviorally-based interventions. Future research in this area may seek to identify specific behavioral interventions that are most useful and what moderators improve their efficacy.

APPENDICES

Appendix A: DSM-IV Criteria for Major Depressive Disorder and Major Depressive Episode

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.

Appendix B: 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 or 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.

Appendix C: 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 D: 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)

CONFIDENTIAL* USE ONLY

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?	<input type="checkbox"/>	<input type="checkbox"/>
2. Have you been feeling irritable, cranky, or easily annoyed for a lot of the day	<input type="checkbox"/>	<input type="checkbox"/>
3. Have you been less interested in doing things like hobbies or sports?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have you been enjoying hobbies or interests less that you did in the past?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>
6. Have you had any trouble with your sleep, such as falling asleep, waking up at night, or waking too early?	<input type="checkbox"/>	<input type="checkbox"/>
7. Have you been having trouble with your sleep, in that you are sleeping a lot more than usual lately?	<input type="checkbox"/>	<input type="checkbox"/>
8. Do you feel like you still need sleep or rest, even if you got a full night's sleep?	<input type="checkbox"/>	<input type="checkbox"/>
9. Do you feel like you have no energy, or not as much energy as usual?	<input type="checkbox"/>	<input type="checkbox"/>
10. Do you feel restless or fidgety, that you have a hard time sitting still?	<input type="checkbox"/>	<input type="checkbox"/>
11. Have you felt slowed down, like you are moving in slow motion or your movements are not as quick as usual?	<input type="checkbox"/>	<input type="checkbox"/>
12. Have you had trouble concentrating or paying attention, like your mind is "in a fog?" Or trouble making decisions?	<input type="checkbox"/>	<input type="checkbox"/>
13. Have you felt guilty about things lately?	<input type="checkbox"/>	<input type="checkbox"/>
14. Have you felt hopeless, like things won't work out for you, or that you will always feel bad?	<input type="checkbox"/>	<input type="checkbox"/>
15. Have you felt worthless, inadequate, or like you are no good lately?	<input type="checkbox"/>	<input type="checkbox"/>
16. Have you had thoughts of death or dying?	<input type="checkbox"/>	<input type="checkbox"/>

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 E: Measure of the Cognitive Triad

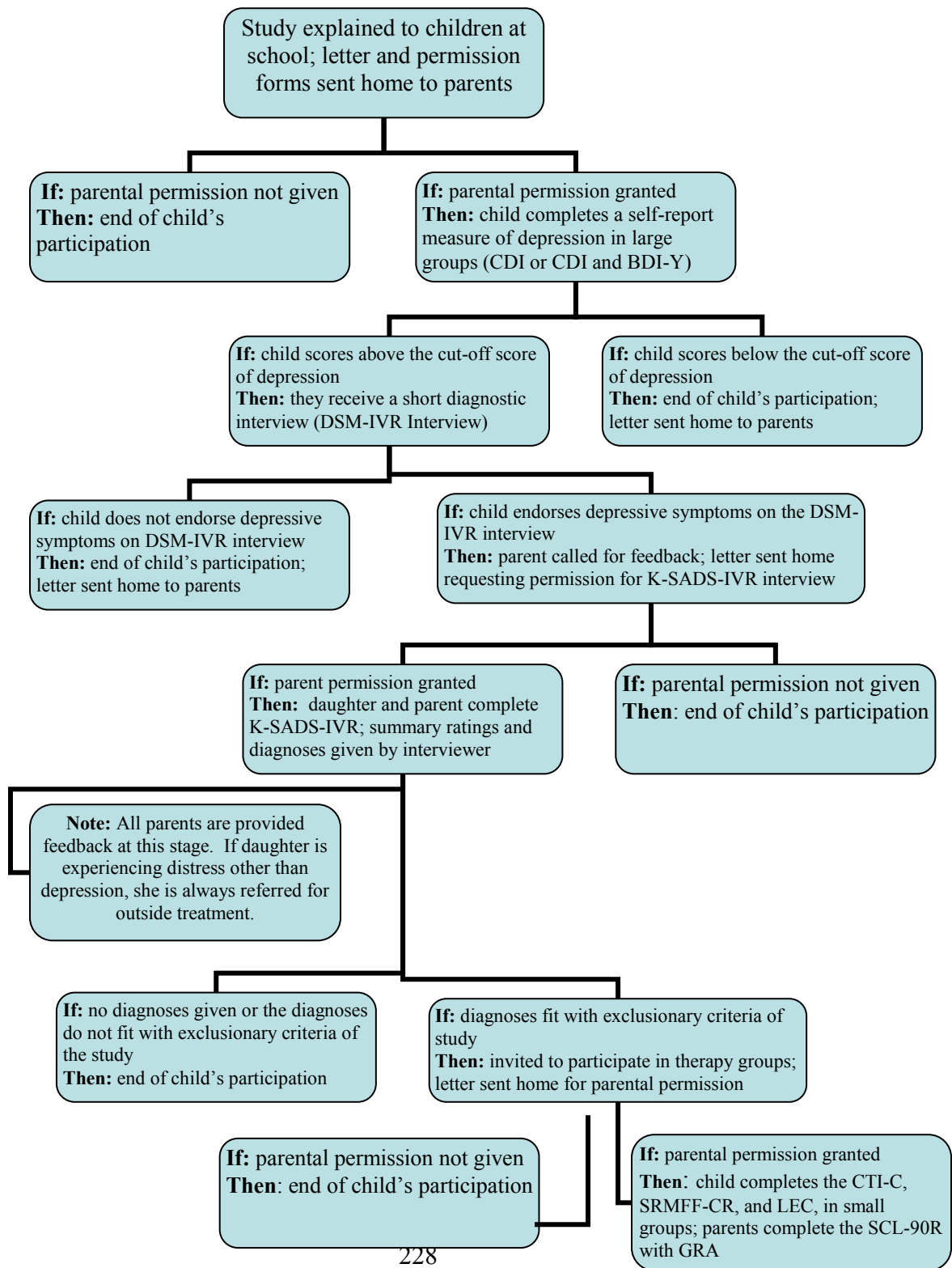
Cognitive Triad Inventory for Children
(CTI-C)

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	Yes	Maybe	No

what I need.			
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 F: Multiple Gate Procedure



Appendix G: Letters to Parents, Parental Consent Forms, and Student Assent Forms

Parent Consent Letter and Form for Screening; Depressed Group

Dear Parent,

[insert name of school here] 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 [insert grade numbers of school here] 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 RECORDS

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; Depressed Group

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; Depressed Group

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; Depressed Group

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 ACTION 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 H: Intraclass Correlation Coefficients for CCS-BN Behavior Intervention Subscale (N=42)

Coding Measure	ICC*
CCS-BN Behavior 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

*Single measures ICC

Appendix I: Cognitive Errors

Cognitive Error Type	Description	Example
All or Nothing Thinking (also called Black-and-White, Polarized, or Dichotomous Thinking)	A situation is viewed in only two categories rather than on a continuum	“If I’m not a total success, I’m a failure.”
Catastrophizing (also called Fortune Telling)	The future is predicted in a negative manner without considering other, more likely outcomes	“I’ll be so upset, I won’t be able to do anything right at all.”
Disqualifying or Discounting the Positive	The individual unreasonably tells herself that positive experiences, deeds, or qualities do not count	“I did that assignment so well, but that doesn’t mean I’m competent, I just got lucky.”
Emotional Reasoning	The individual thinks something must be true because it is felt so strongly, evidence to the contrary is ignored or discounted	“I know I do a lot of things at school OK, but I still feel like I’m a failure.”
Labeling	The individual puts a fixed, global label on herself or others without considering that evidence might more reasonably lead to a less disastrous conclusion	“I’m a loser,” “He’s no good.”
Magnification/Minimization	When the individual evaluates herself, others, or a situation in a way that magnifies the negative and/or minimize the positive	“Getting a ‘C’ proves how I’m not good enough,” “Getting an ‘A’ doesn’t mean I’m smart.”
Mental Filter (also called Selective Abstraction)	The individual places undue attention to one negative detail instead of seeing the whole picture	“Because I got one ‘C’ [while the rest of grades were ‘As’] it means I’m a bad student.”
Mind Reading	The individual believes she knows what others are thinking; fails to consider more likely possibilities	“He’s thinking that I don’t know anything about how to do this homework assignment.”

Cognitive Error Type	Description	Example
Overgeneralization	The individual makes a sweeping negative conclusion that goes for beyond the current situation	“Because I got a ‘C’ I don’t have what it takes to be a good student.”
Personalization	The individual believes others are behaving negatively because of her, without considering more plausible explanations for their behavior	“My teacher was crabby at me because I didn’t do well on my assignment.”
“Should” or “Must” Statements (also called Imperatives)	The individual has a precise, fixed idea of how she or others should behave and makes overestimates of how bad the situation is when these expectations are not met	“It’s so horrible that I slacked off a little. I should always do my best.”
Tunnel Vision	The individual sees only the negative aspects of a situation	“Mr. Smith can’t teach at all. He’s crabby, boring, and bad at teaching.”

Appendix J: Treatment Objectives

Session	Session Objectives
Group Session One	Participants will demonstrate understanding in the following areas: (1) group pragmatics and rules, (2) why they were selected to participate and overall treatment goal, (3) limits of confidentiality, (4) support network of the group, and (5) the within group incentive system and the importance of completing therapeutic homework.
Group Session Two	Participants will: (1) learn what an agenda is and its use in group meetings, (2) learn the importance of therapeutic homework in symptom relief, (3) identify specific plans to aid in the completion of homework, (4) learn how to accurately rate mood in different situations (using the 10 — point “mood meter”) (5) experience a change in mood while performing a coping skill and identify how they could use it outside of group, and (6) recognize the “Take Action List” (TAL) as a tool to help increase engagement in fun activities and to notice effects they have on mood.
Group Session Three	Participants will: (1) demonstrate understanding of the importance of thinking about therapeutic concepts between sessions, (2) experience a change in mood produced by a coping strategy (changing thoughts), (3) identify emotions by using cues in their body, brain, and behavior, and (4) name the five broad coping strategies and give several examples of each.
Individual Session One	Participants will: (1) demonstrate understanding of the therapeutic concepts taught to date, (2) collaboratively develop therapeutic goals, (3) develop procedures to achieve those goals, and (4) role play with the counselor asking the group for help to meet those therapeutic goals.
Group Session Four	Participants will: (1) evaluate progress made toward goals and problems solve difficulties, (2) identify ways to support other group members in reaching their goals, (3) identify the situations within which to use the three major therapeutic skills, (4) identify key concerns and solicit help from group members, (5) begin to use coping strategies to manage negative moods, and (6) experience a change in mood through use of a coping skills strategy and name other situations within which she could use a similar strategy.

Group Session Five	Participants will: (1) shift focus to the positive by sharing positive experiences or observations, (2) experience a change in mood using a coping skills strategy and identify other times to use a similar skill, (3) explain problem-solving steps and identify appropriate situations to use problem-solving, (4) begin to apply problem solving to their daily lives, and (5) generate multiple solutions to a problem, rather than a single solution.
Group Session Six	Participants will: (1) identify progress made toward goals and problem-solve difficulties making gains, (2) articulate relationships between thoughts and feelings and understand the role of changing thoughts as a coping strategy, (3) identify their own thoughts that lead to negative feelings and develop coping statements for future use, (4) experience a change in mood through application of a coping strategy and identifying other times to use a similar strategy.
Group Session Seven	Participants will: (1) shift their focus to the positive by sharing pleasant events and situations they have noticed, (2) generate multiple solutions to everyday problems, including interpersonal problems, and (3) experience a change in mood through use of a coping skills strategy and identify other times a similar strategy can be used.
Group Session Eight	Participants will: (1) evaluate progress made toward goals and problems solve difficulties, (2) shift their focus to the positive by sharing pleasant events and situations they have noticed, (3) generate multiple solutions to everyday problems, including interpersonal problems, and (4) experience a change in mood through use of a coping skills strategy and identify other times a similar strategy can be used.
Group Session Nine	Participants will: (1) shift their focus to the positive by sharing pleasant events and situations they have noticed, (2) generate multiple solutions to everyday problems, including interpersonal problems, and (3) experience a change in mood through use of a coping skills strategy and identify other times a similar strategy can be used.
Individual Session Two	Participants will: (1) evaluate progress made toward goals and problems solve difficulties demonstrate

	understanding of therapeutic concepts to date, (2) identify progress toward goals and problem solve obstacles, (3) demonstrate comprehension of using skill integration to obtain improvement in depressive symptoms, (4) identify their most common negative thoughts and describe their impact on emotion, behavior, and relationships, (5) identify specific areas to monitor in their Catch the Positives Diaries, and (6) describe the cognitive restructuring process.
Group Session Ten	Participants will: (1) evaluate progress made toward goals and problems solve difficulties, (2) recognize group has become closer and that members will start discussing negative thoughts, and (3) experience a change in mood through application of a coping strategy and begin disputing negative thoughts.
Group Session Eleven	Participants will: (1) shift their focus to the positive by sharing pleasant events or observations, (2) understand that perceptions are constructed and they way a situation is perceived affects mood, (3) continue to identify their most common negative thoughts and the effects of those thoughts on mood, and (4) develop and elaborate upon coping statements to dispute negative thoughts.
Group Session Twelve	Participants will: (1) evaluate progress made toward goals and problems solve difficulties, (2) evaluate progress made toward goals and problem solving difficulties, (3) identify their own and other's negative thoughts, (4) recognize positive characteristics about themselves to build a positive self-schema, and (5) understand the importance of asking themselves questions to believe their new, more positive thoughts.
Group Session Thirteen	Participants will: (1) shift their focus to the positive by sharing pleasant events or observations, (2) identify their own and others' negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) effectively use the cognitive restructuring technique, "What's a different way of looking at it?".
Group Session Fourteen	Participants will: (1) evaluate progress mad toward goals and problem solve difficulties, (2) continue identifying their own and other's negative thoughts, (3)

	recognize positive characteristics about themselves to build a positive self-schema, and (4) be to apply the cognitive restructuring strategy, “What’s another way of looking at it?”.
Group Session Fifteen	Participants will: (1) shift their focus to the positive by sharing pleasant events and observations, (2) identify their own and others’ negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) effectively using the cognitive restructuring question, “What’s the Evidence” to help with evaluating information that supports and disconfirms the belief.
Group Session Sixteen	Participants will: (1) evaluate progress made toward goals and problem solve impediments, (2) identify their own and other’s negative thoughts, (3) recognize positive characteristics about themselves to build a positive self-schema, and (4) apply the cognitive restructuring question, “What are the clues that tell me this thought isn’t true?,” and (5) recognize that treatment is coming to an end.
Group Session Seventeen	Participants will: (1) shift their focus to the positive by sharing pleasant events and observations, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) appropriately use the cognitive restructuring questions, and (4) recognize group is ending and become aware of alternative ways to bring up issues that have not been discussed
Group Session Eighteen	Participants will: (1) evaluate progress toward goals and problem solve difficulties, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) integrate and apply all the skills to positively alter mood, and (4) recognize the “smiley ball” as their new ability to “catch the positive.”
Group Session Nineteen	Participants will: (1) shift their focus to the positive by sharing pleasant events and observations, (2) recognize positive characteristics about themselves to build a positive self-schema, (3) recognize that although group is ending, they have internalized the support of the group, (4) identify negative thoughts they are ready to

	let go and discuss thoughts and feelings regarding termination.
Group Session Twenty	Participants will: (1) say goodbye to group members and therapists, (2) symbolically release the negative thoughts and feelings associated with depression, and (3) process the termination experience.

ACTION Cognitive Interventions Coding Manual

Note:

Items 1, 7, 20 were taken from the Cognitive Therapy Scale (CTS; Young & Beck, 1980)

Items 2-5, 8 -18, were taken from the CBT Section of the Collaborative Study Psychotherapy Rating Scale (CSPRS-CB; Hollon, Evans, Elkin, Lowery, 1984);

Item 6 was taken from the Therapist Section of the Cognitive Coding Scale for Bulimia Nervosa (CCS-BN; Spangler, 1998)

Item 19 was rationally derived (Beck, Rush, Shaw, & Emery, 1979)

General Considerations, Instructions to Raters, Specific Guidelines for Rating Items were adapted from the CSPRS-CB (Hollon et al., 1984)

GENERAL CONSIDERATIONS

1. **Rating Therapist Behaviors:** The scale is designed to rate therapist behavior. In rating the scale items it is important to distinguish the therapist behavior (as much as possible) from client behavior in response to the therapist.

In rating therapist behavior, the rater should consider what the therapist attempted to do, not whether those attempts met with success or failure. For example, in rating item #12 the rater must determine to what extent the therapist executed finding alternative explanations, not to what extent the client's mood improved as a result.

2. **Prerequisite Knowledge to Give Ratings:** Raters are not required to have special knowledge of the behaviors being measured to rate items in this scale. The items of this scale were specifically designed so that raters with no previous exposure to CBT could reliably and validly rate therapist behaviors. The Rater's Manual was designed to provide the rater with specific background needed to rate the items.

However, when using the scale, the rater must be careful and conscientious in listening to and rating therapy sessions. Because rating the scale is a complex task, it requires the rater to be thoughtful and exert good judgment.

3. Rating Extensiveness: The scale is designed to measure the extent to which therapists engage in the behaviors being measured. In order to determine the “extent” to which a therapist behavior occurred, the rater must consider BOTH the frequency with which that behavior occurred during the session and the intensity with which that behavior was engaged in when it did occur.

In rating an item, there are no fixed rules for determining the weights assigned to the concepts frequency and intensity. The relative weighting of these two concepts depends not only on which item is being rated, but also on which specific techniques the therapist uses to accomplish the strategy or goal stated in the item. For example, with respect to Item #10, Examine the Available Evidence, the therapist might encourage the client to examine available evidence for her belief using several different strategies:

- (1) The therapist might ask the client whether her belief is consistent with her understanding of the way the world works
- (2) The therapist might review with the client a homework assignment that speaks to the validity of her belief
- (3) The therapist might encourage the client to recall experiences from her past which speak to the validity of the client’s belief.

Thus, the amount of time spent is more important for thoroughly executing some strategies than it is for others.

There are no fixed rules for determining the equivalence of doing something intensively for a short period of time versus doing something not very intensively for a long period of time. Because the rules for combining frequency and intensity would be very complex and might not always lead to valid ratings, the rater uses his/her discretion to appropriately weight these concepts when rating items.

- 4) Avoiding Haloed Ratings: The scale was designed for the purpose of describing the therapist’s behavior in session. In order to use the scale correctly, it is essential that the rater rates what he/she hears, NOT what she/he thinks OUGHT to have occurred.

The rater must be sure to apply the same standards for rating an item regardless of:

- (1) What other behaviors the therapist engaged in during the session
- (2) What ratings were given to other scale items
- (3) How skilled the rater believes the therapist to be
- (4) How much the rater likes the therapist

- (5) Whether the rater thinks the behavior being rated is a good thing to do or a bad thing to do.

Examples of rater halo effects:

Considering other behaviors the therapist engaged in during session:

In deciding what rating to assign an item, the rater might erroneously base her/his ratings on behaviors which are similar to or which are likely to covary with the behaviors which are supposed to be considered in rating the item (General Comment # __, Making Distinctions discusses this further).

Resulting from ratings given to other items:

In deciding what rating to assign an item, the rater might erroneously base her/his rating on ratings given to other items. This is likely to occur when the rater believes that the rating given to another item affects the rating given to the item currently being rated. For example, the rater might assign a high rating to the item Exploring Personal Meanings because a high rating was assigned to Exploring Underlying Assumptions. Each of these items should be rated independently.

Resulting from rater's judgment of the therapist's skill level:

The rater assumes that the therapist is less skilled and thus assigns scores systematically lower based on this belief rather than actual behaviors exhibited by the therapist.

Resulting from how much the rater likes the therapist:

In deciding what rating to assign an item, the rater might rate the item higher than it should be due to the rater's positive affective reaction to the therapist.

Resulting from the rater's judgment of whether the behavior is a good or bad thing to do:

The rater might assign a lower rating to an item than is warranted because she/he thinks the therapist is a good therapist and the 252ymptomo being measured is undesirable. Similarly, the rater might assign a higher rating than is warranted because the rater believes the therapist is a good therapist and the behavior being measured is desirable.

- 5) Rating Conjunctive Relationships: Instances of AND and OR which are particularly important to note have been capitalized. When two aspects of a behavior specified in an item are joined by "AND," both must be present in order for the item to be rated highly. When two aspects are joined by "OR," the item can be rated highly if either aspect is present.
- 6) Use of Guidelines: The descriptions and definitions of items in this manual are intended to be guidelines for use in rating the scale. In some cases, there are specific rules which the rater should use in assigning a particular rating to an item. These rules are referenced in the scale as "/" and are clearly noted in the

manual as “NOTES.” In most cases, however, this manual contains only guidelines. The rater is expected to exercise his/her judgment in applying these guidelines as well as in rating situations for which the guidelines do not apply.

- 7) Use of Examples: For many of the items in this manual, examples of therapeutic exchanges which provide guidelines for how to rate the therapist behavior. The examples are only guidelines for how to rate an items. Often, in fact, examples state only that they should result in a rating of greater than “1” on an item. This is because the examples are only of brief interchanges that might occur in the midst of a session, whereas the rater must consider the entire session when rating an item. Thus, as an aid to rating items, the examples are a better guild to the kinds of behaviors and the intensity with which they should occur, than they are to the frequency with which the behaviors should occur.

Examples in the manual can occur in three different forms:

- (1) A list of relevant aspects of the behavior which should be considered in rating an item
- (2) A synopsis of a therapy exchange which should (or should not) result in a rating of greater than “0” on an item; or
- (3) Dialogue between the therapist and client which should (or should not) result in a rating of greater than “0”.

When dialogue is given as an example, it is italicized and the letter “T” is used to indicate what the therapist said, and “C” is used to indicate what the client said. All names which appear in these examples are fictitious as are most of the situations which are depicted.

In the manual, reference is often made to a “low rating,” a “medium rating,” or a “high rating” in discussions regarding how examples should be rated. Because the rater msut consider the entire session and not just a discrete incident or period of time (as is represented in an example) in deciding the exact rating given to an item, these suggested ratings should not be considered to be fixed. In general, however, a “low rating” corresponds to a “1” or “2”; a “medium rating,” a “3” or “4”; and a “high rating,” a “5” or “6”. The manual explicitly states when the rater should assign a rating of “0”. A “low rating” does not refer to a “0”.

- 8) Making Distinctions: because the scale items vary in terms of breadth of coverage, the same therapist behaviors which are appropriately rated in one item may also be rated in another item. Conversely, the rater is often required to make fine distinctions between therapist behaviors which are similar yet should be rated distinctly. These types of items measure therapist behaviors which are similar and which may covary, but yet are distinct. The rater should be careful to rate them distinctly (i.e., in

rating each item, the rater should consider the extent to which the behavior specified in that item occurred and should not consider other similar behaviors).

When possible, similar items have been placed near one another to help the rater make these distinctions. The rater should bear in mind the subtle differences between some items, and not use the same exact behavior to substantiate ratings given to different items unless it is appropriate to do so.

The manual also contains an “Important Distinctions” section within the manual entry for many of the items. This section contains information regarding how the “target” item is similar to and/or different from other “comparison” items in the scale. The “comparison” items contain a cross-reference to refer the rater to a discussion of how that item is similar to or different from the “target” item.

The rater should not infer that the existence of the “Important Distinctions” means that they are the only important similarities or differences that need to be deciphered. All of the items are similar to or different from other items in important ways. Thus, the rater should not rely on “Important Distinctions” to point out all of the important similarities or differences which exist.

- 9) Distinguishing Between Thoughts and Feelings: Several of the items refer to thoughts and/or feelings. In order to rate these items as they are intended, it is important to interpret each of these terms literally: i.e., “feelings” refers to emotions or affective states; “thoughts” refers to cognitions. Therefore, if a client says, “I’m feeling really scared about that,” she is indeed talking about an affective state. If, on the other hand, she says, “I feel that I couldn’t succeed at that” she is referring to the thought or belief, “I don’t believe that I could succeed at that.” In this latter example, the client may also be attempting to convey a feeling of sadness or hopelessness. It is sometimes difficult to determine whether statements refer to feelings or cognitions. Therefore, the rater must carefully distinguish whether thoughts or feelings are the object of the therapist behavior.
- 10) Specific Instances Required for Rating: In order to rate an item greater than a “0”, the rater must hear a specific example of the therapist behavior being rated. The rater should be careful not to rate behavior as having occurred if she/he thinks it probably occurred but cannot think of a specific example.
- 11) Substantiating Ratings: The starting point for rating each item in the scale is “0”. The rater should assign a rating of greater than “0” only if he/she hears examples of the behavior specified in the items.
- 12) Overlap Between Current Versus Prior Sessions: Often an issue that was discussed in an earlier session is implicitly or explicitly referred to in the

session being rated, for example, when the client seems to know what the therapist means when the latter requests thoughts (because the distinction has obviously been made between thoughts and feelings in an earlier session). Discussions which took place in an earlier session should not be considered in determining a rating given to the current session.

INSTRUCTIONS TO RATERS

- 1) RATE EVERY ITEM. This scale is designed so that every items can be rated on a scale from zero to six for every therapy session. In other words, **DO NOT LEAVE ANY ITEMS BLANK.**
- 2) READ ITEMS EACH TIME THEY ARE RATED. It is recommended that the rater read each item entirely every time it is rated. Careless errors may result when raters rate an item from reading only the tem name on the answer sheet and not the items as it is defined in the scale. Because of the complexity of the items, it is also essential that the rater be completely familiar with the information in the manual for each item before rating it. It is important that the rater continually refer to the manual, even after she/eh has become familiar with it, in order to prevent subsequent rater drift.
- 3) ATTEND TO MANUAL NOTES. Breaks (//) which appear in the lines above the scale points in the scale indicate that the manual contains a note for the item which specifies what conditions are necessary in order for the items to be given a rating below the “//”.
- 4) LISTEN BEFORE RATING. Do not rate any items on the scale until the entire session has been listened to.
- 5) TAKE NOTES. It is recommended that the rater take notes while listening to the session. It has been found that this procedure enhances the accuracy of ratings both because it helps remind raters of the information which is relevant to rating items, and because it helps keep the rater focused on what is occurring in the session. Because the scale requires the rater to make many fine distinctions, it is essential that the rater listen to the session carefully. The rater should not attempt to do other tasks while listening to tapes of therapy sessions which are to be rated.

- 6) USE ANSWER SHEET CORRECTLY. The answer sheet was developed so that it can easily read for data entry. It is crucial that rater review their answer sheet to ensure that the necessary identifying information has been filled in and that every item is rated and that no item is assigned more than one response.
- 7) RATE ITEM FOR THE INDIVIDUAL EVEN IF INTERVENTION IS TARGETING THE GROUP. As therapy is implemented in a group setting, therapists often have to apply the intervention to the group as whole for the purposes of efficiency. Optimally, when the therapist does so, she applies the intervention in a way that is meaningful and relevant to all the girls in the group. If, however, the therapist is targeting an individual child and another child interrupts or adds to the dialogue, use judgment as it applies to the specific situation. Try to determine to what extent the therapist begins targeting the second child as well. Often, the therapist may use the other children as helpers. In such cases, do not rate the item for the helpers, as the helper's participation is instrumental to the intervention for the targeted child. Despite the fact that the helper may be learning how to use the technique, it is not being applied directly to the helper's cognitions so the item therefore not rated for that helper.

SPECIFIC GUIDELINES FOR RATING ITEMS

Cognitive Interventions

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.

====APPLIED TO ALL ITEMS MARKED WITH “+”=====

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

a. **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.

b. **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 is 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.

====APPLIED TO ALL ITEMS MARKED WITH “*”=====

1. **FOCUSING ON KEY COGNITIONS*+:**

Did the therapist elicit specific (**positive or negative**) thoughts, assumptions, images, or 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 to 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 I

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 I
 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 I 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

I...what would you say your mood was on the mood meter or how much you cried/stayed at 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 nurses 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 nurses 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 covary 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 covary 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) 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, 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, tattler 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, tattler-tale!

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, tattler-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 an 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 mean 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, 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".

4) 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, 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

5) 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. It 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!

6) 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 discussion 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 inbetweens, 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?

7) 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 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.

8) 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 clients 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 clients 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 is 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: Geat 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 til 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 clients 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, DIDACTIC PERSUASION).

9) 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, 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 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 "kool 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?

T: 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

10) 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.

11) 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 it's 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 kool 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.

- 12) 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, 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 more sad, 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, 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.

13) 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 be 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

14) 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: whats 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 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: whats 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.

2

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 tried 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 use 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).

15) 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.

16) 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 thought, 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 their 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: Woah! 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 answer's 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?

17) 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). So for this one, even though the child is thinking about/shifting attention toward something whenever she monitors something, this item is coded only if she is monitoring/recording a cognition (including characteristics/traits). Everything else is caught in the behavioral section.

*(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

- 18) BUILDING A POSITIVE SCHEMA*+:

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. **Rate a 1** 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 points out and elicits 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). **Rate a 5** 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 things differently.
 C: yes...
 T: what does it mean about you?
 C: I don't know.
 T: do bad students do the things 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.

19) 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.). again, this one counts only if the goal is cognitive, e.g., thinking more positively.

***(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: hows 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 improvement 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: me and my mom 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 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.

20) 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).

SPECIFIC GUIDELINES FOR RATING ITEMS
Behavior Interventions

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 reduce 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 IDENTIFICATION 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 IDENTIFICATION 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 IDENTIFICATION 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 IDENTIFICATION 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) COPING SKILLS TRAINING*:

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, ect.

- 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 coping skills can be implemented by the client.) 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.

Purpose: To determine the extent to which the therapist taught the client coping skills and practiced the application within the session.

Example:

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 hopping, 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 kind of 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) MOOD MONITORING EDUCATION*:

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 one or more useful strategies 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, ect). 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).

Purpose: To determine the extent to which the therapist and client work together to effectively help the client develop interpersonal skills in the session.

Example:

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) INCREASING MASTERY*:

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) BEHAVIORAL ACTIVATION: SCHEDULING/STRUCTURING ACTIVITIES*:

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 collaborates 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. A link between mood and behavior is made overt. In addition, the therapist explored any areas of the client's concerns through problem solving or role-playing.

Purpose: 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).

Example:

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) HOMEWORK ASSIGNED/ REVIEWED:

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 client's current problem. In addition, the therapist explained rationale of the homework.

Purpose: To determine the extent that the therapist collaborates with the client to develop, assign or review homework.

Example:

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) MANAGING BEHAVIOR VIA REINFORCEMENT:

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.

RATE: Frequency and level of intervention.

- 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.

Purpose: 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 youOh 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) MANAGING & BUILDING A BEHAVIOR VIA STIMULUS CONTROL:
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.

Purpose: 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) SELF-MONITORING:
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**)

Appendix M: Measure of Mastery of Therapeutic Skills

Mastery of Therapeutic Skills

Affective Education

1. Provides at least one example for each of the 3 B's
Brain – 1 pt
Body – 1 pt
Behavior – 1pt
2. Demonstrates understanding that thoughts cause feelings – 1 pt

Subtotal: 4 pts

Coping Skills

1. Names 5 Coping Strategies – 5 pts
2. Gives an example of at least one adaptive coping strategy – 1 pt

Subtotal: 6 pts

Problem Solving

1. Lists 5 P's – 6 pts
Problem – 1 pt
Purpose – 1 pt
Plans – 1 pt
Predict (1 pt) and Pick (1 pt) – 2 pts
Pat on Back – 1 pt
2. Uses 5 P's with an example – 12 pts
Gives example of each of the problem solving steps (1 pt for every plan, maximum 5 pts for plans – 12 pts)

For "Predict" –gets 1 pt for general understanding of assessing benefits of plans

--gets 2 pts for describing process of assessing benefits (e.g., using 5-star system)

Subtotal: 18 pts

Cognitive Restructuring

1. Demonstrates understanding that negative thoughts can be changed to improve mood – 1pt
2. Lists 3 Thought Judge Questions (or demonstrates understanding of them) – 3 pts
3. Identifies a negative thought – 1 pt
4. Identifies a more helpful thought – 1pt
(if the participant provides a general positive thought – 1pt; a thought more targeted in countering the negative thought – 2 pts; a targeted thought backed up with evidence – 3pts)

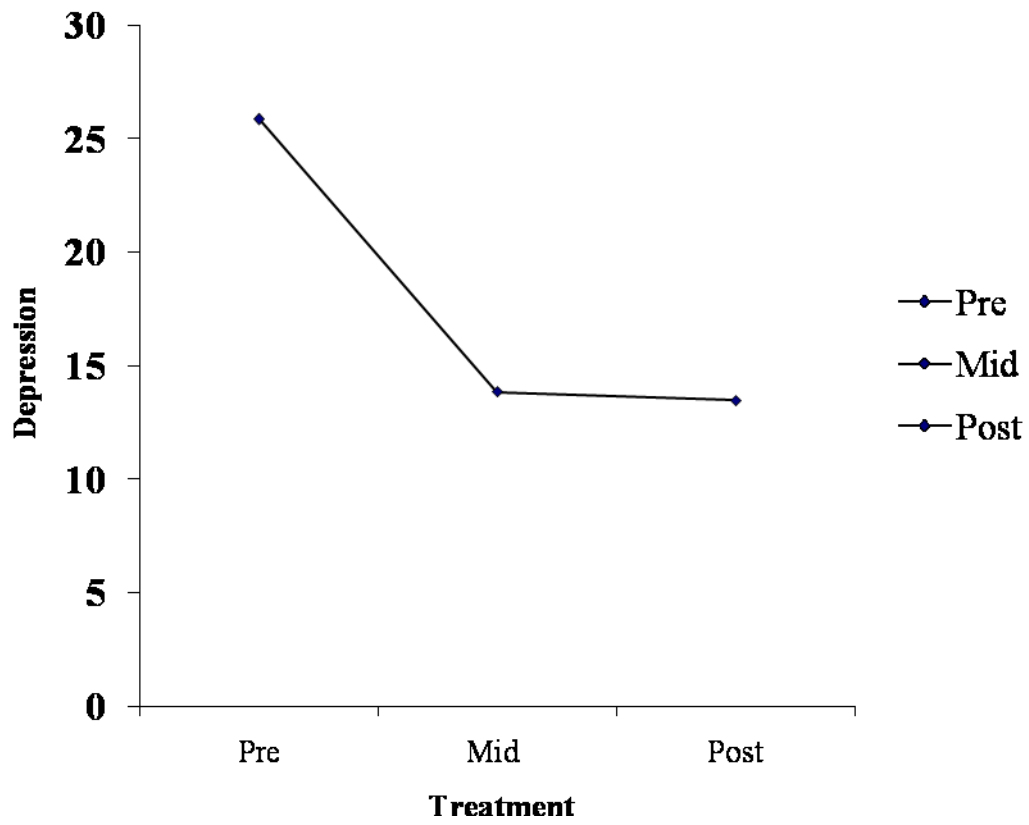
Subtotal: 8 pts

TOTAL: 36 pts

NOTES:

Appendix N: BYI-D Scores Across Treatment

BYI-D Scores across Treatment



References

- Abela, J. (2001). The hopelessness theory of depression: A test of the diathesis-stress and causal mediation components in third and seventh grade children. *Journal of Abnormal Child Psychology*, 29(3), 241-254.
- Abela, J. & D'Alessandro, D. (2002). Beck's cognitive theory of depression: A test of the diathesis-stress and causal mediation components. *British Journal of Clinical Psychology*, 41, 111-128.
- Abela, J., Vanderbilt, E., & Rochon, A. (2004). A Test of the Integration of the Response Styles and Social Support Theories of Depression in Third and Seventh Grade Children. *Journal of Social and Clinical Psychology*, 23, 653-674.
- Abramson, L.Y., Alloy, L.B., Hogan, M.E., Whitehouse, W.G., Cornette, M., Akhavan, S., et al. (1998). Suicidality and cognitive vulnerability to depression among college students: A prospective study. *Journal of Adolescence*, 21, 157-171.
- Abramson, L.Y., Alloy, L.B., Hogan, M.E., Whitehouse, W.G., Donovan, P., Rose, D.T., et al. (1999). Cognitive vulnerability to depression: Theory and evidence. *Journal of Cognitive Psychotherapy: An International Quarterly*, 14, 5-20.
- Abramson, L.Y., Metalsky, G.I., & Alloy, L.B. (1989). Hopelessness depression: a theory-based subtype of depression. *Psychological Review*, 96, 358-372.
- Abramson, L.Y., Seligman, M. E., Teasdale, J.D. (1978). [Learned helplessness in humans: Critique and reformulation.](#) *Journal of Abnormal Psychology*, 87(1), 49-74.

- Achenbach, T.M., & Edelbrock, C.S. (1983). *Manual for the Child Behavior Checklist*. Burlington: University of Vermont.
- Achenbach, T., McConaughy, S., & Howell, C. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101, 213-232.
- Agresti, A. & Finlay, B. (1997). *Statistical methods for the social sciences (3rd ed.)*. Upper Saddle River, NJ: Prentice Hall.
- Akiskal, H. S., McKinney, W.T. (1975). Overview of recent research in depression: Integration of ten conceptual models into a comprehensive clinical frame. *Archives of General Psychiatry*, 32(3), 285-305.
- Allgood-Merten, B., Lewinsohn, P.M., Hops, H. (1990). [Sex differences and adolescent depression](#). *Journal of Abnormal Psychology*, 99(1), 55-63.
- Alloy, L.B. (1988). *Cognitive processes in depression*. New York: Guilford Press.
- Alloy, L.B. & Abramson, L.Y. (1999). The Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project: Conceptual background, design, and methods. *Journal of Cognitive Psychotherapy: An International Quarterly*, 13, 227-262.
- Alloy, L.B., Abramson, L.Y., Hogan, M. E. (2000). The Temple-Wisconsin Cognitive Vulnerability to Depression Project: Lifetime history of Axis I psychopathology in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology*, 109(3), 403-418.
- Alloy, L.B., Abramson, L.Y., & Hogan, M.E. (2001). The Temple-Wisconsin Cognitive Vulnerability to Depression Project: Lifetime history of Axis I psychopathology in

- individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology, 109*, 403-418.
- Alloy, L.B., Abramson, L.Y., Metalsky, G.I., & Hartlage, S. (1988). The hopelessness theory of depression: Attributional aspects. *British Journal of Clinical Psychology, 27*, 5-21.
- Alloy, L.B., Abramson, L.Y., Hogan, M.E., Whitehouse, W.G., Rose, D.T., Robinson, M.S., et al. (2000). The Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project: Lifetime history of Axis I psychopathology in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology, 109*, 403-418.
- Alloy, L.B., Abramson, L.Y., Murray, L.A., Whitehouse, W.G., & Hogan, M.E. (1997). Self-referent information processing in individuals at high and low cognitive risk for depression. *Cognition and Emotion, 11*, 539-568.
- Alloy, L.B., Abramson, L.Y., Whitehouse, W.G., Hogan, M.E., Tashman, N.A., & Steinberg, D.L. (1999). Depressogenic cognitive styles: predictive validity, information processing and personality characteristics, and developmental origins. *Behaviour Research and Therapy, 37*(6), 503-531.
- Alloy, L., Abramson, L., Tashman, N., Berrebbi, D., Hogan, M., Whitehouse, W., et al. (2001). Developmental Origins of Cognitive Vulnerability to Depression: Parenting, Cognitive, and Inferential Feedback Styles of Parents of Individuals at High and Low Cognitive Risk for Depression. *Cognitive Therapy and Research, 25*(4), 397-423.
- Alloy, L. B., Albright, J. S., Fresco, D. M., & Whitehouse, W. G. (1995) Stability of

- cognitive styles across the mood swings of DSM-III cyclothymics, dysthymics, and hypomanics: A longitudinal study in college students. *Unpublished manuscript*, Temple University, Philadelphia, PA.
- Alloy, L.B., Lipman, and Abramson, L.Y. (1992). Attributional style as a vulnerability factor for depression: validation by past history of mood disorders. *Cognitive Therapy and Research*, 16, 391-407.
- Ambrosini, P.J. (2000). [Historical development and present status of the Schedule for Affective Disorders and Schizophrenia for School-Age Children \(K-SADS\).](#) *Journal of the American Academy of Child & Adolescent Psychiatry*, 39(1), 49-58.
- Ambrosini, P.J. & Dixon, J.F. (2000). *Schedule for affective disorders & schizophrenia for school age children (6-18 years) – Kiddie-SADS (K-SADS) (present state and lifetime version) K-SADS-IVR (Revision of K-SADS-IIIR)*. Unpublished manuscript. Eastern Pennsylvania Psychiatric Institute, Philadelphia, PA.
- Ambrosini, P.J., Metz, C., Prabucki, K., & Lee, J. (1989). Video tape reliability of the third revised edition of the K-SADS. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28, 723-728.
- American Academy of Child and Adolescent Psychiatry (1998). Practice parameters for the assessment and treatment of children and adolescents with depressive disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37(10 supplement), 63S-83S.

- American Association of University Women. (1992). *How schools shortchange girls: The AAUW report: A study of major findings on girls in education*. Washington, DC: American Association of University Women Educational Foundation.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders (3rd ed. Rev.)* Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorder (4th ed. TR)*. Washington, DC: Author.
- Anderson, J.C., Williams, S., McGee, R., & Silva, P.A. (1987). DSM-III disorders in early adolescent children. *Archives of General Psychiatry, 44*, 69-76.
- Apter, A., Orvaschel, H, Laseg, M., Moses, T., & Tyano, S. (1989). Psychometric properties of the K-SADS-P in an Israeli adolescent inpatient population. *Journal of the American Academy of Child and Adolescent Psychiatry, 28*, 61-65.
- Arbuckle, J. L. (2003). *Amos 5.0 update to the Amos user's guide*. Chicago: Smallwaters.
- Armsden, G.C., McCauley, E., Greenberg, M.T., Burke, P.M., & Mitchell, J.R. (1990). Parent and peer attachment in early adolescent depression. *Journal of Abnormal Child Psychology, 18*, 683-697.
- Asarnow, J.R., Goldstein, M.J., Thompson, M., & Guthrie, D. (1993). One-year outcomes of depressive disorder in child psychiatric in-patients: Evaluation of the prognostic power of a brief measure of expressed emotion. *Journal of Child Psychology, Psychiatry, and Allied Disciplines, 34*, 129-137.
- Atkinson, A.K. & Rickel, A.U. (1984). Postpartum depression in primiparous parents.

- Journal of Abnormal Psychology*, 93, 115-119.
- Avison, W.R. & McAlpine, D.D. (1992). Gender differences in symptoms of depression among adolescents. *Journal of Health and Social Behavior*, 33, 77-96.
- Bandura, A. (1965). [Influence of models' reinforcement contingencies on the acquisition of imitative responses.](#) *Journal of Personality & Social Psychology*, 1(6), 589-595
- Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart, & Winston.
- Barrera, M., & Garrison-Jones, C. (1992). Family and peer social support as specific correlates of adolescent depressive symptoms. *Journal of Abnormal Child Psychology*, 20, 1-16.
- Beardslee, W.R., Schultz, L.H., & Selman, R.L. (1987). Level of social-cognitive development, adaptive functioning, and DSM-III diagnoses in adolescent offspring of parents with affective disorders: Implications of the development of the capacity for mutuality. *Developmental Psychology*, 25, 807-815.
- Beardslee, W.R., Versage, E.M., & Gladstone, T.R. (1998). Children of affectively ill parents: A review of the past 10 years. *Journal of American Academy of Child & Adolescent Psychiatry*, 37, 1134-1141.
- Beardslee, W.R. & Wheelock, I. (1994). Children of parents with affective disorders: Empirical findings and clinical implications. In W.M. Reynolds & H.F. Johnston (Eds.), *Handbook of depression in children and adolescents* (pp. 463-479). New York: Plenum.
- Beck, A.T. (1967). *Depression: clinical, experimental and theoretical aspects*. New York: Harper & Row.

- Beck, A.T. (1972). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania Press. (Original work published 1967).
- Beck, A.T. (1976). *Cognitive Therapy and the Emotional Disorders*. New York: International Universities Press.
- Beck, A.T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy: an International Quarterly*, 1, 5-37.
- Beck, J.S., Beck, A.T., & Jolly, J.B. (2001). *Beck youth inventories of emotional and social impairment manual*. The Psychological Corporation.
- Beck, A.T., Brown, G., Steer, R.A., Eidelson, J.I., & Riskind, J.H. (1987). Differentiating anxiety and depression: A test of the cognitive content specificity hypothesis. *Journal of Abnormal Psychology*, 96, 179-183.
- Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.
- Beck, A.T., Weissman, A., Lester, D., & Traxler, L. (1974). Measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, 42, 861-865.
- Beckham, E.E., Leber, W.R., Watkins, J.T., Boyer, J.L., & Cook, J.B. (1986). Development of an Instrument to Measure Beck's Cognitive Triad: The Cognitive Triad Inventory, *Journal of Consulting and Clinical Psychology*, 54, 566-567.
- Belsher, G., & Costello, C.G. (1988). Relapse after recovery from unipolar depression: A

- critical review. *Psychological Bulletin*, 104, 84-96.
- Benjet, C., & Hernandez-Guzman, L. (2002). A short-term longitudinal study of pubertal change, gender, and psychological well-being of Mexican early adolescents. *Journal of Youth and Adolescence*, 31, 429-442.
- Billings, A.G. & Moos, R.H. (1983). Comparisons of children of depressed and non-depressed parents: A social-environmental perspective. *Journal of Abnormal Child Psychology*, 11, 463-486.
- Billings, A.G. & Moos, R.H. (1985). Children of parents with unipolar depression: A controlled 1-year follow-up. *Journal of Abnormal Child Psychology*, 14, 149-166.
- Birmaher B, Ryan N.D., & Williamson D.E. (1996) Childhood and adolescent depression: a review of the past 10 years. Part I. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 27-39.
- Birmaher, B., Williamson, D. E., & Dahl, R. E. (2004). [Clinical presentation and course of depression in youth: Does onset in childhood differ from onset in adolescence?](#) *Journal of the American Academy of **Child** & Adolescent Psychiatry*, 43, 63-70.
- Blatt, S.J., Wein, S.J., Chevron, E.S., & Quinlan D.M. (1979). Parental representations and depression in normal young adults. *Journal of Abnormal Psychology*, 88, 388-397.
- Brand, A.H., & Johnson, J.H. (1982). Note on the reliability of the life events checklist. *Psychological Reports*, 50, 1274.

- Brennan, P.A., Hammen, C., Katz, A.R., & LeBrocq, R.M. (2002). Maternal depression, paternal psychopathology, and adolescent diagnostic outcomes. *Journal of Consulting and Clinical Psychology, 70*, 1075-1085.
- Brewin, C., Firth-Cozens, J., Furnham, A., & McManus C. (1992). Self-criticism in adulthood and recalled childhood experience. *Journal of Abnormal Psychology, 101*, 561-566.
- Brown, G.W., & Harris, T.O. (1993). Etiology of anxiety and depressive disorders in an inner-city population. I. Early adversity. *Psychological Medicine, 23*, 143-154.
- Bruck, M.A., Mattia, J.I., Heinberg, R.G., & Holt, C.S. (1993). Cognitive specificity in social anxiety and depression: Supporting evidence and qualifications due to affective confounding. *Cognitive Therapy and Research, 17*, 1-21.
- Burke, P., Puig-Antich, J. (1990). Psychobiology of childhood depression. In M. Lewis & S. M. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 327-339). New York, NY, US: Plenum Press.
- Carey, M., Faulstich, M., Gresham, F., & Ruggiero, L. (1987). Children's Depression Inventory. Construct and discriminant validity across clinical and nonreferred (control) populations. *Journal of Consulting & Clinical Psychology, 55*, 755-761.
- Carlson, C.I. (1990). Assessing the family context. In C.R. Reynolds and R.W. Kamphaus (Eds.) *Handbook of Psychological and Educational Assessment of Children: Personality, Behavior, and Context* (pp. 546-575). New York: Guilford Press.
- Casper, R.C., Belanoff, J., & Offer, D. (1996). Gender differences, but no racial group

- differences, in self-reported psychiatric symptoms in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35, 500-508.
- Chambers, W.J., Puig-Antich, J., Hirsch, M., Paez, P., Ambrosini, P.J., Tabrizi, M.A. et al. (1985). The assessment of affective disorders in children and adolescents by semi-structured interview: Test-retest reliability for the schedule for affective disorders and schizophrenia for school-age children, present episode version. *Archives of General Psychiatry*, 42, 696-702.
- Cicchetti, D. (1991). [Fractures in the crystal: Developmental psychopathology and the emergence of self](#). *Developmental Review*, 11(3), *Special issue: The development of self: The first three years*, 271-287.
- Clarkin, J. F., Haas, G.L., Glick, I.D. (1988). [Affective disorders and the family: Assessment and treatment](#). New York: Guilford Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cole, D.A., Jacquez, F.M., & Maschman, T.L. (2001). Social origins of depressive cognitions: A longitudinal study of self-perceived competence in children. *Cognitive Therapy and Research*, 25, 377-396.
- Cole, D. & McPherson, A. (1993). Relation of family subsystems to adolescent depression: Implementing a new family assessment strategy. *Journal of Family Psychology*, 7, 119-133.
- Cole, D.A. & Rehm, L.P. (1986). Family interaction patterns and childhood depression. *Journal of Abnormal Child Psychology*, 14, 297-314.

- Cole, D.A., & Turner, J.E. (1993). Models of cognitive mediation and moderation in child depression. *Journal of Abnormal Psychology, 102*, 271-281.
- Compas, B.E., & Wagner, B.M. (1991). Psychosocial stress during adolescence: Intrapersonal and interpersonal processes. In M.E. Colton & S. Gore (Eds.), *Adolescent stress: causes and consequences*. (pp. 67-85). Hawthorne, NY: Aldine de Gruyter.
- Compton, K., Snyder, J., Schrepferman, L., Bank, L., & Shortt, J.W. (2003). The contribution of parents and siblings to antisocial and depressive behavior in adolescents: A double jeopardy coercion model. *Development and Psychopathology, 15*, 163-182.
- Cornah, D., Sonuga-Barke, E., Stevenson, J., & Thompson, M. (2003). The impact of maternal mental health and child's behavioural difficulties on attributions about child behaviours. *British Journal of Clinical Psychology, 42*, 69-79.
- Costello, E.J., Costello, A.J., Edelbrock, C., Burns, B.J., Dulcan, M.K., Brent, D., et al. (1988). Psychiatric disorders in pediatric primary care. *Archives of General Psychiatry, 45*, 1107-1116.
- Crittenden, P.M. & Ainsworth, M.D.S. (1989). Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect. In D. Cicchetti & V. Carlson (Eds.), [*Child maltreatment and attachment theory*](#).(pp. 432-463). New York, NY: Cambridge University Press.
- Culbertson, F.M. (1997). Depression and Gender. *American Psychologist, 52*, 25-31.

- Cummings, E.M., & Davies, P.T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry, 35*, 73-112.
- Cummings, E.M., DeArth-Pendley, G., Schudlich, T.D.R., & Smith, D.A. (2001). Parental depression and family functioning: Toward a process-oriented model of children's adjustment. In S.R.H. Beach (Ed.), *Marital and Family Processes in Depression: A Scientific Foundation for Clinical Practice* (pp. 89-110). Washington, DC: American Psychological Association.
- Depue, R.A., Slater, J., Wolfstetter-Kausch, H., Klein, D., Goplerud, E., & Farr, D. (1981). A behavioral paradigm for identifying persons at risk for bipolar spectrum disorder: A conceptual framework and five validation studies. *Journal of Abnormal Psychology, 90*, 381-487.
- Derogatis, L.R. (1983). *SCL-90-R administration, scoring, and procedures manual – third edition*. Minneapolis, MN: NCS Pearson, Inc.
- Derogatis, L.R., & Melisaratos, N. (1983). [The Brief Symptom Inventory: An introductory report](#). *Psychological Medicine, 13*(3), 595-605.
- Derogatis, L.R., Rickels, K., & Rock, A. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *British Journal of Psychiatry, 128*, 280-289.
- DeVellis, R.F. (1991). [Scale development: Theory and applications](#). Thousand Oaks, CA: Sage.
- Digdon, N., & Gotlib, I.H. (1985). Developmental considerations in the study of childhood depression. *Developmental Review, 5*, 162-199. Publications, Inc.

- Dixon, J. F. & Ahrens, A.H. (1992). [Stress and attributional style as predictors of self-reported depression in children](#). *Cognitive Therapy & Research*, 16(6), 623-634.
- Dmitrieva, J., Chen, C., Greenberger, E., & Gil-Rivas, V. (2004). Family relationships and adolescent psychosocial outcomes: Converging findings from Eastern and Western cultures. *Journal of Research and Adolescence*, 14(4), 425-447.
- Dobson, K. S., & Breiter, H. J. (1983). Cognitive assessment of depression: Reliability and validity of three measures. *Journal of Abnormal Psychology*, 92, 107-109.
- Donenberg, G.R., & Weisz, J.R. (1997). Experimental task and speaker effects on parent-child interactions of aggressive and depressed/anxious children. *Journal of Abnormal Child Psychology*, 25, 367-387.
- Downey, G., Coyne, J.C. (1990). [Children of depressed parents: An integrative review](#). *Psychological Bulletin*, 108(1), 50-76.
- Eaves, G. & Rush J. (1984). Cognitive patterns in symptomatic and remitted unipolar major depression. *Journal of Abnormal Psychology*, 93, 31-40.
- Epkins, C. (1996). Cognitive specificity and affective confounding in social anxiety and dysphoria in children. *Journal of Psychopathology and Behavioral Assessment*, 18, 83-101.
- Fergusson, D.M., & Horwood, L.J. (1999). Prospective childhood predictors of deviant peer affiliations in adolescence. *Journal of Child Psychology and Psychiatry*, 40(4), 581-592.

- Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1995). Maternal depressive symptoms and depressive symptoms in adolescents. *Journal of Child Psychology and Psychiatry*, *36*, 1161-1178.
- Field, T., Morrow, C., Healy, B., Foster, T., Adelstein, D., & Goldstein, S. (1992). Mothers with zero Beck depression scores act more depressed with their infants. *Development and Psychopathology*, *3*, 253-262.
- Finch, A., Lipovsky, J., & Casat, C. (1989). Anxiety and depression in children and adolescents: Negative affectivity or separate constructs? In P.C. Kendall & D. Watson (Eds.), *Anxiety and depression: Distinctive and overlapping features* (pp. 171-202). San Diego, CA: Academic Press, Inc.
- Finch, A.J., Saylor, C.F., Edwards, G.L., & McIntosh, J.A. (1987). Children's depression inventory: Reliability over repeated administrations. *Journal of Consulting and Clinical Psychology*, *16*, 339-341.
- Flynn, L. (1999). [The adolescent parenting program: Improving outcomes through mentorship](#). *Public Health Nursing*, *16*(3), 182-189.
- Forehand, R., Brody, G.H., Long, N., & Fauber, R. (1988). The interactive influence of adolescent and maternal depression on adolescent social and cognitive functioning. *Cognitive Therapy & Research*, *12*, 341-350.
- Frank, E., Anderson, B., Reynold, C.F., Ritenour, A., & Kupfer, D.J. (1994). Life events and the Research Diagnostic Criteria endogenous subtype. A confirmation of the distinction using the Bellford College Methods. *Archives of General Psychiatry*, *51*, 519-524.

- Gamble, S. & Roberts, J. (2005). Adolescents' perceptions of primary caregivers cognitive style: The roles of attachment security and gender. *Cognitive Therapy and Research, 29*, 123-141.
- Garber, J. (2000). [Development and depression](#). In A.J. Sameroff & M.Lewis (Eds.), *Handbook of developmental psychopathology (2nd ed.)*. (pp.467-490). Dordrecht, Netherlands: Kluwer Academic Publishers.
- Garber, J., & Flynn, C. (1998). Origins of depressive cognitive style. In D. Routh & R.J. DeRubeis (Eds.), *The science of psychology: Evidence of a century's progress*. (pp. 53-93.) Washington DC: American Psychological Association.
- Garber, J., & Flynn, C. (2001). Predictors of depressive cognitions in young adolescents. *Cognitive Therapy and Research, 25*, 353-376.
- Garber, J., Kriss, M.R., Koch, M., & Lindholm, L. (1988). Recurrent depression in adolescents: A follow-up study. *Journal of the American Academy for Child and Adolescent Psychiatry, 27*, 49-54.
- Garber, J., Robinson, N.S., & Valentiner, D. (1997). The relation between parenting and adolescent depression: Self-worth as a mediator. *Journal of Adolescent Research, 12*, 12-33.
- Garber, J., Weiss, B., & Shanley, N. (1993). Cognitions, depressive symptoms, and development in adolescents. *Journal of Abnormal Psychology, 102*, 47-57.
- Ge, X., Conger, R.D., & Elder, G.H. (2001). Pubertal transition, stressful life events, and the emergence of gender differences in adolescent depressive symptoms. *Developmental Psychology, 37*, 404-417.

- Gibb, B.E. Alloy, L.B., Abramson, L.Y., Rose, D.T., Whitehouse, W.G., Donovan, P., et al. (2001). History of childhood maltreatment, negative cognitive styles, and episodes of depression in adulthood. *Cognitive Therapy and Research*, 25, 425-446.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gladstone, T.R. & Kaslow, N.J. (1995). Depression and attributions in children and adolescents: A meta-analytic review. *Journal of Abnormal Child Psychology*, 23, 597-606.
- Goodman, S.H., & Gotlib, I.H. (1999). Risk for psychopathology in children of depressed mothers: A developmental model for understanding mechanisms of transmission. *Psychological Review*, 106, 458-490.
- Goodwin, F.K. (1982). [Potentiation of antidepressant effects by l-triiodothyronine in tricyclic nonresponders](#). *American Journal of Psychiatry*, 139(1), 34-38.
- Goodyer, Ian M.; Herbert, Joe; Scher, Sandra M., Pearson, J. (1997). Short-term outcome of major depression: I. Comorbidity and severity at presentation as predictors of persistent disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36, 179-187.
- Gotlib, I. H., Lewinsohn, P. M., & Seeley, J. R. (1998). Consequences of depression during adolescence: Marital status and marital functioning in early adulthood. *Journal of Abnormal Psychology*, 107, 686-690.

- Graber, J.A., Lewinsohn, P.M., Seeley, J.R., & Brooks-Gunn, J. (1997). Is psychopathology associated with the timing of pubertal development? *Journal of American Academy of Child and Adolescent Psychiatry*, 36(12), 1768-1776.
- Haines, B.A., Metalsky, G.I., Cardamone, A.L., & Joiner, T. (1999). Interpersonal and cognitive pathways into the origins of attributional style: A developmental perspective. In T. Joiner & J.C. Coyne (Eds.), *The Interactional Nature of Depression*, (pp.65-92). Washington DC: American Psychological Association.
- Hammen, C. (2000). Interpersonal factors in an emerging developmental model of depression. In Johnson, Sheri, Hayes, & Adele (Ed.) *Stress, Coping, & Depression* (pp. 71-88). Mahwah, NJ: Lawrence Erlbaum Publishers.
- Hammen, C. (2001). Vulnerability to psychopathology: Risk across the lifespan. In R.E. Ingram & J.M Price (Eds.), [*Vulnerability to depression in adulthood*](#). (pp. 226-257). New York, NY: Guilford Press.
- Hammen, C., & Brennan, P.A. (2001). Depressed adolescents of depressed and non-depressed mothers: Tests of an interpersonal impairment hypothesis. *Journal of Consulting and Clinical Psychology*, 69, 284-294.
- Hammen, C., Burge, D., Bruney, E., & Adrian, C. (1990). Longitudinal study of diagnoses in children of women with unipolar and bipolar affective disorder. *Archives of General Psychiatry*, 47, 1112-1117.
- Hammen, C. & Rudolph, K. (1996). Childhood depression. In E.J. Mash & R.A. Barkley (Eds.), *Child Psychopathology*. (pp. 153-195). New York, NY: Guildford Press.

- Hankin, B. & Abramson, L. (2001). [Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory.](#) *Psychological Bulletin*, 127(6), 773-796.
- Hankin, B.L., & Abramson, L.Y. (2002). Measuring cognitive vulnerability to depression in adolescence: Reliability, validity, and gender differences. *Journal of Clinical Child & Adolescent Psychology*, 31, 491-504.
- Hankin, B., Abramson, L., Miller, N., Haefffel, G. (2004). Cognitive vulnerability-stress theories of depression: examining affective specificity in the prediction of depression versus anxiety in three prospective studies. *Cognitive Therapy and Research*, 28, 309-346.
- Hankin, B.L., Abramson, L.Y., & Siler, M. (2001). A prospective test of the hopelessness theory of depression in adolescence. *Cognitive Therapy & Research*, 25, 607-632.
- Hankin, B.L., Abramson, L.Y., Siva, P.A., McGee, R., Moffitt, T.E., & Angell, K.E. (1998). Development of depression from preadolescence to young adulthood: Emerging gender differences in a 10-year longitudinal study. *Journal of Abnormal Psychology*, 107, 128-140.
- Hayward, C., Hurrelmann, K., Currie, C., & Rasmussen, V. (2003). *Gender Differences and Puberty*. New York, NY: Cambridge University Press.
- Hill, J.P., & Lynch, M.E. (1983). The intensification of gender-related role expectations during early adolescence. In J. Brooks-Gunn & A.C. Peterson (Eds.), *Girls at puberty* (pp. 201-228). New York: Plenum Press.
- Hill, C. V., Oei, T. P., & Hill, M. A. (1989). An empirical investigation of the specificity

- and sensitivity of the Automatic Thoughts Questionnaire and Dysfunctional Attitudes Scale. *Journal of Psychopathology & Behavioral Assessment*, 11, 291-311.
- Hilsman, R. & Garber, J. (1995). [A test of the cognitive diathesis- stress model of depression in children: Academic stressors, attributional style, perceived competence, and control.](#) *Journal of Personality & Social Psychology*, 69(2), 370-380.
- Hollon, S.D., & Kendall, P.C. (1980). Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. *Cognitive Therapy and Research*, 4, 383-395.
- Hollon, S. D., Kendall, P. C., & Lumry, A. (1986). Specificity of depressotypic cognitions in clinical depression. *Journal of Abnormal Psychology*, 95, 52-59.
- Hollon, S., Evans, M., & DeRubeis, R. (1988). Preventing relapse following treatment for depression: The cognitive pharmacotherapy project. In T. Field, P. McCabe & N. Schneiderman (Eds.), *Stress and coping across development*. (pp. 227–243). New York: Erlbaum.
- Hops, H. (1995). Age- and gender-specific effects of parental depression: A commentary. *Developmental Psychology*, 31, 428-431.
- Hops, H., Lewinsohn, P.M., Andrews, J.A., & Roberts, R.E. (1990). Psychosocial correlates of depressive symptomatology among high school students. *Journal of Clinical Child*, 3, 211-220.

- Horowitz, L.M., Rosenberg, S.E., Baer, B.A., Ureno, G., & Villasenor, V.S. (1988). Inventory of interpersonal problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology, 56*, 885-892.
- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.
- Ingram, R.E., Overbey, T., & Fortier, M. (2001). Individual differences in dysfunctional automatic thinking and parental bonding: Specificity of maternal care. *Personality and Individual Differences, 30*, 401-412.
- Jacob, T. & Johnson, S.L. (2001). [Sequential interactions in the parent-child communications of depressed fathers and depressed mothers.](#) *Journal of Family Psychology, 15(1)*, 38-52.
- Jacobs, L. & Joseph, S. (1997). Cognitive Triad Inventory and its association with symptoms of depression and anxiety in adolescents. *Personality & Individual Differences, 22*, 769-770.
- Jaenicke, C., Hammen, C., Zupan, B., Hiroto, D., Gordon, D., Adrian, C., et al. (1987). [Cognitive vulnerability in children at risk for depression.](#) *Journal of Abnormal Child Psychology, 15(4)*, 559-572.
- Jensen, P.S., Ryan, N.C., & Prien, R. (1992). Psychopharmacology of child and adolescent major depression: Present status and future directions. *Journal of Child and Adolescent Psychopharmacology, 2*, 31-45.
- Jewell, J.D. & Stark, K.D. (2003). Comparing the family environments of adolescents

with conduct disorder and depression. *Journal of Child & Family Studies*, 12, 77-89.

Johnson, J.H. & McCutcheon, S. (1980). Assessing life stress in older children and adolescents: Preliminary findings with the Life Events Checklist. In: I. Sarason & S. Spielberger (Eds.), *Stress and Anxiety*, 7, (pp.111-125). Washington, DC: Hemisphere.

Joiner, T., Metalsky, G., Lew, A., & Klocek, J. (1999). Testing the causal mediation of Beck's theory of depression: Evidence for specific mediation. *Cognitive Therapy and Research*, 23, 401-412.

Jolly, J.B. (1993). A multi-method test of the cognitive content-specificity hypothesis in young adolescents. *Journal of Anxiety Disorders*, 7, 223-233.

Jolly, J.B., Dyck, M.J., Kramer, T.A., & Wherry, J.N. (1994). Integration of positive and negative affectivity and cognitive content-specificity: Improved discrimination of anxious and depressed symptoms. *Journal of Abnormal Psychology*, 103, 544-552.

Jones, D.C. & Costin, S.E. (1995). Friendship quality during preadolescence and adolescence: The contributions of relationship orientations, instrumentality, and expressivity. *Merrill-Palmer Quarterly*, 41, 517-535.

Judd, L.L. (1997). The clinical course of unipolar major depressive disorders. *Archives of General Psychiatry*, 54, 989-991.

Kalat, J.W. (1992). [*Biological psychology \(4th ed.\)*](#). Belmont, CA: Wadsworth/Thomson Learning.

- Kandel, D.B. & Davies, M. (1982). Epidemiology of depressive mood in adolescents. *Archives of General Psychiatry*, 39, 1205-1212.
- Kandel, D.B., & Davies, M. (1986). Adult sequelae of adolescent depressive symptoms. *Archives of General Psychiatry*, 43, 255-262.
- Kane, P., & Garber, J. (2004). The relations among depression in fathers, children's psychopathology, and father-child conflict: a meta-analysis. *Clinical Child Review*, 24(3), 339-360.
- Kashani, J.H., Cantwell, D. P., Shekim, W.O., Reid, J.C. (1982). [Major depressive disorder in children admitted to an inpatient community mental health center.](#) *American Journal of Psychiatry*, 139(5), 671-672.
- Kashani, J.H., Carlson, G. A. (1987). [Seriously depressed preschoolers.](#) *American Journal of Psychiatry*, 144(3), 348-350.
- Kashani, J.H., McGee, R.O., Clarkson, S.E., Anderson, J.C., Walton, L.A., Williams, S., et al. (1983). Depression in a sample of 9-year-old children. *Archives of General Psychiatry*, 140, 1217-1223.
- Kashani, J.H.; Ray, J. S. (1983). [Depressive related symptoms among preschool-age children.](#) *Child Psychiatry & Human Development*, 13(4), 233-238.
- Kashani, J.H., Ray, J.S., & Carlson, G.A. (1984). Depression and depressive-like states in preschool-age children in a child developmental unit. *American Journal of Psychiatry*, 141, 1397-1402.

- Kashani, J.H., Reid, J.C., & Rosenberg, T.K. (1989). Levels of hopelessness in children and adolescents: A developmental perspective. *Journal of Consulting & Clinical Psychology, 57*, 496-499.
- Kashani, J.H., Orvaschel, H., Rosenberg, T.K., & Reid, J.C. (1989). Psychopathology in a community sample of children and adolescents: A developmental perspective. *Journal of the American Academy of Child and Adolescent Psychiatry, 28*, 701-706.
- Kashani, J.H., Suarez, L., Jones, M.R., & Reid, J.C. (1999). Perceived family characteristic differences between depressed and anxious children and adolescents. *Journal of Affective Disorders, 269-274*.
- Kashani, J.H., Vaidya, A.F., Soltys, S.M., Dandoy, A.C., & Reid, J.C. (1990). Life events and major depression in a sample of inpatient children. *Comprehensive Psychiatry, 31*, 266-274.
- Kaslow, N.J., Rehm, L.P., Pollack, S.L., & Siegel, A.W. (1988). Attributional style and self-control behavior in depressed and nondepressed children and their parents. *Journal of Abnormal Child Psychology, 16*, 163-175.
- Kaslow, N.J., Rehm, L.P., & Siegel, A.W. (1984). Social-cognitive and cognitive correlates of depression in children. *Journal of Abnormal Child Psychology, 12*, 605-620.
- Kaslow, N.J., Stark, K.D., Printz, B., Livingston, R., & Tsai, S. (1992). Cognitive Triad Inventory for Children: Development and Relation to Depression and Anxiety. *Journal of Clinical Child Psychology, 21*, 339-347.

- Kaslow, N.J., Tannenbaum, R.L., & Seligman, M.E.P. (1978). The KASTAN-R: A Children's Attributional Style Questionnaire (KASTAN-R-CASQ). Unpublished manuscript, University of Pennsylvania, Philadelphia.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., et al. (1997). Schedule for affective disorders and schizophrenia for school-age children – present and lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 980-988.
- Kavanagh, K. & Hops, H. (1994). Good girls? Bad boys? Gender and development as contexts for diagnosis and treatment. In T.H. Ollendick & R.J. Prinz (Ed.), *Advances in Clinical Child Psychology* (pp. 45-79). New York, NY: Plenum Press.
- Kazdin, A. (1988). Childhood depression. In E.J. Mash & L.G. Terdal (Eds.), *Behavioral assessment of childhood disorders* (2nd ed., pp. 157-195). New York: Guilford Press.
- Kazdin, A.E. & Weisz, J.R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology*, 66, 19-36.
- Keith, T.Z. (2006). *Multiple Regression and Beyond*. Boston: Allyn & Bacon.
- Keith, T.Z., Reimers, T.M., Fehrmann, P.G., Pottebaum, S.M., & Aubey, L.W. (1986). Parental Involvement, Homework, and TV Time: Direct and Indirect Effects on High School Achievement. *Journal of Educational Psychology*, 78, 373-380.

- Keenan-Miller, D., Hammen, C. L., & Brennan, P. A (2007). Health outcomes related to early adolescent depression. *Journal of Adolescent Health, 41*, 256-262.
- Kendall, P.C., Cantwell, D.A., & Kazdin, A.E. (1989). Depression in children and adolescents: Assessment issues and recommendations. *Cognitive Therapy and Research, 13*, 109-146.
- Kendall, P.C., Stark, K.D., & Adam, T. (1990). [Cognitive deficit or cognitive distortion of childhood depression.](#) *Journal of Abnormal Child Psychology, 18(3)*, 255-270.
- Kendler, K.S., Thornton, L.M., & Prescott, C.A. (2001). Gender differences in the rates of exposure to stressful life events and sensitivity to their depressogenic effects. *American Journal of Psychiatry, 158(4)*, 587-593.
- Kennard, B.D., Stewart, S.M., Hughes, J. L., Jarrett, R. B., & Emslie, G J. (2004). Developing cognitive behavioral therapy to prevent depressive relapse in youth. *Cognitive and Behavioral Practice, 15(4)*, 387-399.
- Klein, D.N., Clark, D.C., Dansky, L., & Margolis, E.T. (1988). Dysthymia in the offspring of parents with primary Unipolar Affective Disorder. *Journal of Abnormal Psychology, 97*, 265-274.
- Klein, D.N., Lewinsohn P.M., Rohde, P., Seeley, J.R., Durbin, C.E. (2002). Clinical features of major depressive disorder in adolescents and their relatives: Impact on familial aggregation, implications for phenotype definition, and specificity of transmission. *Journal of Abnormal Psychology, 111*, 98-106.

- Klerman, G. K. & Weissman, M.M. (1989). Increasing rates of depression. *Journal of the American Medical Association*, 261, 2229-2235.
- Kovacs, M. (1981). [Rating scales to assess depression in school-aged children](#). *Acta Paedopsychiatrica: International Journal of Child & Adolescent Psychiatry*, 46(5-sup-6), 305-315.
- Kovacs, M. (1985). [The natural history and course of depressive disorders in childhood](#). *Psychiatric Annals*, 15(6), 387-389.
- Kovacs, M. (1989). Affective disorders in children and adolescents. *American Psychologist*, 44, 209-215.
- Kovacs, M. (1992). *Children's depression inventory (CDI) manual*. North Tonawanda, NY: Multi-Health Systems, Inc.
- Kovacs, M., Akiskal, H. S., & Gatsonis, C. & Parrone, P.L., (1994). Childhood-onset dysthymic disorder: Clinical features and prospective naturalistic outcome. *Archives of General Psychiatry*, 51, 365-374.
- Kovacs, M. & Beck, A.T. (1978). Maladaptive cognitive structures in depression. *American Journal of Psychiatry*, 135, 525-533.
- Kovacs, M., Feinberg, T. L., Crouse-Novak, M.A., Paulauskas, S.L., & Finkelstein, R. (1984). Depressive disorders in childhood, I. A longitudinal prospective study of characteristics and recovery. *Archives of General Psychiatry*, 41, 229-237.
- Last, C.G. & Strauss, C.C. (1990). School refusal in anxiety disordered children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 31-35.

- Leadbeater, B.J., Blatt, S.J., & Quinlan, D.M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress, and problem behaviors in adolescents. *Journal of Research on Adolescence*, 5, 1-29.
- Lewinsohn, P.M. (1974). [A behavioral approach to depression](#). In R.J. Friedman & M.M. Katz (Eds.), *Psychology of depression: Contemporary theory and research*. Oxford, England: John Wiley & Sons.
- Lewinsohn, P.M., Clarke, G.N., Seeley, J.R., Rohde, P. (1994). Major depression in community adolescents: age at onset, episode duration, and time to recurrence. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 809-818.
- Lewinsohn, P.M., Hoberman, H.M., & Rosenbaum, M. (1988). A prospective study of risk factors for unipolar depression. *Journal of Abnormal Psychology*, 97, 251-264.
- Lewinsohn, P.M., Hops, H., Roberts, R.E., Seeley, J.R., & Andrews, J.A. (1993). Adolescent psychopathology: I. Prevalence and incidence of depression and other DSM-III-R disorders in high school students. *Journal of Abnormal Psychology*, 102, 133-144.
- Lewinsohn, P.M., Roberts, R.E., Seeley, J.R., Rhode, P., et al. (1994). [Adolescent psychopathology: II. Psychosocial risk factors for depression](#). *Journal of Abnormal Psychology*, 103(2), 302-315.
- Lewinsohn, P. M., Rohde, P., Klein, D. M., & Seeley, J. R (1999). Natural course of

- adolescent major depressive disorder: I. Continuity into young adulthood.
Journal of the American Academy of Child and Adolescent Psychiatry, 38, 56-63.
- Lewinsohn, P.M., Rohde, P., Seeley, J.R., Klein, D.H., & Gotlib, I.H. (2003).
Psychosocial functioning of young adults who have experienced and recovered
from major depressive disorder during adolescence. *Journal of Abnormal
Psychology*, 112, 353-363.
- Lukens, E., Puig-Antich, J., Behn, J., Goetz, R., Tabrizi, M., & Davies, M. (1983).
Reliability of the psychosocial schedule for school-age children. *Journal of the
American Academy of Child and Adolescent Psychiatry*, 22, 29-39.
- MacMillan, H.L., Fleming, J.E., Streiner, D.L., Lin, E., Boyle, M.H., Jamieson, E. (2001).
Childhood abuse and lifetime psychopathology in a community sample. *American
Journal of Psychiatry*, 158(11), 1878-1883.
- Marcotte, D., Alain, M., & Gosselin, M. (1999). Gender differences in adolescent
depression: Gender-typed characteristics or problem-solving skills deficits? *Sex
Roles*, 41, 31-48.
- Margolin, G., Oliver, P.H., Gordis, E.B., O'Hearn, H.G., Medina, A.M., Ghosh, C.M., et
al. (1998). The nuts and bolts of behavioral observation of marital and family
interaction. *Clinical Child and Family Psychology Review*, 1, 195-213.
- McCauley, E., Mitchell, J.R., Burke, P., & Moss, S. (1988). Cognitive attributes of
depression in children and adolescents. *Journal of Consulting and Clinical
Psychology*, 56, 903-908.

- McCauley, E., Myers, K., Mitchell, J., Calderon, R., Schloredt, K., & Treder, R. (1993). Depression in young people; Initial presentation and clinical course. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 611-619.
- McCranie, E. & Bass, J. (1984). Childhood family antecedents of dependency and self-criticism: Implications for depression. *Journal of Abnormal Psychology, 93*, 3-8.
- McDermut, W., & Haaga, D.A.F. (1994). Cognitive balance and specificity in anxiety and depression. *Cognitive Therapy and Research, 18*, 333-352.
- McDermut, J., Haaga, K., & Bilck, L. (1997). Cognitive Bias and Irrational Beliefs in Major Depression and Dysphoria. *Cognitive Therapy and Research, 21*, 459-476.
- McFarlane, A.H., Bellissimo, A., Norman, G., & Lange, P. (1994). Adolescent depression in a school-based community sample: Preliminary findings on contributing social factors. *Journal of Youth & Adolescence, 23*, 601-620.
- McGinn, L.K., Cukor, D., & Sanderson, W.C. (2005). The Relationship Between Parenting Style, Cognitive Style, and Anxiety and Depression: Does Increased Early Adversity Influence Symptom Severity Through the Mediating Role of Cognitive Style? *Cognitive Therapy and Research, 29*(2), 219-242.
- Metalsky, G.I., Joiner, T.E., Hardin, T.S., & Abramson, L.Y. (1993). Depressive reactions to failure in a naturalistic setting: a test of the hopelessness and self-esteem theories of depression. *Journal of Abnormal Psychology, 102*, 101-109.
- Moos, R.H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: Resolving the case of the family environment scale. *Family Process, 15*, 199-208.

- Moos, R.H., & Moos, B.S. (1981). *Family Environment Scale Manual*. Palo Alto, CA: Consulting Psychologists Press.
- Nelson, D.R., Hammen, C., Brennan, P.A., & Ullman, J.B. (2003). The impact of maternal depression on adolescent adjustment: The role of expressed emotion. *Journal of Consulting and Clinical Psychology, 71*, 935-944.
- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101*, 259-282
- Nolen-Hoeksema, S. (1990). *Sex Differences in Depression*. Stanford University Press.
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100(4)*, 569-582.
- Nolen-Hoeksema, S. (1995). Epidemiology and theories of gender differences in unipolar depression. In M.V. Seeman (Ed.) *Gender and Psychopathology*, (pp.63-87). Washington, DC: American Psychiatric Press.
- Nolen-Hoeksema, S. & Girgus, J.S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin, 115*, 424-443.
- Nolen-Hoeksema, S., Girgus, J., & Seligman, M.E.P. (1992). Predictors and consequences of childhood depressive symptoms: A 5-year longitudinal study. *Journal of Abnormal Psychology, 101*, 405-422.
- O'Connor, T.G., Thorpe, K., Dunn, J., & Golding, J. (1999). Parental divorce and adjustment in adulthood: Findings from a community sample. *Journal of Child Psychology and Psychiatry, 40(5)*, 777-789.

- Olson, D.H., Portner, J., & Lavee, Y. (1985). *FACES III*. St. Paul, MN: Family Social Science, University of Minnesota.
- Orvaschel, H., Walsh-Allis, G., & Ye, W. (1988). Psychopathology in children of parents with recurrent depression. *Journal of Abnormal Child Psychology*, 16, 17-28.
- Ostrander, R., Weinfurt, K., & Nay, W. (1998). The role of age, family support, and negative cognitions in the prediction of depressive symptoms. *School Psychology Review*, 27, 121-137.
- Ostrov, E., Offer, D., & Howard, K.I. (1989). Gender differences in adolescent symptomatology: A normative study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28, 394-398.
- Patel, P. (2009). Investigating the Role of Cognitive and Behavioral Components in Cognitive Behavioral Treatment for Depressed Early Adolescent Girls. *Unpublished Dissertation*.
- Pavlidis, K., & McCauley, E. (2001). Autonomy and relatedness in family interactions with depressed adolescents. *Journal of Abnormal Child Psychology*, 29, 11-21.
- Persons, J. B., & Miranda, J. (1992). Cognitive theories of vulnerability to depression: Reconciling negative evidence. *Cognitive Therapy and Research*, 16, 485-502.
- Petersen, A.C., Compas, B.E., Grooms-Gunn, J., Stemmler, M., Ey, S., & Grant, K.E. (1993). Depression in Adolescence. *American Psychologist*, 48, 155-168.
- Peterson, A.C., Sarigiani, P.A., & Kennedy, R.E. (1991). Adolescent depression: Why more girls? *Journal of Youth and Adolescence*, 20, 247-271.

- Pine, D.S., Cohen, P., Johnson, J.G., & Brook, J.S. (2002). Adolescent life events as predictors of adult depression. *Journal of Affective Disorders, 68(1)*, 49-57.
- Plummer, C.M., (2001). [The effect of training on therapist skill acquisition in cognitive-behavioral therapy](#). *Dissertation Abstracts International, 61*, 10-B. Retrieved October 28, 2009 from Dissertations and Theses database.
- Puig-Antich, J., Kaufman, J., Ryan, N.D., Williamson, D.E., Dahl, R.E., Lukens, E., et al. (1993). The psychosocial functioning and family environment of depressed adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 32(2)*, 244-253.
- Puig-Antich, J., Lukens, E., Davies, M., Goetz, D., Brennan-Quattrock, J., & Todak, G. (1985). Psychosocial functioning in prepubertal major depressive disorders I. Interpersonal relationships during the depressive episode. *Archives of General Psychiatry, 42*, 500-507.
- Puig-Antich, J., & Ryan, N. (1986). Schedule for Affective Disorders and Schizophrenia for School-Age Children (Present Episode version, 4th working draft). Pittsburgh, PA: Western Psychiatric Institute and Clinic.
- Radke-Yarrow, M., Belmont, B., Nottelmann, E., & Bottomly, L. (1990). Young children's self-conceptions: Origins in the natural discourse of depressed mothers and their children. In D. Cicchetti & M. Beeghly (Ed.) *Self in transition: Infancy to Childhood* (pp. 345-361). Chicago, IL: University of Chicago Press.
- Randolph, J. & Dykman, B. (1998). Perceptions of parenting and depression-proneness in

- the offspring: Dysfunctional attitudes as a mediating mechanism. *Cognitive Therapy & Research*, 22, 377-400.
- Rao, U., Ryan, N.D., Birmaher, B., Dahl, R.E., Williamson, D.E., Kaufman, J., et al. (1995). Unipolar depression in adolescents: clinical outcome in adulthood. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 566-578.
- Reynolds, C.R. (1986). [The elusive professionalism of school psychology: Lessons from the past, portents for the future.](#) *Professional School Psychology*, 1(1), 41-46.
- Rholes, W.S., Blackwell, J., Jordan, C., & Walters, C. (1980). A developmental study of learned helplessness. *Developmental Psychology*, 16, 616-624.
- Robinson, N.S., Garber, J., & Hilsman, R. (1995). Cognitions and stress: Direct and moderating effects on depressive versus externalizing symptoms during the junior high school transition. *Journal of Abnormal Psychology*, 104, 453-463.
- Rohde, P., Lewinsohn, P. M., & Seeley, J.R. (1991). [Comorbidity of unipolar depression: II. Comorbidity with other mental disorders in adolescents and adults.](#) *Journal of Abnormal Psychology*, 100(2), 214-222.
- Rose, D.T. & Abramson, L.Y. (1992). Developmental predictors of depressive cognitive style: Research and theory. In D. Cicchetti & S.L. Toth (Eds.), *Rochester symposium on developmental psychopathology* (pp. 323-349). Hillsdale, NJ: Erlbaum.
- Rose, D.T., Abramson, L. Y., & Hodulik, C.J.(1994). [Heterogeneity of cognitive style among depressed inpatients.](#) *Journal of Abnormal Psychology*, 103(3), 419-429.

- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rudolph, K.D., & Hammen, C. (1999). Age and gender as determinants of stress exposure, generation, and reactions in youngsters: A transactional perspective. *Child Development, 70*, 660-677.
- Rush, A.J. & Beck, A.T. (1978). Cognitive therapy of depression and suicide. *American Journal of Psychotherapy, 32*, 201-219.
- Sander, J.B. & McCarty, C. A. (2005). Youth depression in the family context: Familial risk factors and models of treatment, *Clinical Child and Family Psychology review, 8(3)*, 203-219.
- Sanford, M., Szatmari, P., Spinner, M., Monroe-Blum, H., Jamieson, E., Walsh, C., et al. (1995). Predicting the one-year course of adolescent major-depression. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1618-1628.
- Scafidi, F. A., Field, T., Prodromidis, & M., Abrams, S. (1999). Association of fake-good MMPI-2 profiles with low Beck Depression Inventory scores. *Adolescence, 34 (133)*, 61-68.
- Scher, C.D., Segal, Z.V., & Ingram, R.E. (2004). Beck's theory of depression: Origins, empirical status, and future directions for cognitive vulnerability. In R. Leahy (Ed.) *Contemporary cognitive therapy: Theory, research, and practice* (pp. 27-44). New York, NY, US: Guilford Press.

- Schumm, W.R. (2001). Evolution of the family field: Measurement principles and techniques. In J.Touliatos, B.F. Perlmutter, & M.A. Straus (Eds.), *Handbook of Family Measurement Techniques: Vol. 1* (pp. 1-8). London: Sage Publications.
- Schwartz, J.A.; Kaslow, N.J.; Seeley, J., & Lewinsohn, P. (2000). [Psychological, cognitive, and interpersonal correlates of attributional change in adolescents.](#) *Journal of Clinical Child Psychology*, 29(2), 188-198.
- Secunda, S., Katz, M., & Friedman, R. (1973). The depressive disorders in 1973. National Institute of Mental Health. Washington, D.C.: Government Printing Office.
- Segal, Z.V. & Ingram, R.E. (1994). Mood priming and construct activation in tests of cognitive vulnerability to unipolar depression. *Clinical Psychology Review*, 14, 663-695.
- Seligman, M.E.P. (1975). *Helplessness: on depression, development, and death*. San Francisco: W.H. Freeman.
- Seligman, Martin E. P. (1998). Science of clinical psychology: Accomplishments and future directions. In D.K. Routh, R.J. DeReubeis (Eds.), [The prediction and prevention of depression](#) (pp. 201-214). Washington, DC.: American Psychological Association.
- Seligman, M. E., Abramson, L. Y., & Semmel, A. (1979). [Depressive attributional style.](#) *Journal of Abnormal Psychology*, 88(3), 242-247.

- Seligman, M.E.P., Peterson, C., Kaslow, N.J., Tanenbaum, R.L., Alloy, L.B., & Abramson, L.Y. (1984). Attributional style and depressive symptoms among children. *Journal of Abnormal Psychology, 93*, 235-238.
- Seligman, M.E.P., & Peterson, C. (1986). A learned helplessness perspective on childhood depression: Theory and research. In M.Rutter, C.E. Izard, & P.B. Read (Eds.), *Depression in young people: Developmental and clinical perspectives*, (pp. 223-249). New York: Guilford Press.
- Servaty, H.L., & Hayslip, B.J. (2001). Adjustment to loss among adolescents. *Omega: Journal of Death and Dying, 43(4)*, 311-330.
- Shaw, J.M. & Scott, W.A. (1991). Influence of parent discipline style on delinquent behaviour: The mediating role of control orientation. *Australian Journal of Psychology, 43(2)*, 61-67.
- Sheeber, L., Hops, H., Alpert, A., Davis, B., & Andrews, J. (1997). Family support and conflict: Prospective relations to adolescent depression. *Journal of Abnormal Child Psychology, 25*, 333-344.
- Sheeber, L., & Sorensen, E. (1998). Family relationships of depressed adolescents: A multimethod assessment. *Journal of Clinical Child Psychology, 27*, 268-277.
- Siegal, J.M. (2002). Body image change and adolescent depressive symptoms. *Journal of Adolescent Research, 17(1)*, 27-41.
- Siegal, J.M., Yancey, A.K., Aneshensel, C.S., & Schuler, R. (1999). Body image, perceived pubertal timing, and adolescent mental health. *Journal of Adolescent Health, 25*, 155-165.

- Skinner, H.A., Steinhauer, P.D., & Santa-Barbara, J. (1983). The family assessment measure. *Canadian Journal of Community Mental Health, 2*, 9-105.
- Smucker, M.R., Craighead, W.E.; Craighead, L.W., & Green, B. (1986). [Normative and reliability data for the Children's Depression Inventory](#). *Journal of Abnormal Child Psychology, 14(1)*, 25-39.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp.290-312). San Francisco: Jossey-Bass.
- Spitzer, R.L., Endicott, J., & Robins, E. (1978). Research diagnostic criteria: Rationale and reliability. *Archives of General Psychiatry, 35*, 773-782.
- Sroufe, L. A. (1990). [Considering normal and abnormal together: The essence of developmental psychopathology](#). *Development & Psychopathology, 2(4)*, 335-347.
- Stark, K.D. (2002). Diagnostic Statistical Manual of Mental Disorders Interview. Unpublished Manuscript.
- Stark, K.D. (2002). *The Self-Report Measure of Family Functioning-Child Revised*. Unpublished manuscript, University of Texas at Austin.
- Stark, K.D., Brookman, C.S., & Frazier, R. (1990). A comprehensive school-based treatment program for depressed children. *School Psychology Quarterly, 5(20)*, 111-140.
- Stark, K. D., Hargrave, J., Sander, J., Custer, G., Schnoebelen, S., Simpson, J. et al. (2006). Treatment of childhood depression: The ACTION treatment program. In P.

- C. Kendall (Ed.) *Child and Adolescent Therapy: Cognitive Behavioral Procedures*, 3rd ed. (pp. 169-216). New York: Guilford Press.
- Stark, K.D., Humphrey, L.L., Crook, K., & Lewis, K. (1990). Perceived family environments of depressed and anxious children: Child's and maternal figure's perspectives. *Journal of Abnormal Child Psychology*, 18, 527-547.
- Stark, K.D. & Sander, J.B. (2002). *Diagnostic and statistical manual brief symptom interview for depression*. Unpublished Manuscript, University of Texas at Austin.
- Stark, K.D., Sander, J.B., Yancy, M.G., Bronik, M.D., & Hoke, J.A. (2000). Treatment of depression in childhood and adolescence: Cognitive-behavioral procedures for the individual and the family. In *Child and Adolescent Therapy: Cognitive-Behavioral Procedures* (pp 173-234, 2nd ed.). New York: Guilford Press.
- Stark, K.D., Schmidt, K., & Joiner, T.E. (1996). Depressive cognitive triad: Relationship to severity of depressive symptoms in children, parents' cognitive triad, and perceived parental messages about the child him or herself, the world, and the future. *Journal of Abnormal Child Psychology*, 24, 615-625.
- Stice, E., Presnell, K., & Bearman, S.K. (2001). Relation of early menarche to depression, eating disorders, substance abuse, and comorbid psychopathology among adolescent girls. *Developmental Psychology*, 37(5), 608-619.
- Strober, M., Lampert, C., Schmidt, S., & Morrell, W. (1993). The course of major depressive disorder in adolescents: I. Recovery and risk of manic switching in a follow-up of psychotic and nonpsychotic subtypes. *Journal of the American Academy of Child and Adolescent Psychiatry*. 32, 34-42.

- Sullivan, P.F., Neale, M.C., & Kendler, K.S. (2000). Genetic epidemiology of major depression. Review of meta-analysis. *American Journal of Psychiatry*, *157*(10), 1552-1562.
- Thoits, P.A. (1983). Dimensions of life events that influence psychological distress: An evaluation and synthesis of the literature. In H.B. Kaplan (Ed.), *Psychosocial stress: Trends in theory and research* (pp.33-103). New York: Academic Press.
- Thompson, M., Kaslow, N., Weiss, B., & Nolen-Hoeksema, S. (1998). Children's Attributional Style Questionnaire – Revised: Psychometric examination. *Psychological Assessment*, *10*, 166-170.
- Timbremont, B., Braet, C., & Dreesen, L. (2004). Assessing Depression in Youth: Relation Between the Children's Depression Inventory and a Structured Interview. *Journal of Clinical Child & Adolescent Psychology*, *33*, 149-157.
- Toth, S.L., & Cicchetti, D. (1996). Patterns of relatedness, depressive symptomology, and perceived competence in maltreated children. *Journal of Consulting & Clinical Psychology*, *64*, 32-41.
- Toth, S.L., Cicchetti, D., Kim, J. (2002). Relations among children's perceptions of maternal behavior, attributional styles, and behavioral symptomatology in maltreated children. *Journal of Abnormal Child Psychology*, *30*(5), 487-500.
- Tram, J.M. & Cole, D.A. (2000). Self-perceived competence and the relation between life events and depressive symptoms in adolescence: Mediator or moderator? *Journal of Abnormal Psychology*, *109*(4), 753-760.

- Turner, J.E. & Cole, D.A. (1994). Developmental differences in cognitive diatheses for child depression. *Journal of Abnormal Child Psychology*, 22, 15-32.
- Van der Veen, F. (1965). The parent's concept of the family unit and child adjustment. *Journal of Counseling Psychology*, 12, 196-200.
- Weissman, A., & Beck, A. T. (1978). Development and validation of the dysfunctional attitudes scale. *A paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy*, Chicago.
- Weissman, M. M. & Klerman, G. L. (1977). [Sex differences and the epidemiology of depression](#). *Archives of General Psychiatry*, 34(1), 98-111.
- Weller, R.A., Kapadia, P., Weller, E.B., Fristad, M., Lazaroff, L.B., & Preskorn, S.H. (1994). Psychopathology in families of children with major depressive disorders. *Journal of Affective Disorders*, 31, 247-252.
- Whisman, M.A., & Kwon, P. (1992). Parental representations, cognitive distortions, and mild depression. *Cognitive Therapy and Research*, 16, 557-568.
- White, C. & Barrowclough, C. (1998). [Depressed and non-depressed mothers with problematic preschoolers: Attributions for child behaviours](#). *British Journal of Clinical Psychology*, 37(4), 385-398.
- Williamson, D.E., Birmaher, B., Axelson, D.A., Ryan, N.D., & Dahl, R.E. (2004). First episode of depression in children at low and high familial risk for depression. [Journal of the American Academy of Child & Adolescent Psychiatry](#), 43(3), 291-297.

Wong, M.M., & Csikszentmihalyi, M. (1991). Affiliation motivation and daily experience: Some issues on gender differences. *Journal of Personality & Social Psychology, 60*, 154-164.

Zauszniewski, J., Panitrat, R., & Youngblut, J. (1999). The children's Cognitive Triad Inventory: Reliability, validity, and congruence with Beck's cognitive triad theory of depression. *Journal of Nursing Measurement, 7*, 101-115.

VITA

Lynn Mie Monnat was born and raised in Honolulu Hawai'i. She attended McKinley High School in Honolulu and in 1988, she entered the University of Hawai'i at Manoa in Honolulu, Hawai'i. She received the degree of Bachelor of Arts in Psychology with a minor in Religion from the University of Hawai'i at Manoa in December 1993. During the following years she was employed at the Brown-Karhan Rehabilitation Center in Dripping Springs, Texas providing direct care to head-injured adults and individuals diagnosed with Schizophrenia. She was also employed as a direct care worker and supervisor at the Oaks Psychiatric Hospital in Austin, Texas, providing mental health services to adolescent boys and girls with multiple diagnoses on an acute-care unit. In September 2003, she entered the School Psychology program in the Educational Psychology department at the University of Texas at Austin. She has worked on the ACTION project throughout graduate school in multiple roles. In July 2009, she completed her clinical internship at UC Davis Children's Hospital, the CAARE Center, serving primarily maltreated children and their families.

Permanent Address: 1804 A Prairie Knoll Court; Austin, Texas 78758

This dissertation was typed by the author.