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A REVIEW OF SCHOOL-BASED INTERVENTIONS FOR
CHILDREN AND ADOLESCENTS
WHO SUFFER FROM DEPRESSIVE SYMPTOMS

by

Sherry L. Hlavaty

A paper submitted in partial fulfillment
of the requirements for the degree

of

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in

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Approved:

UTAH STATE UNIVERSITY
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ABSTRACT

A Review of School-Based Interventions for Children and Adolescents who suffer from
Depressive Symptoms

by

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Utah State University, 2005

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This paper provides a brief review of childhood and adolescent depressive disorders and the importance of treating such symptoms within a school setting. The purpose of this paper was to examine published studies that were conducted in schools and were designed to treat symptoms of depression in children and adolescents. Active treatments utilized in this review were shown to be effective in reducing symptoms of depression. Most active treatment conditions involved intervention components that are commonly used in conjunction with typical cognitive-behavioral therapies. Further research is needed to determine the effectiveness of specific programs and program components. Implications of the present research is presented for use by school-based mental health practitioners.

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Sherry L. Hlavaty

Overview of Childhood and Adolescent Depression

Depression is one of the most widely diagnosed mental health disorders among children and adolescents today. According to a recent National Institute of Mental Health Publication, the diagnosis of depression affects approximately “2.5 percent of children and 8.3 percent of adolescents in the United States” (NIMH, 2000). These numbers indicate an increase in the diagnosis over the last several years, as well as the difference age can play in the expression of the disorder. Research also indicates that preschool aged children are less likely to suffer from depressive disorders than any other age group (Schwartz et al., 1998).

Research suggests that rates of depression also differ significantly based on gender. When Anderson, Williams, McGee, and Silva (1987) reviewed studies on pre-pubertal children, they found that boys had higher rates of depression than girls (as cited in Schwartz et al., 1998). However, it has also been noted that “by age 15, females are twice as likely as males to receive a depressive diagnosis” (Schwartz et al., 1998, p.277). This usually coincides with early adolescence and the onset of puberty for females. This difference is also consistent with adult rates of depression (Kopelwicz, 2002).

The importance of understanding and conceptualizing this disorder among children and adolescents is becoming more of a focus for researchers and practitioners alike. Depression affects multiple areas of personal functioning, including behavioral, emotional, and cognitive functioning, that can interfere with a child and adolescent’s development as a functioning, contributing member of society (Kopelwicz, 2002; Reynolds, 1990).

Problems resulting from depressive disorders can range from simple changes in mood, to major changes related to sleeping habits, eating habits, energy levels, and general physical health (Evans et al., 2002). Children and adolescents who suffer from depression and are left untreated are at-risk for many significant problems (Klerman & Weissman, 1989). The negative effects that depression can have on the ability to think and focus in school can lead to many academic problems and school failure (Evans et al., 2002; Kopelwicz, 2002; Merrell, 2001). It has been suggested that because of the school problems that can arise, children who are depressed are at higher risk for dropping out of school, as well as drug and alcohol abuse (Evans et al., 2002). Researchers have also suggested that, because of the difficulties that are involved with depressive symptoms and the emotional and hormonal changes that children and adolescents go through, they are even more at-risk for later depressive episodes or suicide, especially if the depression is left untreated (Klerman & Weissman, 1989; Kopelwicz, 2002).

Depression in children and adolescents can also negatively impact their relationships with family members and teachers. Emotional outbursts and moodiness are considered typical child and adolescent behaviors, however they are also symptoms of depression in children and adolescents. These disruptive behaviors tend to add more stress to the home and school environments, for both the youth and the adults. Parents and teachers tend to perceive children and adolescents who exhibit these types of behaviors as behavioral problems, rather than considering an underlying problem of depression. This perception can lead to harsh discipline strategies and coercion, which may exacerbate the depressed feelings that a child or adolescent has (Kopelwicz, 2002).

Children and adolescents with depression also have difficulty making and keeping friends, because they are often withdrawn and isolated (Evans et al., 2002) and most lack positive social skills (Merrell, 2001). Peer support is often scarce for children and adolescents who suffer from depression, because the emotional issues that can arise for youths with this disorder can be quite cumbersome for same-age peers to comprehend. Many children and adolescents with depression report being unable to express their thoughts and feelings to their peers, because the issues go well beyond typical child and adolescent issues (Kopelwicz, 2002).

There is little question today regarding whether or not depression is a significant problem for children and adolescents (Merrell, 2001). Identifying and treating depressive disorders in children and adolescents have more recently become important areas of research. In the past, most of the research on depressive disorders was focused on adults and many believed that children and adolescents did not actually suffer from depression (Reynolds, 1990). Symptoms of depression were usually attributed to typical teen behaviors rather than a clinical disorder (Schwartz et al., 1998). Research now suggests that not only can children and adolescents suffer from depression, but also that later depression or suicide can be predicted by an early onset of the disorder, especially if left untreated (Klerman & Weissman, 1989; Reynolds, 1990).

Diagnosis

The diagnostic criteria for the depressive disorders are outlined in the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV; American Psychiatric Association, 1994). Major Depressive Disorder (MDD) is described as one or

more depressive episodes that lasts at least 2 weeks and includes five or more of the following symptoms: depressed mood, loss of interest or pleasure in activities (for a child or adolescent, irritability would be included here), significant changes in weight or appetite, sleep disturbances, psychomotor retardation or agitation, fatigue or loss of energy, feelings of worthlessness or inappropriate guilt, concentration difficulties or indecisiveness, and/or thoughts of death or suicide. To obtain a diagnosis of MDD, depressed mood, decreased interest or pleasure, or irritability must be one of the five symptoms and other disorders must be ruled out.

Dysthymic Disorder (DD) is characterized by two or more of the following, lasting the majority of days, for two years or more: depressed mood or appears depressed to others for most of the day (or irritable for a child or adolescent), decreased or increased appetite, decreased or increased sleep, fatigue or low energy, poor self-image/low self-esteem, reduced concentration or indecisiveness, and feelings of hopelessness (APA, 1994). For a diagnosis of DD for a child or adolescent, the period of time the symptoms must be present is reduced to 1 year and when it is diagnosed before the age of 21, it is considered "early-onset" (Schwartz et al., 1998, p. 273).

It is important to note that although a child or adolescent may present with depressive symptoms, he/she may not meet the criteria for one of the above-mentioned disorders. However, such individuals may benefit from treatment programs and are often included in the samples of many studies involving interventions in schools.

Researchers now agree that although most characteristics of these disorders in children are similar to adult characteristics, some symptoms for children and adolescents can be very different and it is important to recognize these differences (Kopelwicz, 2002;

Merrell, 2001). Pronounced irritability in children and adolescents is the most common characteristic mentioned by practitioners and researchers alike. However, irritability is also something most parents view as one of the major characteristics of adolescence. A child or adolescent with depression will be more irritable and volatile than others their age or adults with depression. They tend to be more explosive and act out aggressively and they typically remain irritable for longer periods of time. Children and adolescents with depression also report more physical ailments and somatic complaints than adults with depression. And, rather than weight loss and an inability to sleep, which are more typical of adults with depression, children and adolescents with depression tend to engage in overeating and oversleeping (Kopelwicz, 2002).

Co-Morbid Disorders

Children and adolescents with depression can exhibit characteristics of other syndromes or psychological disorders. Research suggests that 40% to 50% of children and adolescents with depression also present with other diagnosable disorders (Kazdin & Marciano, 1998). A review done by Kovacs (1989) reported that 30% to 75% of children and adolescents diagnosed with depression also meet the criteria for an anxiety disorder (as cited in Schwartz et al., 1998). Other common co-occurring disorders include: Attention Deficit Hyperactivity Disorder, Conduct Disorder, Oppositional Defiant Disorder, Substance Abuse, and Eating Disorders. Many of the symptoms of depression and these above mentioned disorders are similar for children and adolescents and overlap in the DSM-IV. However, the additional complications of the co-morbid conditions can exacerbate and complicate treatment planning and long-term prognosis. Some

researchers, though, suggest that the distinction of the co-morbid disorders is irrelevant, because it is the overall symptoms that will actually lead the treatment and intervention plan (Kazdin & Marciano, 1998).

Assessment of Depressive Symptoms

An important step in treating the symptoms of a child or adolescent with depression is the assessment process. Most researchers agree that self-report checklists are appropriate to use in the process of identifying a child or adolescent with depression (Merrell, 2001; Reynolds, 1990; Schwartz et al., 1998). However, several models indicate that, in addition to utilizing self-report measures, conducting clinical interviews, observations, and gathering information through behavioral rating scales from several different informants, from several different environments is considered to be the most thorough way to assess for depressive symptoms (Merrell, 2001; Schwartz et al., 1998). This type of approach can provide the most comprehensive information about the child or adolescent in question.

Self-Report Checklists

The most frequently used measures for assessing depression include the use of self-report checklists. Ones commonly used are the Children's Depression Inventory (CDI), the Children's Depression Scale (CDS), the Depression Self-Rating Scale, the Reynolds Child Depression Scale (RCDS) and the Reynolds Adolescent Depression Scale (RADS), and the Internalizing Symptoms Scale for Children (Merrell, 2001;

Schwartz et al., 1998). Each of these specifically asks respondents to report on their feelings about symptoms related to depression and how it affects them.

The two most commonly used measures are the CDI and the RCDS/RADS. The CDI consists of 27 items and takes only minutes to complete and score. It is one of the most well researched self-report checklists available (Merrell, 1999). It produces a total score which indicates the severity of a child's depression (the cutoff usually being 11). It also gives scores for five factors of depression: negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem (Kovacs, 1991).

The Reynolds Child Depression Scale (RCDS) and the Reynolds Adolescent Depression Scale (RADS) are also commonly used self-report checklists. They are also designed to identify depressive symptoms and consist of 30 items each. They are both considered well researched assessment measures and provide a cutoff score for clinical levels of depressive symptoms at 74 for the children's scale and 77 for the adolescent scale (Merrell, 1999). These two assessments are easily to read and can be administered orally if necessary.

Behavioral Rating Scales

There are several different broadband measures that include depression and internalizing symptoms as a subsection. These include the Behavior Assessment System for Children (BASC), the Behavior Evaluation Scales: 2nd Edition (BES: 2), the Behavior Rating Profile: 2nd Edition, Achenbach's Child Behavior Checklist (CBCL), and the Devereux Behavior Rating Scale (Merrell, 2001; Schwartz et al., 1998). These measures are good for screening purposes, obtaining information from multiple

raters/settings, and ruling out other problems or disorders. They can provide several different perspectives of the problems and concerns that can occur with children and adolescents with depression (Merrell, 2001). Although the focus is more general in nature, the broad range of the information is also helpful in determining further assessment procedures and approaches to treatment, especially if there are co-occurring problems (Merrell, 2001). Two of the most commonly used broadband measures to assist in the identification of internalizing problems are the BASC assessment system (Reynolds & Kamphaus, 1992) and Achenbach's CBCL rating system (Achenbach & Rescorla, 2001). Both rating systems provide forms for parents, teachers, and adolescents to complete.

The BASC system requires respondents to rate the subject on 126 to 186 items, depending which form they are completing. There are teacher and parent forms available for ages 3-18 and a self-report form for children and adolescents ages 8-18. Scores are obtained on a number of different subscales. The Internalizing Problems composite score is an overall score generated by a combination of related subscale scores. Specific internalizing subscales include depression, withdrawal, and somatization (Merrell, 2001).

The Achenbach Child Behavior Checklist system is similar to the BASC and asks the raters to complete 120 items. There are forms for both the parents (Child Behavior Checklist; CBCL); and teachers (Teacher's Report form; TRF); as well as for adolescents ages 11-18 to complete (Youth Self Report; YSR). An Internalizing Problems broadband score is generated from items related to depressive symptoms, such as withdrawn, anxious/depressed, somatic complaints. This system also provides an overall Total Composite score, as well as eight subscale scores (Merrell, 2001). On the newest version

of the CBCL there are also 6 DSM-oriented scales, including affective problems, anxiety problems, and somatic problems.

Clinical Interviews

Clinical interviews are regarded as one of the most important and effective information gathering processes during an evaluation. Interviews can provide a more detailed look at the child or adolescent's perception of what is happening. The process allows for the child or adolescent to talk about and explain things in his/her own words. During the interview, the clinician can observe relevant behaviors of the child or adolescent. This can provide further information about anxiety, social interactions, and withdrawal. Parents and teachers should also be interviewed to ensure an accurate picture of the child or adolescent and his/her daily functioning (Schwartz et al., 1998).

Behavioral Observations

Although internalizing problems are more difficult to observe, there are observable behaviors that can provide important information about the functioning of the child or adolescent, related to depression. Observations that target behaviors such as social activity, solitary behaviors, on-task or off-task behaviors in school, and affect-related expressions (smiling, laughing) may help target concerns related to internalizing problems (Merrell, 1999). These can be helpful in the overall assessment process in determining the need for interventions and determination of a depressive disorder; however observations alone are not considered enough to diagnose a child or adolescent with depression. The combination of the observations, the self-report checklists and the

clinical interview will give the best picture of the extent of the depressive symptoms (Merrell, 2001; Schwartz et al., 1998).

Typical Treatment Modalities

Current research has shown that the use of Cognitive behavioral therapy (CBT), Interpersonal therapy (IPT) and psychopharmacology are the most commonly used interventions for decreasing symptoms of depression in children and adolescents (e.g., Kaslow & Thompson, 1998; Kopelwicz 2002; Lewisohn et al., 1990; Michael & Crowley, 2002; Merrell, 2001; Reinecke et al., 1998; Schwartz et al., 1998 and Stark et al., 1987). Most recently, the NIMH Treatment for Adolescents with Depression Study Team (TADS) study indicated that the use of fluoxetine and Cognitive-Behavioral Therapy (CBT) combined showed the most promising results in reducing symptoms of depression as measured by the Children's Depression Rating Scale-Revised (CDS-R) and Reynolds Adolescent Depression Scale (RADS) (TADS, 2004). This combined approach was more effective than either Fluoxetine or CBT alone. The TADS team used a CBT program based on skill building and cognitive restructuring of negative thoughts over a 12-week period.

Cognitive-Behavioral Therapy

Cognitive behavioral therapy (CBT) involves using techniques that assist in the restructuring of faulty and negative thought patterns, along with a behavioral modification component to increase positive experiences (Clarke et al., 1990; Kahn et al., 1990; and Reynolds & Coats, 1986). Most CBT programs include teaching awareness of

thoughts and feelings, identifying problem cognitive patterns, increasing problem solving skills, and will integrate self-monitoring and self-observation strategies to reduce negative instances and thought patterns. They also include a combination of structured sessions and homework assignments that teach skills ranging from being assertive to successful self-control strategies, such as relaxation techniques (Merrell, 2001). These techniques are used to assist in the changing of maladaptive beliefs and attitudes that can continue to cause emotional problems. They also integrate activity-planning skills along with reconstructive thinking patterns to increase pleasant activities (Kopelwicz, 2002; Merrell, 2001).

Reinecke et al. (1998) reviewed several different research studies using CBT to treat adolescents in clinical and school settings. They showed that CBT is an effective treatment approach to use with adolescents who exhibit depressive symptoms. Effect sizes indicated large improvements at posttest and moderate improvements at the follow-up ($d = -1.02$ and $d = -.61$). In this review, they determined that the use of CBT techniques for adolescents was useful in reducing depressive symptoms. However, they did not find a specific CBT intervention that was superior to others and, they suggested that, “clinicians would do well to adopt the broad view and use a range of cognitive and behavioral techniques...”(p. 32).

Relaxation Training

Relaxation training programs are another type of intervention approach that has been used to treat children and adolescents with depression, although relaxation training is also used as a component of CBT. Reynolds and Coats (1986) found that relaxation

training was effective in reducing depressive symptoms in moderately depressed adolescents. Relaxation training usually consists of teaching children and adolescents how to relax and manage tension to reduce stress levels (Merrell, 2001). Progressive muscle relaxation teaches the child or adolescent to work through tightening and releasing different parts of the body, starting with the arms, shoulders and back, down to the legs and toes, in a progressive pattern until everything is relaxed (Merrell, 2001). This type of intervention has shown to be especially effective for those who suffer from depression and anxiety (Reynolds & Coats, 1986).

Social Skills Training

For children and adolescents who suffer from depression, deficits in positive social skills are also a common problem. Researchers have recognized the importance of positive social skills among children and adolescents and how training to improve these skills can be beneficial in reducing depressive symptoms (Merrell, 2001). The recommendation of social skills training for children and adolescents who suffer from depressive symptoms has been supported by a “reasonable amount of evidence indicating that this form of intervention may be effective in reducing depression” (Merrell, 2001, p.137). Merrell also suggests that social skills are an effective intervention because of the exposure to others in the group setting, that can provide for more positive social interactions and reinforcement.

Most social skills programs focus on the use of modeling and role-playing, as part of the social skills training process. Role-playing and modeling are also usually included in most CBT programs, but have been used alone to treat symptoms of

depression (Merrell, 2001). The training is usually divided into steps or stages that include, problem definition, identification of solutions, modeling, rehearsal and role playing, performance feedback, removal of problem behaviors, self-instruction and self-evaluation, and training for generalization and maintenance (Merrell, 2001).

Interpersonal Therapy

Interpersonal Therapy (IPT) is another popular form of psychotherapy that is commonly used with adolescents. IPT was first researched and examined for use with adults with depression (Kazdin & Marciano, 1998). An adapted version of IPT, IPT-A, was first developed for use with adolescents by Mufson et al. in 1993 (as cited in Merrell, 2001). It focuses on the personal, social relationships that the adolescent has, including parents and teachers (Kazdin & Marciano, 1998; Merrell, 2001). The therapy process evaluates and teaches about the maintenance of interpersonal relationships that may or may not exacerbate the depressive symptoms (Merrell, 2001). The theory behind IPT is that the depressive symptoms can interfere with an adolescent's social relationships and that interference can worsen depressed feelings (Koplewicz, 2002; Merrell, 2001). However, its use is most effective with intelligent and mature adolescents, rather than with young children or less mature adolescents (Merrell, 2001). This type of intervention has shown to be effective in reducing depressive symptoms in moderately and severely depressed adolescents (Mufson et al., 2004; Mufson et al., 1999; Santor & Kusumakar, 2001).

During the course of treatment, role-play techniques are often used to give the child or adolescent feedback on interpersonal interactions. They will also explore

correlations between events, people, and negative feelings that occur and work through communication problems that may exist (Kazdin & Marciano, 1998).

Psychopharmacology

Psychopharmacology is one of the most popular treatment modalities for individuals suffering from depressive symptoms. The wide use of medications with adults and the generally positive results of these medications has spurred a movement over the last several years for use of medications with children and adolescents who have depressive symptoms (Kazdin & Marciano, 1998).

The rise in popularity of medications also comes with risk, as side effects in children and adolescents often differ from those seen in adults. Changes in growth and hormones can be different in each child or adolescent, and those factors can affect reactions to the medications. In the past tricyclic antidepressants, such as imipramine, were regularly used, however recent research has shown that the selective serotonin reuptake inhibitors (SSRIs) produce better treatment results in children and that they are safer for children and adolescents (Michael & Crowley, 2002; NIMH, 2000; Office of the Surgeon General, 1999).

Most of the current research supports the use of Fluoxetine (Prozac), Paroxetine (Paxil), Sertraline (Zoloft), and Citalopram (Celexa) all of which are SSRIs (e.g., NIMH, 2000; Office of the Surgeon General, 1999). Most recently the NIMH TADS study showed that the use of Fluoxetine (Prozac) along with a structured CBT program resulted in the greatest reduction in depressive symptoms in children and adolescents (TADS, 2004). The study also indicated that the use of Fluoxetine alone was more effective than

CBT alone. Fluoxetine and other SSRIs have shown to have less adverse side effects than tricyclic medications and are considered less risky for overdose concerns (Merrell, 2001). However, there are still concerns about long-term use and developmental growth in children and adolescents who use these types of medications for long periods of time (Koplewicz, 2002). Concerns over medication use and over-use among children and adolescents have heightened over the last year. The Food and Drug Administration (FDA) has recently issued a “black box warning” in relation to the use of antidepressant medication in children and adolescents, due to slightly increased risk of suicidal thoughts and behaviors for children and adolescents taking these medications (FDA, 2004).

Purpose of Current Paper

The purpose of this current paper was to determine what interventions are most efficacious in the treatment of depressive symptoms in children and adolescents within the school setting. The current paper will review research studies designed to evaluate school-based intervention programs for children and adolescents that suffer from depressive symptoms. This paper will review studies that include either children and/or adolescents who exhibit depressive symptoms, as determined by an assessment measure or diagnostic interview. Only studies that include a school-based intervention program will be reviewed. This is because the treatment of childhood and adolescent mental health disorders is a very important task for school-based mental health practitioners. Providing treatment options within the school system has become imperative, as the rates of affected children continues to rise. Children and adolescents spend the majority of their time in the school setting and receive majority of their daily interactions while at

school, making schools an ideal place to provide interventions. The school-based mental health practitioner has access to children and adolescents, the teachers, the classroom environments, and can observe peer interactions easily. Therefore, it is important for school-based mental health practitioners to have access to and be familiar with successful school-based treatment programs for children and adolescents with depressive symptoms.

Inclusion and Exclusion Criteria for Current Review

To locate the research studies or reviews of the treatment of childhood and adolescent depression, a computer search of PsychLit, ERIC, and Medline databases was completed. To be included in the current review, studies had to specifically indicate that depressive symptoms were treated within a school setting for children and/or adolescents. Research reviews that included medications and or family therapy approaches were excluded because of the feasibility of completing the treatment within the school environment.

The most recent articles and reviews available from these databases were the most desired. However, articles dating back to 1980 were used to ensure a thorough review of the information available. Textbooks and treatment manuals were also consulted. The following descriptors and key words were used for a computer-assisted search on these databases: school, treatment, intervention(s), depression, school psychologist, school-based, depressive disorders, and cognitive-behavioral therapy. Abstracts from articles found were manually reviewed to determine further relevance to the current review. Bibliographies were also reviewed for further resources and initial investigations.

Review of Treatment Studies

This section will review the most current research available on school-based interventions for children and adolescents who suffer from depressive symptoms. The interventions were conducted with children and adolescents who suffered from mild to severe symptoms of depression, as evaluated by assessment measures. Only interventions that were conducted within the school setting were used. The first section will include studies conducted with children and the next section will include studies conducted with adolescents. The studies will be presented chronologically in order.

Treatment Studies for Children

In 1980, Butler et al. conducted one of the first studies treating children with depression within the school setting. They selected 56 children that exhibited depressive symptoms from the fifth and sixth grades. Children who participated in the study were identified with the use of self-report measures that made up a Depression Battery. The battery consisted of the Self-Esteem Scale, The Children's Depression Inventory, the Moyal-Miezitis Stimulus Appraisal Questionnaire and the Nowicki-Stickland Locus of Control Scale for Children. An interview with children's teachers also helped determine which students would participate. Children that scored 1.5 standard deviations above the mean on two or more of the measures were included in this study.

The children in this study were assigned to one of the following conditions (the authors do not indicate if this was done randomly): role-play, cognitive restructuring, attention placebo, and wait-list control. Children in all groups except the waitlist

condition participated in groups of six to eight in eight hour-long sessions, held once a week for ten weeks. A psychology graduate student conducted each of the sessions.

The children in the role play condition went through a program involving three main objectives: 1) making the children aware of their own and others' thoughts and feelings; 2) teaching social skills that would assist in positive interactions; and 3) teaching problem-solving techniques to ameliorate negative situations. The sessions consisted of a warm-up activity, a short review of the previous session, set up and preparation for role plays, the actual role play performances and discussion, introduction of another problem and additional role play performances, summarization of the session and assignment of homework.

The children that participated in the cognitive restructuring condition spent their time developing skills to recognize their own negative thought processes and enhancing their listening and communication skills. The main focus was to assist in development of positive thinking patterns rather than self-deprecating ones and to identify the relationship between thoughts and feelings. The group leader did this through the use of different exercises, discussions, and homework assignments. Details of the exercises used were not reported in this study.

An attention placebo group was used in this study to help determine if any progress made was due to the actual treatment modalities, or simply contact with an adult in a group setting. In this group the children were instructed using cooperative problem solving techniques, which was described as sharing research and assembling information. The students were given assignments to complete, as a group, with the materials provided by the therapist. Sessions consisted of, homework review time, an introduction of a

research question, cooperative group time to investigate possible answers, and then a new homework assignment was given. Research questions ranged from, “how did Ernest Hemingway die?” to “the difficulties that may be experienced by a family of four moving from Toronto to Montreal” (p. 113). A wait-list control group was also used in his study. These children remained in their classrooms and did not receive any intervention.

The results of this study indicated that the participants in the role-play condition made the most gains on the assessment measures used; pre-post-test comparisons indicate statistically significant improvement ($p < .05$ to $p < .01$) on all depression measures for students in this group. Teacher interviews indicated that nine of those students also improved in areas of classroom adaptation and behavior. Two students made no change and the other two had a change in teachers and comparisons were not available. Individual scores were not reported. The combined pretest mean was 25.71 (the standard deviation was not reported) on the CDI and the combined posttest mean was 14.29 (again, the standard deviation was not reported).

The authors noted some success with the cognitive restructuring condition, with statistically significant improvement on 2 of the depression measures ($p < .05$ and $p < .01$), including the CDI on which the group combined mean was 22.43 at pretest and 15.86 at posttest (standard deviations were not reported). They noted, though, that with this age group, the cognitive restructuring intervention might not have been as appealing as the role-play condition appeared to be. Teacher interviews revealed that four of the fourteen students from the cognitive restructuring condition showed improvements in class, however only three of these students reported considerable improvements on the post test measures (actual individual scores were not reported).

In the placebo group, the authors reported that only one out of the thirteen students showed a “slight improvement” (p. 116) on Depression scores, although the individual scores were not given. However, two of the students in the group scored higher on the Depression scales at post-testing and their teachers reported worse behaviors in class. The others in this condition had no observable changes. The group mean score on the CDI at pretest was 26.54 and at posttest, 25.46 (standard deviations not reported). Interestingly, there was a statistically significant decrease ($p < .05$) on the CDI scores for the wait-list control group. The group mean score at pretest was 22.08 and at posttest, 16.54 (standard deviations not reported). The authors explained this as a result of improvements on the CDI for five particular students in this group, from the same school. They reported that these five students attended three supplemental classes between pre- and post test on improving self-esteem and attribute the improvements to those experiences during that time. Based on the findings of this study the authors recommend the role-play intervention for treating students in school with symptoms of depression.

In 1987, Stark, Reynolds and Kaslow conducted another research study on school-based interventions for children who suffer from depressive symptoms. They focused on using self-control therapy and behavioral problem solving to reduce depressive symptoms. The researchers used a score of 16 or higher on the CDI to determine what students would participate in their study. They initially gave the measure to 372 students to screen for inclusion. The final sample of 29 were identified as moderately or severely depressed after a second administration of the CDI, with a cutoff score of 13. Their sample consisted of children in the fourth, fifth and sixth grades.

There were 16 males and 12 females in the sample. The participants were randomly assigned to one of three conditions: self-control, behavioral problem solving or waitlist. However, once the random assignments were completed to determine what condition the student would participate in, the therapists separated the students into groups based on age and maturity within each condition. There were two groups in each condition that consisted of five students each, with one student dropping out after the second session. There were 12 sessions that lasted 45-50 minutes and took place over a five-week period. Sessions were led by a doctoral-level psychologist and a doctoral candidate in psychology; both led one group in each condition.

The children selected to participate were given the Child Depression Scale (CDS), took part in the Children's Depression Rating Scale-Revised semi-structured interview, and their parents were asked to complete the Child Behavior Checklist (CBCL). The participants were also given the Coopersmith Self-Esteem Inventory (CSEI) and the Revised Children's Manifest Anxiety Scale (RCMAS) to measure the related constructs of self-esteem and anxiety.

The therapists kept both groups structured and utilized homework assignments and regular activities as critical parts of the therapeutic process. The children in the self-control group focused more on self-management skills for personal growth, such as, self-monitoring, self-evaluation, and self-consequencing. The children in the behavioral problem-solving group spent more time learning skills that were intended to improve their overall social behavior, such as, self-monitoring, pleasant activity scheduling, and problem solving skills. Each group was given a behavioral rationale for the approach presented and both spent time discussing the relationship between activities, mood, and

depression. The children assigned to the waitlist control group began the self-control treatment program after a five-week waiting period. Attendance was considered voluntary, as the program ran into summer break.

The results of this study indicate that both treatment programs produced desired effects in reducing depressive symptoms in children, ages nine to twelve. Post treatment assessments showed that 73% of the children in the self-control condition and 60% of the children in the behavior problem solving condition had scores below the pretreatment cutoff score of 13 on the CDI. All of the children had scores at or above 13 on the pretreatment assessments. Post treatment assessments for the waitlist group showed only one student had a score below 13 on the CDI.

At the eight-week follow-up, clinically significant changes were maintained for 88% of those in the self-control group and for 67% of those in the behavioral problem-solving group. Both groups showed a significant decrease in levels of anxiety on the ICMAS at post treatment and at follow-up. However, only those in the self-control program reported a significant change at post treatment and follow-up on the self-concept measures.

In another study, Liddle and Spence (1990) treated seven to eleven year old children who were in the mild to moderate range for depressive symptoms. The total sample consisted of 31 students, 21 boys and 10 girls from two different Catholic Primary Schools.

The selection process included the use of the CDI and the Children's Depression Rating Scale-Revised (CDRS-R). Each participant completed the CDI in his or her classroom. Those that scored 19 or above were selected to participate in the CDRS-R

interview two weeks later. An established score of 40 was used as a cutoff for the CDRS-R, thus children who scored above 40 were selected to participate. The mean scores for the group selected were 21.32 for the CDI and 42.03 for the CDRS-R. The children were randomly assigned to one of three groups: social competence, attention placebo-control and no treatment control. Each active group met for 1 hour a week for eight weeks.

Students that participated in the social competence-training group were exposed to instruction on overt social skills, cognitive restructuring and interpersonal problem solving skills. Each session consisted of instruction, discussion, modeling, role-playing, feedback, reinforcement and homework assignment and review. The first five sessions focused on teaching and practicing the skills and the cognitive restructuring components. The last few sessions were spent practicing those skills to solve problems identified by the group. As part of the cognitive restructuring component, self-talk, self-praise and challenging negative thought patterns were focused on. They also focused on the four steps to solving problems and how to use them with presenting problems, as well as how to use and recognize forms of non-verbal communication and conversation skills.

The students assigned to the attention control group were taught drama lessons while attending group sessions. This group was similar in the areas of adult attention, escape from class, small group interaction, and homework assignments used. However, the focus was on the curriculum of drama basics, rather than social competence skills. Children in the no treatment control group remained in their classes and were only involved in the assessment processes.

To evaluate outcomes the authors conducted repeated measures MANOVAs. There were no significant group by time interactions. However, there was a significant effect for time on the CDI ($p < .001$). These results showed children in all groups improved, indicating that neither the active treatment group nor the attention placebo-group was any better than the passage of time. The improvements on the CDI in each condition were maintained at the two-month follow-up.

Weisz et al. (1997) conducted the most recent school-based intervention research study involving children with mild to moderate levels of depression. They used a three-step procedure to determine qualified participants. They first gave all of the students with parental consent the CDI to complete. Next, they had the school counselors and teachers indicate whether any of those students had, to their knowledge, any problems involving depression. Those that were identified by a teacher or counselor and had a prorated cutoff score of 10 or higher on the CDI were given individual CDRS-R interviews. The students included in the final sample had to have at least an 11 on the CDI and/or a CDRS-R score of 34. Their total sample included 38 children from the third, fourth, fifth and sixth grades. The sample included 26 boys and 22 girls from three different elementary schools. The mean CDI score was 18.1 and the mean CDRS-R score was 40.7.

The children were assigned to one of two conditions, a control group or an active treatment group. Sixteen students were included in the active treatment conditions and 32 students were in the control condition. The active condition groups consisted of four groups with less than six students in each group. The therapists in this study were five doctoral-level clinical psychology students and one licensed faculty member. Each group

had two co-therapists. The active treatment condition was based on the Primary and Secondary Control Enhancement Training (PASCET) program, developed by the authors. The PASCET program is an eight session guided cognitive behavioral intervention program. This was the initial test of this program. Sessions lasted fifty minutes and were held weekly. Treatment manuals were used throughout this program.

The students in the PASCET program condition were exposed to role-play activities, homework assignments, games, and videos. They were also given a practice book to help teach them and remind them of the main components of the program. A main focus of this program was to help the students identify and engage in pleasant activities and build skills through goal setting and regularly engaging in valued activities. These are considered primary control skills. They also taught the students to identify and modify depressive thoughts, gave them instruction on cognitive techniques to enhance their mood and taught them relaxation techniques and positive imagery.

The children that were in the control condition were seen only for the assessment procedures at the pre, post, and follow-up dates. The follow-up assessments were done nine months following the last session date.

The authors evaluated change via a repeated measures ANOVA. A significant effect for time was found ($p < .001$), but also there was a significant group x time interaction ($p < .05$). On the CDI, the treatment group improved significantly more than the control group, from pre-to posttest, even when pre treatment scores were used as a covariate. Effect sizes were around .50 indicating that the difference was of moderate magnitude. On the CDRS-R, the treatment group improved significantly more than the control group, but when the pre-treatment scores were used as a covariate, the difference

was not significant ($p = .18$) and effect sizes were small (for raw and adjusted scores, .16 and .39). The authors reported similar findings at the follow-up assessment. The authors also indicate that the scores for those in the treatment group were no longer considered to be in the clinical range on either measure at post testing and the gains were maintained at follow-up.

Their analysis shows that the mean scores for the PASCET group on the CDI were 18.63 ($sd=5.32$) at pretreatment and 7.06 ($sd=6.12$) at posttreatment. On the CDRS-R mean scores were 45.25 ($sd=16.01$) at pretreatment and 33.19 ($sd=10.86$) at posttreatment. Treatment gains were maintained at the nine-month follow-up, when mean scores were 5.77 ($sd= 5.15$) on the CDI and 28.08 ($sd= 7.15$) on the CDRS-R. Mean scores for the controls on the CDI were 17.81 ($sd=10.05$) at pretreatment and 11.81 ($sd=10.00$) at posttreatment and 10.25 ($sd=8.48$) at follow-up. CDRS-R mean scores for the control group were 38.38 ($sd=11.15$) at pretreatment and 34.94 ($sd=10.93$) at posttreatment and 28.59 ($sd=8.75$) at follow-up.

Treatment Studies for Adolescents

In a study by Reynolds and Coats (1986), adolescents identified as moderately depressed were used as subjects for their research on depression. A three stage screening process was incorporated to determine the severity of depression in the adolescents. They used the Beck Depression Inventory (BDI), the Reynolds Adolescent Depression Scale (RADS) and the Bellevue Index of Depression (BID). The BDI scores had to be 12 or higher, the RADS score had to be 72 or higher and the BID score had to be 20 or

higher to qualify. There were 30 high school students involved in their research study, including 11 males and 19 females.

The students were randomly assigned to one of the following groups: cognitive behavioral therapy, relaxation-training or a waitlist/control group. The treatment sessions were scheduled twice a week for five weeks, fifty minutes each. There were two groups per condition, with four to six adolescents per group.

In the cognitive behavioral therapy (CBT) group, the sessions were set up to emphasize three major components of CBT, all of which are considered self-control skills: self-monitoring, self-evaluation, and self-reinforcement skills. The participants spent their time learning the rationale behind the therapy approach, as well as the importance of self-observation. The therapist, a doctoral-level psychology student and the second author of this study, used various activities, reinforcements, and homework assignments to address the issues. The participants were also taught how to monitor their mood and rate it daily. They were also asked to document the number of positive activities they participated in to use for comparison to their mood ratings. They were asked to graph this as therapy progressed. Participants were instructed on how to develop and set goals for a self-change plan and were also taught how to reinforce themselves for progress made toward their self-change plan.

The participants in the relaxation-training group were also given a rationale for each therapy session, as well as homework assignments that were reviewed. The therapist focused on helping the participants recognize the relationship between stress and depression and worked them through progressive muscle relaxation techniques.

Each session was spent reviewing the techniques and discussing ways to generalize use when stress produced muscle tension occurred.

The waitlist group was told that they would begin treatment in ten weeks, because the groups were full at the time. They completed all evaluation measures, just as the active conditions.

The results indicated that both CBT and relaxation training programs can be effective in reducing depressive symptoms in moderately depressed adolescents, as compared to a waitlist condition. Scores gathered show that 11 out of 14 adolescents in an active treatment condition rated themselves to be in the normal range on the BDI at posttreatment. At the five-week follow-up, all of the subjects in the active treatment conditions rated themselves in the normal range on the BDI. The authors report similar findings for the BID and the RADS. There were no statistically significant differences between the two active conditions. The authors report that the mean scores at posttest and follow-up for the two active conditions were significantly lower ($p < .05$ to $p < .001$), indicating less depression than those for the waitlist group. The authors did not report statistically significant changes for those in the waitlist group.

The reported means and standard deviations are as follows:

	BDI	BID	RADS
CBT Group			
Pretreatment	21.11(sd =7.75)	50.33 (sd=19.60)	85.67 (sd=8.40)
Posttreatment	6.36 (sd=3.15)	16.00 (sd=17.83)	66.74 (sd=7.47)
Follow-up	1.81 (sd=3.94)	6.52 (sd=10.25)	62.60 (sd=19.33)
Relaxation			
Pretreatment	17.09 (sd=6.36)	46.27 (sd=20.42)	80.09 (sd=6.99)
Posttreatment	5.77 (sd=4.0)	19.45 (sd=11.97)	65.80 (sd=9.52)
Follow-up	4.18 (sd=3.35)	13.97 (sd=6.24)	54.73 (sd=11.30)
Waitlist Group			
Pretreatment	16.90 (sd=5.48)	36.90 (sd=12.17)	80.70 (sd=5.48)
Posttreatment	18.31 (sd=9.82)	18.31 (sd=9.82)	81.12 (sd=13.46)
Follow-up	16.01 (sd=11.86)	16.01 (sd=11.86)	72.25 (sd=13.09)

Note. The data are from "A comparison of cognitive-behavioral therapy and relaxation training for the treatment of depression in adolescents," by W. M. Reynolds & K. I. Coats, 1986, *Journal of Consulting and Clinical Psychology*, 54, p. 657. Copyright 1986 by APA.

The next research study including adolescents was conducted in 1990 by Kahn, Kehle, Jensen, and Clark. They focused on the treatment of moderately to severely depressed middle school students. They used a multistage, multi-method of assessment suggested by Reynolds (1986) in determining participant qualifications. Students included had to have RADS score of 72 or above and a CDI cutoff score of 15 or above for the first stage. The second stage included the use of the same measures with the same cutoff scores to rule out any situational issues. The third stage consisted of the BID with a cutoff score of twenty. These researchers also excluded any students who were taking

medications or who were seeking outside psychological help. The total sample included 68 adolescents, including 33 males and 35 females.

The students were randomly assigned to one of the following conditions: 1) cognitive behavioral training, 2) relaxation training, 3) self-modeling intervention, or 4) waitlist control. Each condition had 17 participants. The CBT and relaxation training conditions consisted of groups of two to six students. School psychologists and school counselors led the groups. They met for 12 sessions over a six to eight week period, for 60 minutes each. Students in the self-modeling condition met with the same psychologists or counselors, individually, for 12 treatment sessions during the same six to eight week period.

The sessions were structured to be psychoeducational in nature and the therapists used manuals and workbooks throughout the treatment sessions. The CBT group utilized an adapted Coping With Depression (Clarke & Lewinsohn, 1984) course that was modified for the use with adolescents. Sessions consisted a brief explanation of the rationale for treatment and introduction of each of the session topics. These ranged from the importance of self-observation, regular mood monitoring to learning important self-change skills in the first few sessions. They specifically targeted goal setting, self-reinforcement, and identifying antecedents and consequences. After they completed these topics, they moved on to the relationship between pleasant activities and mood, scheduling pleasant activities, challenging negative thought patterns and constructive thinking. The last few sessions focused on social skills development, specifically problem solving skills and communication skills. Homework assignments and regular reviews were also essential parts of this treatment program.

The participants in the relaxation condition also received a rationale for treatment. Homework assignments and various activities to practice learned relaxation techniques were also used. During the first few sessions, time was spent learning the basics of progressive muscle relaxation. The subsequent sessions were spent learning variations of progressive muscle relaxation, which involved the use of breathing exercises, guided mental imagery, and focused on ways to utilize the skill in stress producing environments. The last session focused on reinforcing the participants for use of the techniques outside of the group.

The self-modeling participants also received a basic rationale for the treatment program. The participants met with the therapist individually. They met for only ten to twelve minutes each time. They were instructed on social skills topics, such as body posture, eye contact, positive affect, and verbalization of positive self-attributions. Video was taken of the participants behaving in their typical manner. The videos were used for baseline data. After the initial videotaping, students were instructed on the target behaviors and then told to practice those behaviors for a final videotaping. They were asked to use those skills to develop a 3-minute tape that demonstrated the student exhibiting only pro-social skills. The students were then instructed to watch the videotape of themselves exhibiting the target social skills during the subsequent sessions. Those in the waitlist control group were treated after the follow-up assessments were complete.

The authors conducted repeated measures MANOVAs to assess the effectiveness of the interventions. The results indicated significant group x time interactions ($p < .001$) with those in the treatment groups improving more than those in the waitlist group.

There were no significant differences between the different treatment groups. The results showed that those in the active treatment groups also showed clinically significant improvements compared to those in the waitlist group. The majority of the students in the CBT and relaxation training conditions rated themselves to be in the normal range at post testing and gains were maintained at a one-month follow-up. Those students in the self-modeling group also moved into the normal range on assessment measures at posttreatment, however most gains were lost at follow-up testing. Over 80% of the students in the waitlist group remained in the clinical range on assessment measures at post testing and follow-up. The authors report that after treatment of those in the waitlist group, 86% of them moved into the nonclinical range for depressive symptoms. The reported means and standard deviations for the CDI and the RADS are:

	CBT	Relaxation	Self-Modeling	Waitlist
Pretreatment				
CDI	26.53 (sd=11.05)	28.49 (sd=13.34)	26.76 (sd=12.56)	28.46 (sd=13.23)
RADS	85.41 (sd=11.48)	83.82 (sd=9.66)	84.27 (sd=10.26)	86.91 (sd=11.71)
Posttreatment				
CDI	7.29 (sd=66.03)	12.88 (10.71)	13.58 (sd=7.38)	26.94 (sd=15.41)
RADS	53.44 (sd=14.72)	61.76 (14.86)	62.12 (sd=12.00)	80.12 (sd=13.44)
Follow-up				
CDI	9.12 (sd=9.89)	13.88 (sd=13.38)	14.59 (sd=9.22)	22.53 (sd=15.54)
RADS	54.18 (sd=16.76)	61.58 (17.31)	64.18 (sd=15.86)	74.70 (sd=16.59)

Note. The data are from "Comparison of cognitive-behavioral, relaxation, and self-modeling interventions for depression among middle-school students," by J. S. Kahn, T. J. Kehle, W. R. Jenson, and E. Clarke, 1990, *School Psychology Review*, 19(2), p. 208. Copyright 1990 by APA.

The final research study for the current review was conducted by Miller and Cole in 1998. This was the only single-subject study found. An adolescent participant that was diagnosed with a co-morbid conduct disorder and depression was treated using a social

skills program. They identified the 14 year-old male student through the use of several screening measures: the Reynolds' Child Depression Scale (RCDS), the Depressed Module of the Diagnostic Interview Schedule for Children, Version 2.3 (DISC), and the Social Skills Rating System (SSRS). They also used the teacher ratings from the Child Behavior Checklist (CBCL) and socio-metric data from his teachers. They used the three-stage assessment model suggested by Reynolds (1986).

Initially, 43 students were included in the first screening. They were classified as having a Serious Emotional Disturbance (SED) and received Special Education services. Only one student scored in the clinically significant range on the RADS and RCDS. This student also scored in the clinically significant range on the DISC and met the criteria for the diagnosis of major depression. On the teacher report form of the SSRS, this student received a score of 76, indicating a very low range of social skills.

The treatment used in this study consisted of social skills training. The training was based on the social skill deficits of the participant. These were identified through the SSRS and teacher interviews. The three areas that were focused on were: giving a compliment, offering help to others, and responding appropriately to teasing.

The design of this study consisted of a baseline phase and an intervention phase; data were collected throughout both phases. Data were also collected during the student's lunch by an independent observer. These observations were to track incidences of target behaviors, in a natural environment where no prompting or training was provided.

The sessions consisted of a discreet-trial training process. During the baseline phase, the school psychologist would present hypothetical social situations to the student

and ask the student to role-play a response. The psychologist would record his responses and whether or not they were correct responses.

After baseline data were collected, the psychologist provided the training. The session structure was set up as follows: instruction, modeling, role-play, and performance feedback. There were four sessions on giving compliments, seven sessions on appropriate responding to teasing and five sessions on helping others. The intervention phase lasted about eight weeks and sessions were held twice a week for twenty to thirty minutes. Sessions were held in the psychologist's office at the student's school.

During the training, the psychologist would present the situation and wait for a response. If the student role-played the correct response, the student was rewarded with verbal praise and edibles or tokens. If his response was incorrect, he was immediately corrected and feedback was given as to what the correct responses would be. The psychologist would also model the correct responses. Then, the student was asked to role-play the situation again until he gave the correct response. Homework assignments were also given to the student in an effort to assist in generalization. The researchers also instructed his teachers and other school staff to verbally praise this student in class or at lunch if appropriate social skills were seen.

The student reported a decrease in depressive symptoms following this treatment. On the RADS, he rated himself to be in the nonclinical range after treatment. His pretreatment score on the RADS was above 80 and his posttreatment score was 75; 77 is the cutoff for clinical levels of depression. The posttreatment DISC interview score puts the student well below the cutoff score for clinical levels of depression. His pretreatment score was 7 and his posttreatment score was 1; 5 is the cutoff for depression.

The results of this intervention also show that this student's frequency of correct, prosocial, responses improved considerably during the training phases, as compared to the baseline phase. He went from zero to four incidents of positive social skills at baseline to six to ten incidents of positive social skills during treatment. Probe data from school environments, although minimal, also show an increase in the usage rate of positive social skills, without prompting; he went from zero incidents to four to six incidents.

Overall Summary of Results

Of the seven research studies reviewed, most took place in the elementary and middle school setting, involving students age 7 to 14. Only one study involved students that attended high school. Most of the studies used a similar system of assessment checklists and teacher and/or parent report to identify children and adolescents suffering from mild to clinical level of depressive symptoms. All but two of the studies in the review used the Children's Depression Inventory (CDI) as part of the identification process. The other two studies used either the Reynolds Child or Adolescent Depression Scale (RCDS/RADS). These assessment measures were used along with other well-researched assessment measures to screen for and determine the severity of the depressive symptoms. Students that scored in the moderate to clinical range were included in most studies, although one study (Weisz et al., 1997) included children with "mild to moderate levels" (p.705) of depression. Waitlist control groups were used in all but one of the studies reviewed. The exception being the case study done by Miller and Cole (1998).

All of the studies reviewed used a model based on CBT components. Specific interventions used included teaching self-control and self-observation, relaxation training and specific social skills training. The studies with active groups that showed significant success included programs with the following as components: teaching awareness of thoughts and feelings, increasing positive social skills to increase positive interactions with others, problem-solving skills to decrease negative situations, self-monitoring, self-evaluation, and self-consequencing, pleasant activity scheduling, goal setting, and relaxation techniques. Most programs also included homework and discussion sessions, as well as education about depression.

The overall findings from these studies indicated that the children in the elementary age group responded well to most of the active experimental groups. Results were reported as clinically significant for two of the four child studies and gains were maintained at follow-up (Stark et al., 1987; Weisz et al., 1997). Clinical significance was not reported for Butler et al.'s (1980) study or Liddle and Spence's (1990) study. However, although clinical significance was not evaluated in Butler et al.'s study, the active treatment groups were statistically better than the placebo groups at posttesting. In Liddle and Spence's (1990) study, both the active treatment group and the attention placebo groups improved over time and there were no differences between them.

Two of the studies reviewed compared different active treatments and in both of those studies, both active groups improved relative to control groups. However, in Butler et al.'s, (1980) study, they showed that the children in the role-play group made more significant improvements than those in the cognitive restructuring group. The authors' attributed this to the age and development of the children, suggesting that the role-play

scenarios were more appealing than the cognitive restructuring program. However, both active treatment conditions produced gains that were significantly better than the attention-placebo group or the control group. Another study that examined two different active conditions found similar results. Stark et al. (1987) compared a self-control group and a behavioral problem -solving group. Both groups showed statistically significant reductions in depressive symptoms, over the waitlist condition. These two interventions are made up of components that are typically used in CBT programs.

Three studies included adolescents, one in the middle school setting and one in the high school setting. The third adolescent study was the case study conducted by Miller and Cole (1998) and they indicated only that treatment took place in a state-approved private school and clinically significant results were not reported. The other two, Kahn et al. (1990) and Reynolds and Coats (1986) both reported clinically significant improvements for active treatment conditions and results were maintained at follow-up for those in group-based treatments. In Kahn et al.'s (1990) study, those in the self-modeling condition (an individual condition) did not maintain clinically significant results at follow-up. In both of these studies, at least two or more active treatment conditions were compared to control conditions. In Reynolds and Coats' (1986) study, a cognitive behavioral group and a relaxation training group, was compared to a wait-list control group. As with the studies on elementary school children, both active treatments decreased depressive symptoms to a greater extent than was seen in the wait-list control group. The differences were statistically significant and results were maintained at the 5-week follow-up. This was also true for Kahn et al.'s (1990) study which also used a cognitive behavioral group and a relaxation training group, along with the above

mentioned individual self-modeling condition. There were statistically significant reductions in depression for all 3 groups at posttesting and gains were maintained at the 1-month follow-up for both group conditions, however not for those in the individual self-modeling condition.

Only two specific, comprehensive programs were used in the research reviewed. They were the adapted Coping with Depression Course (Clarke & Lewisohn, 1984) in Kahn et al.'s (1990) study and the PASCET training program in Weisz et al.'s (1997) study. In both of these studies, children showed a reduction in overall depressive symptoms. Unfortunately, no one study was found that compared these two programs or other successful treatment programs against each other. This would be beneficial in determining the most effective intervention program for treating children and adolescents with depressive symptoms, which was the initial goal of this review.

Almost all of the active treatment conditions took place within small group format. Only two studies involved an individual therapy approach to treatment, the case study by Miller and Cole (1998) and Kahn et al.'s (1990) self-modeling program, as one of three active conditions. Both of these individualized approaches were shown to be effective in reducing depressive symptoms, at least immediately following treatment. However, an individualized approach to treating depression within the school system is not considered feasible given the number of children and adolescents who could benefit from treatment programs.

In summary, the active conditions utilized across studies were similar in nature and encompassed components considered vital to a CBT program. Although components like relaxation and role play were used as separate treatment conditions, both are

considered to be important parts of a successful CBT intervention and utilizing the differing components of CBT program within the school setting can be effective in reducing depressive symptoms overall. Most of the active conditions were also short-term (5-10 weeks) and small-group (2-8 individuals) oriented programs that took place within the school setting with a master's level psychologist or counselor, indicating that this type of treatment strategy for children or adolescents with depressive symptoms can be easily implemented within the school setting by school-based mental health practitioners.

Limitations of the Research Reviewed

In the research reviewed, there was not a single study that compared two successful programs against each other and no one study could show that their program was more effective in treating children and adolescents with depressive disorders than another. However, it is evident, from the current review, that a group intervention program based on a CBT model can be an effective way of reducing depressive symptoms in children and adolescents within the school setting. More research in this area should be done to explore the specific components and interventions to determine the most effective CBT program for treating depressive symptoms in children and adolescents. The different specific treatment components may produce different effects for children versus adolescents.

As suggested in Kaslow and Thompson's (1998) review, future research should focus on which specific components of CBT based interventions are most effective for children and which are best for adolescents, as well as which are best for what type of depression the child or adolescent may present with. The severity of depressive

symptoms in this review ranged from mostly mild to moderate populations and those populations may respond better to the specific components than those with severe, depressive symptoms. More research in this area to explore these differences will help in the development of future treatment protocols to effectively treat childhood and adolescent depression.

A lack of structured treatment details compounds this issue. Only two studies in the current review used manuals as part of their treatment programs, the Coping with Depression Course (Clarke & Lewisohn, 1984) in Kahn et al.'s (1990) study and the PASCET training program in Weisz et al.'s (1997) study. Future research should include a more detailed profile, or manual, of the treatment program, so that replications of the specific program may take place. The use of a manual and program details can help with training more practitioners in the specific treatment program. However, the use of a manual also has concerns, as suggested by Kaslow and Thompson (1998). They indicate that manuals can interfere with establishing rapport and the ability to respond to individual needs and concerns as well as the development of the child or adolescent being treated.

Another limitation to the studies reviewed is the lack of functional outcome data. Data regarding the children's or adolescents' grades, or observations of positive social interactions at school were not provided. Without this information it is difficult to ascertain the functional effects of the interventions and whether or not they helped the child or adolescent function better at school and in general. In addition, no data were provided to indicate if the social skills, relaxation techniques or cognitive restructuring

skills taught in the interventions were actually used by the children or adolescents outside of the treatment setting. Future research should provide some insight into this area.

Another concern with the current review of research is that most of the children and adolescents who participated fell into the mild to moderately depressed range. The generalizability of findings from these studies to clinically depressed children and adolescents is uncertain. It is the clinically depressed children and adolescents that require more immediate interventions and attention, because of health risks (i.e. suicide, drug and alcohol addictions) that make treating them effectively and efficiently extremely important. At this time, it is uncertain that any of the reviewed interventions will have the same positive effect with clinically depressed children and adolescents as they did with mild to moderately depressed children and adolescents.

None of the reviewed studies included family involvement and only a few included parental observations of the child or adolescents behaviors related to depressive symptoms at post treatment. This suggests that further data should be collected to determine if the generalization of new skills and reduction of depressive symptoms is evident outside of the treatment session or school environment.

Treatment gains were measured using self-report assessments at pre and posttesting and most included some follow-up data. However, the follow-up periods, if given, varied from only 1 month to 9 months at the most. Two studies did not include any follow-up data. In Stark et al.'s (1987) study, follow-up results were taken during summer vacation, because of school timeline difficulties. The authors of this study suggest that the timing of the assessments and the results could be more a measure of the children's excitement about summer vacation and the change of not being in school,

rather than just specific treatment gains. Further long-term follow-up periods would be more helpful in future research in determining lasting effects of the treatment conditions in reducing depressive symptoms in children and adolescents.

The reduction of depressive symptoms in children and adolescents in active conditions were noted in most of the studies reviewed. However, only four studies reviewed indicated a clinical significance in the reduction of symptoms on assessment measures used. This may be due to the mild to moderate samples that were used and the school populations that were accessed. There was also a lack of studies that involved students with co-morbid disorders. Many children and adolescents with depressive symptoms also suffer from a wide range of other childhood disorders, namely anxiety. Information in this area would be helpful in future research. Also, clinical significance was not addressed in the remainder of the studies. This again, suggests a need for further research with clinical samples of children and adolescents diagnosed with depression.

Implications for School-Based Mental Health Practitioners

The treatment of childhood and adolescent depression is a very important task for mental health professionals in the school system. With the awareness of this as a true mental health disorder for children and adolescents, the importance of treating this disorder effectively has become crucial to mental health practitioners, especially to school-based mental health practitioners. Schools are increasingly becoming the ideal and expected place of treatment and interventions for children and adolescents. Children and adolescents spend the majority of their time in the school setting and receive the majority of their daily interactions while at school. These interactions can play an

important part in treating children and adolescents, as well as in helping with generalization of treatment gains. Depression related problems tend to manifest themselves as academic or social problems at school, making school-based interventions a preferred approach. The school-based mental health practitioner has access to children and adolescents, the teachers, the classroom environments, and can observe peer interactions easily.

Although the research reviewed in this paper does not point to a single intervention program that will best treat childhood and adolescent depression, it does provide practitioners with some basic concepts to build on in developing an intervention program. Although the lack of one specific effective program maybe a source of frustration for some, the knowledge that several different combinations and components are considered effective in reducing depressive symptoms can help a school-based mental health practitioner develop a program that best meets the needs of the child or adolescent or even the school in which they are working.

The school setting can provide an environment where a flexible program design is necessary, just as the developmental age of the child may help to determine what therapy components are most appealing (Butler et al., 1980). This flexibility can give the school-based mental health practitioner the ability to take different components of a CBT based intervention, like those reviewed in this paper and use them to match more closely the needs of the child or adolescent they are treating.

However, school based mental health practitioners should closely consider the research reviewed to help further understand the treatment modalities used. This will aid in the design of the intervention program. Each of the studies reviewed (except two

which used individual approaches) indicate that a small-group setting can be used to provide successful interventions to reduce depressive symptoms. The small-group setting is ideal for school-based mental health practitioners because the need to treat children and adolescents with depressive symptoms continues to rise. The small group format allows more students to be treated in a shorter amount of time. A school-based mental health practitioner can feel confident designing a program for a small group, based on the current review. The average group size used in the studies reviewed was six and many were adjusted for age and maturity, although not all were. A school-based mental health practitioner may do well to choose the small group format, to insure that those in need are being treated, given the time, space and funding available within the school setting.

As noted in Kaslow and Thompson's (1998) review, the delivery setting of interventions for children and adolescents with depressive symptoms does not have a specific effect on the results. This finding suggests that group, individual, or even family therapy approaches can all have desired effects (Kaslow & Thompson, 1998). However, in the school setting, the availability of family involvement is limited, due to many factors, but the feasibility of doing small group therapy is accomplished easily and can serve a larger population, in a shorter time period.

Understanding the severity of the depressive symptoms can also play an important role in the group and intervention development. Any of the numerous assessment measures available for identifying depressive symptoms can be used. The most regularly used assessments in the current review were the CDI and the RCDS/RADS. The use of an assessment measure to assist in identifying those with depressive symptoms is considered best practice, along with teacher and parent report,

observations and interviews. This type of collaboration gives the school-based mental health practitioner the best picture of how the depressive symptoms are interfering with the child or adolescent's life. This can help lead to a more specific intervention program as well. For example, an assessment that reveals depressive symptoms and low social skills, may gear the intervention approach to add more social skills training to a CBT based therapy program. In addition to using assessment measures to ascertain the severity of depressive symptoms, assessments measures should be used to evaluate end of treatment results as well. This will assist in determining whether treatment programs are producing the desired effects and allow practitioners to build programs that most effectively reduce depressive symptoms.

In designing a intervention program for those who suffer from depressive symptoms, school-based mental health practitioners can use the current review as a starting point in developing their program, or they may wish to obtain manuals for the adapted Coping with Depression Course (Clarke & Lewisohn, 1984), much like Kahn et al. (1990) did to help design their program. As noted earlier in this review, a combination of antidepressant medications and CBT was superior to medication or CBT alone (TADS, 2004). However, school-based mental health practitioners are limited to the use of CBT therapy alone. In the TADS study, the CBT was conducted throughout several clinical settings with many different practitioners. This suggests that the integration of the program into other environments and the training of many practitioners on this program were feasible. This also reinforces that CBT programs can be easily integrated in to a school environment by school-based mental health practitioners. Because many children and adolescents also receive treatment outside of the school

system, a collaborative effort with outside agencies is essential in treating the depressive symptoms.

As stated above, the components of most CBT programs include many of the different approaches used in the active conditions as part of this review. Because most of the active conditions were effective in reducing symptoms of depression, a school-based mental health practitioner can feel confident in designing an intervention program that is made up of some, if not all, of the following CBT-based components: teaching awareness of thoughts and feelings, increasing positive social skills to increase positive interactions with others, increasing problem-solving skills to decrease negative situations, identifying problem cognitive patterns, teaching cognitive restructuring, using self-monitoring, self-evaluation, and self-consequencing techniques, teaching pleasant activity scheduling and positive goal setting, relaxation techniques, and social skills training. Programs should also include homework and discussion sessions, as well as some education and rationale for the therapy approach. Although no one specific program or component was shown to be superior over another, school-based practitioners should use their best judgment, based on the assessments of the child or adolescent, to determine where to focus the majority of the intervention program.

In conclusion, school-based treatment programs that are designed to accommodate a small group, and include 10 to 12 sessions (each 45-50 minutes) based on components of commonly known CBT techniques, should produce desired reductions in symptoms for children and adolescents who suffer from depressive episodes.

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