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COGNITIVE-BEHAVIORAL TREATMENT OF ADOLESCENT DEPRESSION:
EFFECTS ON MULTIPLE PARAMETERS

by

Steven E. Curtis

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

of

DOCTOR OF PHILOSOPHY

in

Psychology

UTAH STATE UNIVERSITY
Logan, Utah

1992

This work is dedicated to my parents,
Jack and Dorothy Curtis.

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Steven E. Curtis

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ABSTRACT

Cognitive-Behavioral Treatment of Adolescent Depression:
Effects on Multiple Parameters

by

Steven E. Curtis, Doctor of Philosophy

Utah State University, 1992

Major Professor: Jay R. Skidmore, Ph.D.
Department: Psychology

Clinical depression is the most frequently reported mental health problem for adolescents. Previously studied psychological treatment approaches for adolescent depression have recently been combined and packaged into a comprehensive psychoeducational intervention titled the Adolescent Coping With Depression Course (ACWDC). This study investigated whether treatment of clinically depressed adolescents using the ACWDC resulted in significant emotional, behavioral, and/or academic performance changes as reported by the adolescent, and observed by the parents and teachers.

Nineteen clinically depressed adolescents were identified by screening 876 students in a local high school, using a multistage screening procedure. All selected subjects met the DSM III-R criteria of major depression or dysthymia. Identified subjects were randomly assigned to either a treatment or a waitlist-control

condition. Subjects in the treatment condition received treatment while subjects in the waitlist-control condition received no treatment until after the completion of the study (eight weeks later). Treatment consisted of participation in the ACWDC, conducted in 12 two-hour teaching sessions held over an eight-week period after school. Outcome measures included a variety of self-report, teacher, and parent rating scales. A pretest-posttest randomized experimental design was utilized to examine treatment effects.

At posttesting, subjects receiving treatment reported significantly greater decreases in depression and problem behaviors than subjects not receiving treatment. However, at posttesting there were no significant differences between treatment conditions on parent- and teacher-observed problem behaviors, or teacher-reported academic performance changes.

Based on the results of this study and previous studies, participation by clinically depressed adolescents in the ACWDC does result in significant self-reported decreases in depression and problem behaviors. However, contrary to expectations, these self-reported changes have not been consistently observed by parents or teachers in reductions of problem behaviors at home or school, nor in significant teacher-observed academic improvement at school.

CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Depression in adolescents (and even more so for younger children) was once considered by many researchers to be rare or even nonexistent (Carlson & Garber, 1986). However, within the last 10 years, the research on adolescent depression has greatly proliferated (Kazdin, 1990; Kovaks, 1989). Depression is now widely recognized as the most frequently reported mental health problem for this age group (Clarke, 1990).

The Nature of Depression in Adolescence

Depression can be conceptualized as (a) a single symptom (i.e., sadness); (b) a syndrome (an aggregate of a negative mood and associated symptoms such as hopelessness, worthlessness, suicidal ideation, and fatigue); or (c) as a psychiatric disorder (a syndrome with a pattern and duration that impairs daily functioning and meets required diagnostic requirements)¹ (Garber & Kashani, 1991; Kovacs, 1989).

¹In this paper, "clinical depression" will refer to depression meeting the requirements of a psychiatric disorder based on the Diagnostic and Statistical Manual of Mental Disorders (third edition-revised, DSM-III-R, American Psychiatric Association, 1987). "Depression" will refer to all types of depression, including those not necessarily meeting the criteria for a psychiatric disorder.

Depression (as a symptom, syndrome, or psychiatric disorder) in adolescence has been associated with many serious problems, including suicidal actions (Brent et al., 1988), conduct disorders (Alessi & Magen, 1988; Strauss, Last, Hersen, & Kazdin, 1988), decreased academic performance (Nolen-Hoeksman, Seligman, & Girgus, 1986), and peer and adult conflict (Clarke, Lewinsohn, & Hops, 1990). With regards to clinical depression, Lewinsohn (1991) found that anxiety and substance abuse psychiatric disorders were the most comorbid problems.

Adolescent clinical depression is most often diagnosed by using the diagnostic criteria listed in the Diagnostic and Statistical Manual of Mental Disorders (third edition-revised, DSM-III-R, American Psychiatric Association, 1987). According to the DSM-III-R, adolescent clinical depression is similar to adult clinical depression and usually is characterized as either one of two depressive disorders (i.e., major depression or dysthymia) or as an adjustment disorder with depressed mood.

According to the DSM III-R, major depression is diagnosed when the adolescent, during a two-week period, has a persistent depressed mood or a loss of interest in most activities which represents a change from previous functioning. In addition, during the two weeks, at least five of the following symptoms must have been present: (a) significant weight loss, weight gain, or changes in

appetite; (b) sleep disturbances; (c) psychomotor agitation or retardation; (d) fatigue or loss of energy; (e) feelings of worthlessness or excessive guilt; (f) diminished concentration or indecisiveness; and (g) recurrent thoughts of death or suicidal attempts (American Psychiatric Association, 1987).

A diagnosis of dysthymia is given when the adolescent has a depressed or irritable mood most of the day, during most days, for at least one year. In addition to the depressed or irritable mood, at least two of the following symptoms must be present: (a) changes in appetite or eating patterns; (b) sleep disturbances; (c) low energy or fatigue; (d) low self-esteem; (e) poor concentration or difficulty making decisions; and (f) feelings of hopelessness. For either major depression or dysthymia to be diagnosed, the symptoms must not be due to an organic disorder, and may not be superimposed on a schizophrenia, schizophreniform disorder, or delusional disorder (American Psychiatric Association, 1987).

In addition to dysthymia and major depression, clinical depression can also be characterized as an adjustment disorder with depressed mood. According to the DSM-III-R, this diagnosis is given when there are symptoms of a depressed mood, tearfulness, and/or feelings of hopelessness that have been present no more than six months and due to a clear reaction to an identifiable psychosocial stressor (American Psychiatric Association, 1987).

Other DSM-III-R diagnostic categories that include depressive symptoms (other than major depression, dysthymia, and adjustment disorder with depressed mood) include separation anxiety disorder and uncomplicated bereavement (see DSM-III-R for specifics, American Psychiatric Association, 1987).

Etiology of Depression

The etiology of depression is complex and has only recently been studied in the adolescent population (Kazdin, 1990). As of yet, no comprehensive theory of the etiology of adolescent depression has been developed. In contrast to the lack of studies with the adolescent population, extensive work has been conducted on the etiology of depression in adults. These studies with adults, though not directly applicable, provide useful information for understanding the etiology of depression in adolescents.

Theories of the etiology of adult depression can be classified as involving a biological, psychosocial, or integrative explanation. The biological approach proposes that depression is caused by genetic influences, a deficit in one or more neurotransmitters (monoamines, especially catecholamine and indoleamine), and/or caused by neuroendocrine abnormalities (mainly dysfunction of the hypothalamus). There are numerous studies to support each of these positions (Kazdin, 1990; Petti, 1989; Shelton, Hollon, Purdon, & Loosen, 1991; Weller & Weller, 1991).

The psychological approaches for explaining the etiology of adult depression are varied and include the following: (a) the psychoanalytic view that depression is caused by a real or imaginary loss of a loved object; (b) the behavioral view that depression is due to reduced reinforcement in interpersonal interactions, and/or learned helplessness; (c) the cognitive view that depression is due to a maladaptive cognitive triad (negative views of oneself, the world, and the future); (d) and other views that depression is due to dysfunctional family interactions, deficiencies in the ability to cope with life's stressful events, and/or deficits in interpersonal problem-solving skills. As with the biological approaches, these psychological approaches to the understanding of depression also have considerable empirical support (Kazdin, 1990; Petti, 1989; Shelton et al., 1991; Weller & Weller, 1991).

The integrative model of depression, proposed by Lewinsohn, Hoberman, Teri, and Hautzinger (1985), combines the biological and psychosocial approaches. This integrative model is based on the assumption that depression develops when an antecedent stressful event disrupts positive behavior patterns (i.e., not engaging in pleasant activities) leading to: (a) a reduced rate of positive reinforcement; (b) a negative emotional response; (c) a heightened state of self-awareness causing increased self-criticism and self-attribution of negative outcomes;

(d) negative behavior patterns; and finally to (e) increased dysphoria. These changes lock the heightened state of self-awareness and dysphoria into a vicious cycle which maintains the depressive state. In addition, each individual has a certain set of predisposing biological characteristics which results in individual differences in the ability to offset the development of depression. This integrative model shows promise as a unifying theory of depression in adults, and perhaps eventually adolescence, since it combines many of the adult theories that have already demonstrated some empirical validity.

Prevalence and Course

The prevalence rate of adolescent depression varies according to how depression is conceptualized. As a single symptom, depression is very common, since the period of adolescence is a time of many changes (psychological and physical), which often results in the development of negative moods (Greydanus, 1986). As a syndrome, the prevalence rate of depression has been reported to range from 5% to 12% of the adolescent students in regular school settings (American Psychiatric Association, 1987; Kashani & Sherman, 1988; Reynolds, 1990). As a clinical depression, the prevalence rate, derived from a large-scale epidemiological study by Lewinsohn (1991) involving 1700 high school students in grades 9 to 12, has been reported to be 2.9%. This prevalence rate for adolescent clinical

depression is similar to the prevalence rate of clinical depression in the adult population (Lewinsohn, 1991).

Outcomes of studies on the course of depression in adolescence also parallel study outcomes on the course of depression in adults (Kazdin, 1990). Non-clinical depression is common and temporary, with a quick recovery rate (Petti, 1989). As with clinical depression, studies on the course of this disorder show high recovery rates, but also high future relapse rates (Kovacs & Gatsonis, 1989; Harrington, Fudge, Rutter, Pickles, & Hill, 1990). For example, Kovacs & Gatsonis followed clinically depressed youth (ages 8 - 13) over a several year span and found that clinical depression had a high degree of recovery (93% to 97%). However, over a period of 68 months, relapse rates were also high (62% to 72%). In a study with longer term follow-up into adulthood, Harrington and colleagues (1990) found in an 18-year follow-up study of clinically depressed adolescents, that 31% to 58% of these adolescents had reoccurrence of some type of clinical depression.

In both the study by Kovacs and Gatsonis (1989) and the study by Harrington and colleagues (1990), recovery and relapse rates varied according to the original type of clinical depression experienced. Adolescents diagnosed with dysthymia typically took longer to recover than adolescents diagnosed with a major depression. However, adolescents with a major depression or dysthymia took

longer to recover than adolescents with an adjustment disorder with depressed mood. With regards to relapse rate, adolescents with a major depression had a higher relapse rate than adolescents with dysthymia. Adolescents with dysthymia had a higher relapse rate than adolescents with an adjustment disorder with depressed mood.

Problem Statement

Despite the increased attention given to the study of depression in adolescents in the last 15 years, there have been relatively few controlled, psychological treatment outcome studies with this population (Clarke et al., 1990; Hughes, 1988; Kazdin, 1990). Published reports of controlled, psychological treatment outcome studies involving children and adolescents have consisted of a few single-case designs and only a handful of group design studies (Clarke et al., 1990). About half of these general childhood studies have involved adolescents; the remainder have focussed on younger children.

These psychological treatment outcome studies, involving depressed adolescents, have provided some limited evidence that psychological treatments are effective in reducing self-reported depression symptoms in this population. However, more psychological treatment studies are still needed for efficacy of psychological treatment for adolescent depression to be clearly established (Reynolds, 1990).

CHAPTER II

REVIEW OF PSYCHOLOGICAL TREATMENT STUDIES

The research literature on the treatment (psychological and psychopharmacological approaches) of adult depression is vast (Kazdin, 1990). In a recent meta-analytic review of this adult literature, Dobson (1989) concluded that cognitive therapy (in comparison to no-treatment, pharmacotherapy, behavior therapy, and other non-specified psychotherapies) resulted in the largest reductions in depressive symptoms.

In contrast to the adult literature, the research on the efficacy of treatment for childhood and adolescent depression² is sparse. Most of the reported experimental studies on the treatment of childhood and adolescent depression have focused on the use of psychopharmacological agents, mainly tricyclic antidepressants (i.e., imipramine, amitriptyline, and nortriptyline). These studies have indicated that psychopharmacological agents may be helpful, but clear treatment efficacy has not been firmly established (Reynolds, 1990; Weller & Weller, 1991).

The efficacy of psychological treatment for childhood and adolescent depression has an even weaker empirical base than the efficacy of psychopharmacological treatment

²Depression treatment studies with non-adult populations have involved younger children as well as adolescents. For completeness, treatment studies involving both the child and adolescent populations are reviewed.

(Clarke et al., 1990; Hughes, 1988; Kazdin, 1990). To date, only two single-case design studies and six group design studies have been reported.

Single-Case Design Studies

Petti, Bornstein, Delamater, and Conners (1980), using a single case design, demonstrated the efficacy of a multimodal treatment, involving both medical and psychological treatments. A ten-year-old depressed girl was administered treatments consisting of milieu interventions, dynamically oriented psychotherapy, social skills training, and antidepressant medication (imipramine). The authors used a multiple baseline to demonstrate treatment effects on depressive symptoms. The efficacy of the multimodal treatment was demonstrated, but the contributions of the individual components were not clear.

Frame, Matson, Sonis, Fialkov, and Kazdin (1982) evaluated the behavioral treatment of depressive symptoms in a ten-year-old boy by also using a single-case design. Four behaviors characteristic of depression were selected for intervention: inappropriate body position, lack of eye contact, poor speech, and bland affect. A multiple baseline across behaviors was used in treatment, consisting of a combination of instructions, modeling, role-playing, and performance feedback. Outcome data indicated that the frequency of target behaviors was reduced with treatment and maintained during a 12-week follow-up.

Group-Design Studies

In addition to the two single-case design studies, six group-design treatment studies focusing on the efficacy of psychological treatment of childhood and adolescent depression have been reported. Three of these studies have assessed the efficacy of the Adolescent Coping With Depression Course (ACWDC) (Clarke et al., 1990), a psychoeducational intervention for depressed adolescents (described below).

Butler, Miezig, Friedman, and Cole (1980) demonstrated that role play, and to a lesser extent, cognitive restructuring, was effective in reducing self-reported symptoms of depression in children. Fifty-six fifth- and sixth-grade, moderately depressed children were identified in an elementary school by asking teachers for referrals and by conducting a school screening using the Child Depression Inventory (CDI) (Kovacs, 1985).

These students were randomly assigned to one of four 10-week, school-based treatment groups: (a) a role play group, involving social skills and problem-solving training; (b) a cognitive restructuring group, consisting of learning how to recognize and modify irrational thinking; (c) an attention-placebo group, involving learning how to cooperatively solve non-depression related problems; and (d) a waitlist-control group with no intervention. A pretest-posttest randomized design was

used to evaluate treatment effects.

At posttest, children in the role play group demonstrated a significant decrease in CDI scores, indicating decreased self-reported symptoms of depression. Children in the cognitive restructuring group also demonstrated a decrease, but this trend was not statistically significant. Children in the two control groups did not report any improvement. Teachers were also interviewed informally regarding treatment effects. The greatest improvement in the children was noted in the role-play group in classroom behavior and performance.

Stark, Reynolds, and Kaslow (1987) demonstrated the effectiveness of school-based cognitive-behavioral and behavioral problem-solving groups in the treatment of childhood depression. A school-based screening for depression was conducted with 372 children, 9 to 12 years of age, using the CDI as the screening measure of the school. Children obtaining a score greater than 16 on the CDI were administered the test again one week later and were included in the study if the scores were 13 or above (reflecting continued, significant depression).

Twenty-nine depressed children were identified and randomly assigned to one of two school-based treatment groups or a waitlist-control group (which did not receive treatment). The active treatment groups met for 12 50-minute sessions over a period of five weeks. The two active treatments were (a) a self-control treatment, which

focused on teaching children more adaptive self-monitoring and self-evaluation of performance skills; and (b) a behavioral problem-solving group, which consisted of teaching self-monitoring, pleasant activity scheduling, and problem-solving.

A pretest-posttest control-group design with an eight-week follow-up assessment was utilized to assess treatment effects. Depression outcome measures consisted of the following measures: (a) two self-report instruments, the CDI and the Reynolds Child Depression Scale (RCDS) (Reynolds, 1989); (b) The Children's Depression Rating Scale-Revised (CDRS-R) (Poznanski et al., 1984) a structured interview; and (c) the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983), a parent rating scale.

At posttest and follow-up assessments, subjects in both the self-control and behavioral problem-solving conditions reported significant improvement on the self-report and interview assessments of depression. Subjects in the self-control condition reported less depression at follow-up than subjects in the behavioral problem-solving condition. Parent reports indicated that subjects in the behavioral problem-solving condition were less socially withdrawn and exhibited fewer problem behaviors on the internalizing subscale of the CBCL than subjects in the other two groups at follow-up.

In the first control-group treatment study involving

an adolescent population, Reynolds and Coats (1986) compared the efficacy of group cognitive-behavioral therapy and relaxation training for the treatment of depression. Eight hundred high school age adolescents participated in a three-stage, school-based screening. Stage 1 consisted of all students completing two self-report measures of depression, the Beck Depression Inventory (BDI) (Beck & Steer, 1987) and the Reynolds Adolescent Depression Scale (RADS) (Reynolds, 1987). In stage 2, students scoring above 10 on the BDI and 72 on the RADS were readministered the BDI and the RADS to limit the number of false positives. For stage 3, students in Stage 2 who scored 12 or above on the BDI and 72 or above on the RADS were given a structured interview using the Bellevue Index of Depression (BID) (Petti, 1978). Students in stage 3 who received a score of 20 or more on the BID were included in the study.

Thirty moderately depressed adolescents were identified and randomly assigned to one of the following: (a) a cognitive-behavioral treatment which emphasized the training of self-control skills (such as self-monitoring, self-evaluation, and self-reinforcement), cognitive restructuring, and procedures for increasing involvement in pleasant activities; (b) a relaxation treatment which involved training in progressive muscle relaxation; or (c) a waitlist-control condition which involved no treatment. Students met in small groups during school hours for ten 50-minute sessions over five weeks. A pretest-posttest

design with a five-week follow-up assessment was utilized to examine treatment effects. Outcome measures included the measures used at pretest.

At posttest, subjects in both active treatment groups reported statistically significant improvement in symptoms of depression on all depression measures. At follow-up, these results were maintained, except that the RADS scores failed to reflect statistically significant improvement (although there was a trend in the expected direction). Surprisingly, there were no significant differences between treatment groups on reported symptoms of depression. These results were also of clinical significance³ since all subjects in the active treatment groups changed their initial scores, which were in the moderately depressed range, to the normal range. Fifty-six percent of the waitlist-control subjects continued to manifest symptoms in the moderately depressed range.

The Adolescent Coping With Depression Course (ACWDC)

Recently, treatment approaches used in previous research investigations, with both depressed adults and adolescents, have been combined and packaged into the Adolescent Coping With Depression Course (ACWDC) (Clarke et al., 1990). The ACWDC is a psychoeducational, cognitive-

³"Clinical significance" denotes that the results are of practical significance as defined by Borg and Gall (1989). Results may be statistically significant but may be of little use in practical applications.

behavioral intervention for adolescent depression that combines many of the treatment components used in the treatment studies previously described above. The ACWDC is a downward extension of the adult Coping With Depression Course (Lewinsohn, Antonuccio, Steinmetz-Breckenridge, & Teri, 1984) and is based on the integrative model of depression outlined by Lewinsohn et al. (1985). Table 1 gives the ACWDC's main components.

Table 1

Components of the Adolescent Coping with Depression Course

Session	Main Information Conveyed/Skill Taught
1	Overview of Basic Ground Rules Introduction to Social Learning Mood Monitoring
1-3, 5, and 8	Social Skills
2-5	Identifying/Increasing Pleasant Events
3 and 8	Relaxation Procedures
5-10	Constructive Thinking
9-10	Communication Skills
11-14	Problem Solving and Negotiation
15-16	Setting Life Goals Prevention of Relapse

In the present version of the ACWDC, there are 16 two-hour group sessions conducted over an eight-week period. The sessions are conducted as a class in which the group leader teaches adolescents skills for controlling depression. As noted in Table 1, the areas covered in the class include the following: (a) an introduction to social learning theory, (b) mood monitoring, (c) social skills, (d) identifying and increasing pleasant activities, (e) relaxation, (f) constructive thinking, (g) communication, (h) negotiation and problem solving, (i) setting goals, and (j) learning how to maintain treatment gains. Each adolescent is given a Student Workbook which follows course discussions and activities and contains readings, structured learning tasks, self-monitoring forms, homework assignments, and quizzes. Of practical value, the number and length of sessions may be modified to meet the requirements of the setting in which the course is used with the stipulation that sessions 1 and 16 remain intact.

Efficacy of the ACWDC

Clarke and his colleagues (1990) report the results of two validation studies on the efficacy of the ACWDC with depressed adolescents. The first study involved 21 adolescents, 14 who were clinically depressed according to the Research Diagnostic Criteria (Spitzer, Endicott, & Robins, 1978) for either major depression or intermittent depression. The other adolescents did not meet the

clinical criteria but were described by their parents or teachers as having moderate symptoms of depression. Subjects were given the BDI at pretest and posttest. At posttest, the mean BDI score of the clinically depressed adolescents decreased from 15.0 to 4.1, which was statistically significant. Only one adolescent continued to meet the criteria for major depression. No control-group was used for this study, which makes it difficult to conclude if the treatment, a placebo effect, or time was responsible for the decrease in depressive symptoms.

In the second study, Clarke and his colleagues (1990) compared the ACWDC involving adolescents only to the ACWDC involving both the adolescents and the parents. Fifty-nine clinically depressed adolescents, diagnosed according to Diagnostic and Statistical Manual of Mental Disorders (third edition-revised, DSM III-R, American Psychiatric Association, 1987) criteria, were randomly assigned to one of three conditions: (a) an adolescent only condition, with the ACWDC involving only the adolescents; (b) an adolescent plus parent condition, the ACWDC involving both the adolescents and parents; and (c) a waitlist-control group. Subjects in the active treatment conditions were assessed during pretest, posttest, and follow-up sessions of 1, 6, 12, and 24 months by using the BDI and the Center for Epidemiological Studies; Depression Scale (CES-D) (Radloff, 1977), both self-report instruments. Parents also completed the Child Behavior Checklist (CBCL) at pre- and

Significant improvement in self-reported depression and significant decreases in the number of adolescents meeting DSM-III-R criteria for clinical depression were noted for subjects in both of the two active treatment conditions. Results were maintained for the 24-month follow-up. There were no significant differences between the adolescent-only and the adolescent-plus-parent treatment condition on self-reported symptoms of depression. The adolescent-plus-parent condition did have a lower percentage of adolescents meeting criteria for clinical depression than adolescents in the adolescent-only condition. Ratings made by parents on the CBCL also indicated that parents in the adolescent-plus-parent condition reported significant pre- to posttest reductions in the adolescents' problem behaviors.

In a third control-group study using the ACWDC as one of the treatment interventions, Kahn, Jenson, Clark, and Kehle (1990) compared the efficacy of the cognitive-behavior modification (the ACWDC), relaxation, and self-modeling approaches in the treatment of child and adolescent depression. Using similar screening procedures for depression as Reynolds and Coats (1986), Kahn and his colleagues screened 1,293 middle-school students using the Child Depression Inventory (CDI) and the Reynolds Adolescent Depression Scale (RADS). Students scoring at 72 or above on the RADS and 15 or above on the CDI were administered these assessment instruments a second time

four weeks later. Students continuing to score at or above these scores were given the Bellevue Index of Depression (BID) and were included in the study if their BID score was at or above 20.

Sixty-eight depressed students were identified and randomly assigned to one of four treatment groups: (a) a cognitive-behavioral group; (b) a relaxation training group; (c) a self-modelling group; and (d) a waitlist-control group. The cognitive-behavioral group consisted of a modified version of the original version of the ACWDC (Clarke & Lewinsohn, 1984). This original version is very similar to the new version and consisted of skill instruction in assertion training, relaxation, self-control strategies such as self-reinforcement and self-monitoring, constructive thinking, and pleasant events scheduling. The original version also consisted of a parent-training component. Kahn and his colleagues modified the course by not including the relaxation and parent-training components. The relaxation training group consisted of training in progressive muscle relaxation. The self-modeling group consisted of having subjects videotape themselves engaging in non-depressed behavior and watching these tapes during the group sessions. Subjects in the cognitive-behavioral and relaxation conditions met in small groups of two to five students for a total of 12 50-minute treatment sessions across an eight-week period. Subjects in the self-modeling condition were seen individually for

12 treatment sessions during the same eight-week period.

A pretest-posttest design with a one month follow-up assessment session was utilized to analyze treatment effects. Pretest and outcome measures consisted of the depression measures described above. Parents also completed the RADS and the CDI on their children as an exploratory measure of parental perception of treatment outcome.

At posttest and follow-up, subjects in all active treatment conditions reported significant decreases in depressive symptoms as compared to the waitlist-control group. There were no statistically significant differences between the treatment groups, although visual inspection of the data indicated that the cognitive-behavioral condition (with the ACWDC) resulted in the most improvement. As for clinical significance, the majority of subjects in the cognitive-behavioral and relaxation groups moved from the depressed to normal range, according to preselected cut-off scores on the RADS and CDI, and remained there at follow-up. More self-modeling subjects fell back into the depressed range at follow-up than the other active treatment groups. The majority of subjects in the waitlist-control condition remained in the depressed range at follow-up. At posttest, parents did not report statistically significant differences between treatment groups.

Summary and Research Limitations

As reviewed, there is very little research demonstrating the effectiveness of psychological treatment of childhood and adolescent depression. The most definitive conclusion that can be drawn from the available research is that participation of depressed children and adolescents in a group psychological treatment utilizing a cognitive-behavioral (or other behavioral procedure) format such as the Adolescent Coping With Depression Course (Clarke et al., 1990) can result in a significant reduction (both statistically and clinically significant) of self-reported symptoms of depression.

There are two major limitations to this psychological treatment literature, which applies mainly to the group-design research studies. The first major limitation is that self-reported changes in symptoms of depression were the predominant indicators of treatment outcome. Making conclusions based solely on the subject's self-report is subject to response bias (i.e., faking good or bad for some particular reason) and may give misleading results. A second major limitation to the treatment studies is that little evidence exists that indicates the self-reported improvement in depression also resulted in improvement in the problem behaviors associated with depression such as suicidal ideation, parent-child conflict, or poor academic performance. To strengthen the psychological treatment

outcome data, future studies should include multiple indicators of changes (self-report, parent observed, and teacher observed) over multiple problem areas (i.e., depressive symptoms, suicidal ideation, substance abuse, academic performance, etc.).

The ACWDC has demonstrated initial promise as an effective psychological treatment for adolescent depression and is worthy of future evaluation. Yet, the research demonstrating its tentative efficacy is subject to the same limitations mentioned above. Efficacy research has almost completely relied upon self-reported changes in depression, and there is little documentation that participation in the ACWDC is also associated with teacher- or parent-observed changes in the common depression-related problem areas.

CHAPTER III

PURPOSE OF STUDY

The purpose of this study was to expand on the work of Clarke and his colleagues (1990) by examining the effects of cognitive-behavioral psychological treatment on the emotional, behavioral, and academic performance status of the clinically depressed adolescent. Using the Adolescent Coping With Depression Course (ACWDC) as the cognitive-behavioral psychological treatment, this study sought to determine whether treatment resulted in therapeutic changes as reported by the adolescent, and observed by the parents and teachers.

Research Hypotheses

The specific hypotheses tested were the following:

Hypothesis #1. Clinically depressed adolescents given cognitive-behavioral psychological treatment using the ACWDC would report, upon posttesting, significantly (statistically and clinically) fewer symptoms of depression than subjects given no treatment, as measured by questionnaires and a structured interview.

This expected result would replicate previous research conducted by other researchers (Clarke et al., 1990; Kahn et al., 1990) who demonstrated that participation by depressed adolescents in the ACWDC did result in significant decreases in self-reported depression.

Replicating these results would greatly strengthen current outcome support for the efficacy of the ACWDC for use with depressed adolescents as a proven psychological intervention.

Hypothesis #2. Clinically depressed adolescents given cognitive-behavioral psychological treatment using the ACWDC would report, upon posttesting, statistically significant fewer behavioral problems than subjects given no treatment, as measured by a questionnaire.

As stated in Hypothesis #1, previous research has provided data on the efficacy of the ACWDC resulting in self-reported changes in adolescent depression. However, previous research has not demonstrated that the self-reported changes in depression generalized to reductions in other subjective problem areas, such as suicidal ideation, peer conflict, anxiety, or substance abuse. Demonstrating that participation by depressed adolescents in the ACWDC results in changes in self-reported problem behavior, in addition to changes in self-reported depression, would strengthen the ACWDC efficacy data even further.

Hypothesis #3. Clinically depressed adolescents given cognitive-behavioral psychological treatment using the ACWDC would demonstrate, upon posttesting, statistically significant fewer problem behaviors at home and school than subjects given no treatment, as measured by a parent and teacher rating scale.

As mentioned in Chapter I, depression is often associated with problem behaviors observed by others at home and school, including substance abuse, social conflict, and suicidal actions. Clarke and his colleagues (1990) found results in the expected direction, that ACWDC participation by depressed adolescents resulted in a statistically significant reduction in problem behaviors at home. However, no researcher has demonstrated that participation by depressed adolescents in the ACWDC results in reductions in problem behavior at school, as observed by teachers. By demonstrating that participation by depressed adolescents in the ACWDC results in problem behavior changes at school, as well as at home, the ACWDC could be presented as a psychological treatment intervention for depressed adolescents, which impacts not only subjective emotions and behavior, but also behaviors observed by others at home and at school.

Hypothesis #4. Clinically depressed adolescents given cognitive-behavioral psychological treatment using the ACWDC would demonstrate, upon posttesting, significantly better academic performance than subjects given no treatment, as measured by a teacher rating scale.

As noted in Chapter I, depression in adolescents is often associated with poor school performance. Again, no investigator has demonstrated that participation by clinically depressed adolescents in the ACWDC can result in improved school performance. If participation by depressed

adolescents in the ACWDC does result in improved school performance, then the ACWDC could be offered as a school intervention to help those depressed adolescents who are also concurrently having trouble in school.

CHAPTER IV

METHOD

Subject Identification and Selection

The pool of potential subjects consisted of approximately 1050 adolescents who comprised the Mountain Crest High School population in Cache County, Utah. A multi-stage screening procedure, similar to that described by Reynolds (1990), was utilized for the identification of clinically depressed adolescents.

Stage 1

Stage 1 was designed to identify a smaller pool of potentially clinically depressed adolescents. To meet this objective, all students in the school were screened using the Beck Depression Inventory (BDI). Students were asked to complete the BDI in class during a morning instructional period. Prior to the screening, all parents were mailed a description of the study and were asked to notify the school counselor if they did not want their student to participate. Students were also informed, prior to the screening, of the nature of the study and that participation was voluntary. Usable data was obtained for 876 students.

Stage 2

Stage 2 was designed to rule out situational or transient mood difficulties. Students, from stage 1, scoring at or above a cutoff score of 16 on the BDI were contacted one to two weeks later and asked to retake the BDI in the high school's career development center. A cutoff score of 16 was based on recommendations from a previous researcher in this area (G. N. Clarke, personal communication, November 1990). Of the 876 original students, 144 students again scored at or above the cutoff score of 16 on the BDI. Of these 144 students, valid retest data was obtained for 128 students.

Stage 3

Stage 3 was designed to identify students who were clinically depressed based on the Diagnostic and Statistical Manual of Mental Disorders (third edition-revised; DSM III-R; American Psychiatric Association, 1987). Of the 128 students from stage 2, 72 students again scored at or above 16 on the BDI. These 72 students were recontacted either at school or at home and invited to participate in the remaining part of the study. They were again informed of the nature of the study and that further participation would entail being interviewed and if selected, involvement in a structured group held twice

weekly after school. Students who expressed an interest in further participation were asked to have their parents sign a consent for participation.

Of these 72 depressed students, 24 students expressed interest in further participation. Of the 24, all were granted permission by their parents to participate. The major reason given by students not wanting to participate was an unwillingness to give up time after school⁴. These 24 students were administered the Child Assessment Schedule (CAS) (Hodges, 1986). Based on information obtained from the CAS, students were diagnosed according to the DSM III-R criteria for major depression, dysthymia, or adjustment disorder with depressed mood. All but one student met the criteria for one of these diagnoses. The one student not meeting the criteria for one of the above diagnoses, met the criteria for bipolar disorder⁵ and was excluded from the study. The remaining 23 were selected to participate in the treatment groups.

⁴At the start of this study, the goal was to obtain 30 clinically depressed subjects. Despite extensive screening efforts this goal was not achieved. After consultation with the Dissertation Chair, the study proceeded with a reduced number of subjects.

⁵Bipolar disorder is a mood disorder based on DSM-III-R criteria which involves both elements of depression and mania. This disorder was excluded from this study since bipolar disorder is not traditionally thought of as a depressive disorder.

Design

An experimental, pretest-posttest waitlist-control group design with random assignment was utilized. The 23 clinically depressed subjects were randomly assigned to one of two conditions: a treatment condition or a waitlist-control condition. This initially resulted in 12 subjects in the treatment condition and 11 subjects in the waitlist-control condition. However, at posttesting, two subjects from each condition had dropped out for a total loss of four subjects. Thus, at posttesting, there were 10 subjects in the treatment condition and nine subjects in the waitlist-control condition.

With regard to the characteristics of the subjects who dropped out, one subject from the treatment condition dropped out because she "did not like" participating. The second treatment condition subject dropped out because she obtained new employment and could not participate any further. In the waitlist-control condition, one subject dropped out of school and joined the army and the other subject dropped out of school to live away from home. Based on visual inspection of the data, no pretreatment score differences were observed between those subjects who dropped out and those subjects who completed the study.

Subject Characteristics

Relevant demographic characteristics are reported in Table 2. In the final sample, subjects included 17 females and two males with a mean age of 15.8 years and a mean grade of 10.7. Of the 19 subjects, all were Caucasian except for one female subject who was Hispanic. Two of the subjects had received prior psychological counseling, but none had been prescribed any psychotropic medication.

In the treatment group, subjects included two males and eight females with a mean age of 15.6 and a mean grade of 10.5. Of these 10 treated subjects, all were Caucasian, and one had received prior psychological counseling. In the waitlist-control group, subjects included nine females and zero males with a mean age of 16.1 and a mean grade of 11.0. Eight of the nine waitlist-control subjects were Caucasian and one was Hispanic. Again, one subject had received prior psychological counseling.

Procedures

Subjects assigned to the treatment condition were informed of the dates and time of treatment. Subjects assigned to the waitlist-control condition were informed that they had been put on a waiting-list. Prior to the initiation of treatment, all subjects in both conditions completed the Youth Self-Report (YSR) (Achenbach, 1988a) and the Reynolds Adolescent Depression Scale (RADS). During

Table 2

Demographic Characteristics of Subjects

Variable	Condition		
	Treatment (<u>n</u> = 10)	Waitlist-Control (<u>n</u> = 9)	Full Sample (<u>n</u> =19)
Sex			
Male	2	0	2
Female	8	9	17
Race			
Caucasian	10	8	18
Hispanic	0	1	1
Mean age	15.6	16.1	15.8
Mean grade	10.5	11.0	10.7
Prior therapist	1	1	2
Prior medication	0	0	0

the same time period, all teachers of subjects in both conditions were asked to complete the Teacher's Report Form (TRF) (Achenbach, 1988b) and both parents were asked to complete the Child Behavior Checklist (CBCL).

Subjects in the treatment condition were seen for a total of 12 two-hour after-school sessions held twice weekly during an eight-week period. During this treatment

session, teachers were not informed which students were receiving treatment and who were on the waiting list.

However, in reality, some of the teachers were aware of who was and who was not involved in treatment as discovered in posttreatment interviews with a sample of the subjects' teachers. This teacher knowledge did not, upon informal observation, appear to affect overall teacher ratings or subjects' performance in the treatment groups since the level of awareness was minimal.

Upon completion of the treatment for subjects in the treatment condition, all subjects (including the waitlist-control subjects) again completed the RADS, BDI, and YSR. Interviews based on the CAS were also administered a second time. Teachers completed the TRF and parents completed the CBCL.

Experimental Conditions

Treatment Condition

The Adolescent Coping With Depression Course (ACWDC), described earlier, was used as the active treatment of depression. Treatment groups were conducted by the present author. Published protocols of the ACWDC were followed as written with the following modifications. Twelve, rather than 16, sessions of the ACWDC were taught since time constraints of the school system did not permit the entire 16 sessions to be conducted. The four sessions deleted,

sessions 12 to 15, focused on teaching negotiating and problem-solving skills. The second alteration to the ACWDC written protocol included a 15 minute "warm-up period" prior to instruction where students had a chance to voice any concerns they were having, either with the program or with their lives in general. This was instituted at the beginning of the third session since in the first two sessions, students had concerns which needed to be voiced but could not be voiced due to the previous structure of the program. As a final modification to the written protocol, students who missed a session, or who were late, were asked to come early to the next group in order to receive the information they had not received in the last group due to their absence or tardiness. A 78% attendance rate was achieved, which was considered adequate for subjects to learn the information presented.

Waitlist-Control Condition

Subjects in this condition received no treatment until after the completion of posttesting (eight weeks later). While on the waiting list, during the time treatment subjects were participating in the ACWDC, waitlist-control subjects were contacted periodically to determine the status of their depression and to determine if they had any suicidal or other self-destructive tendencies which needed referral to an outside mental health agency. One waitlist-control subject did report suicidal intentions and this

person was referred to a local mental health facility for treatment. The referred subject is the one subject who also had a prior therapist. After the completion of posttesting, subjects in the waitlist-control condition were offered treatment with the ACWDC in a similar format as in the treatment condition.

Dependent Measures

Depression

Two questionnaires and a structured clinical interview were used to measure changes in self-reported depression. The questionnaires used were the Reynolds Adolescent Depression Scale (RADS) and the Beck Depression Inventory (BDI). Interviews were conducted using the Child Assessment Schedule (CAS).

The RADS is a 30-item self-report questionnaire, specifically designed to assess depressive symptomatology in adolescents. Normative data was based on responses of a sample of 2460 adolescents, and internal consistency reliability estimates range from .92 to .96 (Reynolds, 1990). Test-retest reliability, with a six-week interval, was .80 with a sample of 104 adolescents (Reynolds, 1990). The RADS has been found to be highly correlated with other self-report measures of depression (r 's ranging from .70 to .89). In a study involving 111 adolescents, the RADS has demonstrated a correlation of .83 with the Hamilton

Depression Rating Scale (Hamilton, 1982; Reynolds, 1990). The RADS has also been shown to be sensitive to treatment effects as demonstrated in the studies by Kahn and colleagues (1990) and Reynolds and Coats (1986).

The BDI is a 21-item self-report scale designed to measure the level of depression among clinical and nonclinical populations. The BDI has been used extensively with the adult population. With adolescents, Reynolds and Coats (1986) report in a study of depression in 675 adolescents that the BDI demonstrated an alpha reliability of .87. Test-retest reliability estimates with adults are reported to be .64 to .90 (Beck & Steer, 1987). The BDI, in the studies by Reynolds and Coats (1986) and Clarke and his colleagues (1990), was also sensitive to treatment effects.

The CAS is a clinical interview for children and adolescents that is organized around 11 topics, including school, friends, activities, hobbies, family, fears, anxieties, self-image, mood, physical complaints, expression of anger, and reality testing symptomatology (Hodges, Kline, Stern, Cytryn, & McKnew, 1982). Several studies have assessed the psychometric properties of the CAS. Interrater agreement of .82 has been obtained for the items pertaining to depression (Hodges, Kline, Stern, Cytryn, & McKnew, 1982). Test-retest reliability over five days for the items pertaining to depression, and also diagnoses of major depression and dysthymia, have been

reported to be .83, 1.00, and .71, respectively (Hodges, Cools, & McKnew, 1989). The internal consistency of the items pertaining to depression has been reported to be .84 (Hodges et al., 1990). The CAS has been demonstrated to correspond well to other self-report measures, to predict clinical group membership, and to have the ability to detect changes in adjustment after treatment intervention (Hodges et al., 1982).

Academic Performance

Academic performance was assessed via the school performance subscale of the Teacher's Report Form (TRF), a teacher rating scale. On the school performance subscale of the TRF, academic performance is rated by the teachers on a 5-point scale ranging from 1 (far below grade level) to 5 (far above grade level) for each academic subject. Test-retest reliability of the school performance subscale of the TRF is reported to be .93 over a period of seven days (Achenbach & Edelbrock, 1988).

Problem Behaviors

Changes in problem behaviors were assessed using the behavior problem scales of the Child Behavior Checklist (CBCL), the behavior problem scales of the TRF, and behavior problems scales of the Youth Self-Report (YSR).

The behavior problem scales of the CBCL are designed to obtain parents' reports of their children's behavior

problems (McConaughy, 1985). Parents rate their child on 118 behavior problem items using a 3-point scale. Parent responses are scored on the Child Behavior Profile, which consists of a variety of empirically derived behavior problem scales derived from a factor analysis of 2,300 children and adolescents (Achenbach & Edelbrock, 1983). Test-retest reliabilities of parent ratings average in the .90s. Clinically referred adolescents obtained higher scores on all the behavior problem scales than non-referred adolescents. For this study the total problem score was used as the dependent variable. Separate scores were computed for both the mother and the father.

The behavior problem scales on the TRF are designed to assess teacher perception of behavioral difficulties within the classroom (Achenbach, 1988b; McConaughy, 1985). The behavior problem scales on the TRF are modified versions of the CBCL behavior problem scales and were empirically derived from a factor analysis involving 1800 children and adolescents. Normative data is based on a sample of 1100 randomly selected non-referred children and adolescents in regular school classes. Test-retest reliability averaged .89 over a one-week period. Compared to non-referred adolescents, referred adolescents were found to score significantly higher on all behavior problem scales. The mean total problem score, averaged across teachers, was used as the dependent variable for this study.

The behavior problem scales on the YSR are designed to assess the adolescent's perception of behavioral difficulties at home and school (Achenbach & Edelbrock, 1987; Achenbach & McConaughy, 1987). The behavior problem scales on the YSR have 102 of the same items as the CBCL behavior problem scales, with the items worded in the first person. The YSR was empirically derived from a factor analysis involving 927 clinically referred children and adolescents. Studies assessing test-retest reliability, involving test-retest periods of a week to a month, have reported correlations in the .80s and .90s. In this study, the mean total problem score was used as the dependent variable.

Analysis

To verify that the two conditions were equated with random assignment, one-way ANOVAs were performed on all pretreatment data. If the two conditions were found to be equivalent, the internal validity threat of "selection" (Campbell & Stanley, 1963) would be minimized.

To investigate treatment effects, a series of ANCOVAs were conducted. Posttest mean scores, on each of the dependent measures, were compared between the treatment and control groups, using the mean pretest scores as the covariates. ANCOVAs were utilized, as a conservative measure, to adjust for any variability of pretreatment

scores regardless if the variability was statistically or non-statistically significant.

Hypothesis #1 (stating that clinically depressed adolescents given treatment using the ACWDC would report, upon posttesting, significantly fewer symptoms of depression than subjects given no treatment) was tested using mean posttest scores on the Beck Depression Inventory (BDI), Child Assessment Schedule (CAS), and Reynolds Adolescent Depression Scale (RADS). The CAS score analyzed was the number of items endorsed pertaining to depressive symptomatology. To further test hypothesis #1, the change in number of subjects diagnosed as having a major depression, dysthymia, or adjustment reaction with depressed mood, based on interview information obtained from the CAS, from pre- to posttesting, was also compared across treatment conditions.

Hypothesis #2 (stating that clinically depressed adolescents given treatment using the ACWDC would report, upon posttesting, significantly fewer behavioral problems than subjects given no treatment) was tested using the mean posttest total problem score of the Youth Self-Report (YSR).

Hypothesis #3 (stating that clinically depressed adolescents given treatment using the ACWDC would demonstrate, upon posttestings significantly fewer problem behaviors at home and school than subjects given no treatment) was tested using the mean posttest total problem

scores of the Child Behavior Checklist (CBCL) and Teacher's Rating Form (TRF).

Hypothesis #4 (stating that clinically depressed adolescents given treatment using the ACWDC would demonstrate, upon posttesting, significantly better academic performance than subjects given no treatment) was tested using the mean posttest score on the school performance subscale of the TRF.

CHAPTER V

RESULTS

Pretreatment Group Equality

Pretreatment subject characteristics, diagnoses, and scores on the depression, academic performance, and problem behavior measures are noted in Tables 2 to 5. To assess pretreatment group equality, a series of one-way ANOVAs were conducted on all pretreatment data. Based on these analyses, only one significant difference between conditions at pretesting was found. Teachers reported that subjects in the waitlist-control condition at pretesting demonstrated statistically significantly more problem behaviors at school than subjects in the treatment condition.

Except for the significant difference of behavior problems noted at school between conditions, subjects at pretesting overall were similar in the following: (a) demographic make-up; (b) depression scores and diagnoses; (c) the number of self-reported problems; (d) academic performance; and (e) parent-reported problem behaviors. At pretesting all subjects were diagnosed with either dysthymia or depression, and no subject was diagnosed as having an adjustment disorder with depressed mood.

Table 3

Means and Standard Deviations of Depression Scores

Measure	Treatment	Waitlist
	M (SD)	M (SD)
Screening (Stage 1)		
BDI	25.8 (14.2)	26.2 (4.0)
Pretreatment (Stages 2 & 3)		
BDI	26.6 (10.2)	24.6 (6.4)
CAS	19.7 (5.3)	21.6 (4.8)
RADS	56.1 (13.4)	61.0 (3.8)
Posttreatment		
BDI	8.5 (10.3)	22.5 (10.5)**
CAS	4.7 (4.6)	20.1 (5.0)**
RADS	29.4 (22.2)	56.7 (14.2)

Note. Treatment = treatment condition; Waitlist = waitlist-control condition; M = mean score; SD = standard deviation; BDI = Beck Depression Inventory; CAS = Child Assessment Schedule; RADS = Reynolds Adolescent Depression Scale.

** $p < .01$ on ANCOVA using pretreatment scores as covariate

Table 4

DSM III-R Diagnoses from CAS Pre- and Posttest Assessment

Diagnosis	Pretest	Posttest
Treatment Condition		
Dysthymia	8	1
Major Depression	2	0
None	0	9
Waitlist Condition		
Dysthymia	7	7
Major Depression	2	2
None	0	0

Note. CAS = Child Assessment Schedule

Table 5

Means/Standard Deviations on Behavior/Performance Measures

	Treatment	Waitlist
	M (SD)	M (SD)
Pretreatment (Stages 2 & 3)		
YSR-Self	94.3 (22.6)	101.6 (27.4)
TRF-Teacher	9.7 (8.1)	32.9 (25.1)**
TRF-Academics	2.3 (1.2)	2.2 (1.5)
CBCL-Mother	37.7 (37.7)	42.2 (29.7)
CBCL-Father	48.8 (24.5)	28.2 (16.4)
Posttreatment		
YSR-Self	52.9 (35.0)	93.0 (25.1)*
TRF-Teacher	13.0 (21.1)	15.3 (13.0)
TRF-Academics	2.4 (1.7)	1.7 (1.2)
CBCL-Mother	26.7 (20.2)	30.0 (20.6)
CBCL-Father	26.0 (22.9)	20.0 (16.9)

Note. Treatment = treatment condition; Waitlist = waitlist condition; YSR = Youth Self-Report; TRF-Teacher = problem behavior subscale of the Teacher's Report Form; TRF-Academics = academic performance subscale of the TRF; CBCL-Mother = Child Behavior Checklist completed by mother; CBCL-Father = CBCL completed by father.

**p < .01 *p < .05

Depression

Mean scores on the depression measures of each condition at the three assessment periods are presented in Table 3. DSM III-R diagnoses, based on information obtained from the Child Assessment Schedule (CAS) pretest and posttest assessments, are reported in Table 4. Pictorial representation of the data presented in Tables 3 to 5 is presented in Figures 1 to 8.

Hypothesis #1 (stating that clinically depressed adolescents given treatment using the (Adolescent Coping With Depression Course (ACWDC) would report, upon posttesting, significantly fewer symptoms of depression than subjects given no treatment) was tested using a series of ANCOVAs with pretreatment scores as covariates. At posttest assessment, statistically significant results were found between conditions on the Beck Depression Inventory (BDI) ($p < .01$) and the Child Assessment Schedule (CAS) ($p < .01$), but not the Reynolds Adolescent Depression Scale (RADS) ($p = .10$). This indicates that at posttesting, on the BDI and CAS, treatment group subjects reported significantly fewer symptoms of depression than waitlist-control subjects. As noted in Figures 1 and 2, not only were there significant differences at posttesting between conditions on the BDI and CAS, but that there were also dramatic treatment effects. Even though at posttesting on the RADS there was no significant difference between

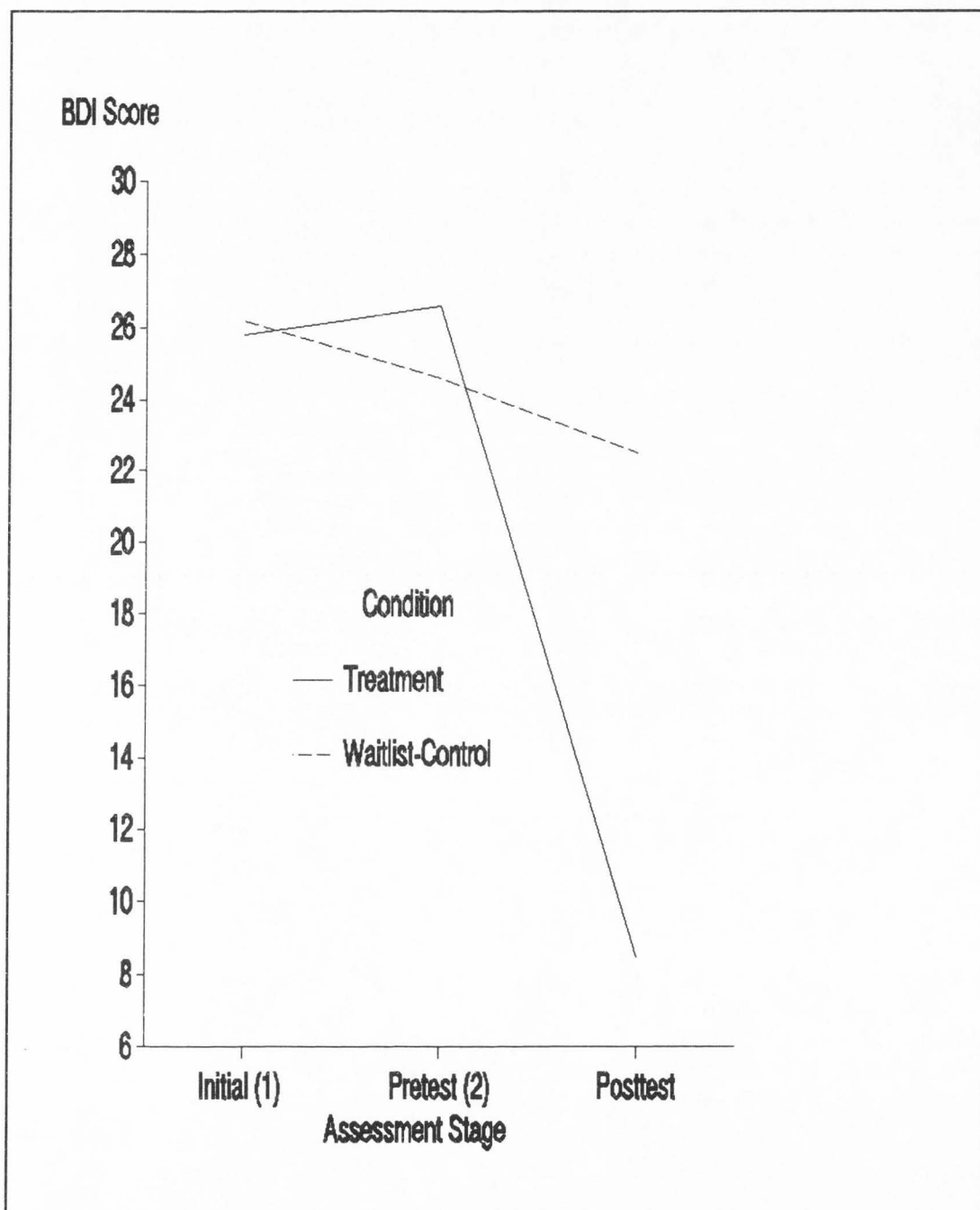


Figure 1. BDI mean scores across assessment stages by treatment condition.

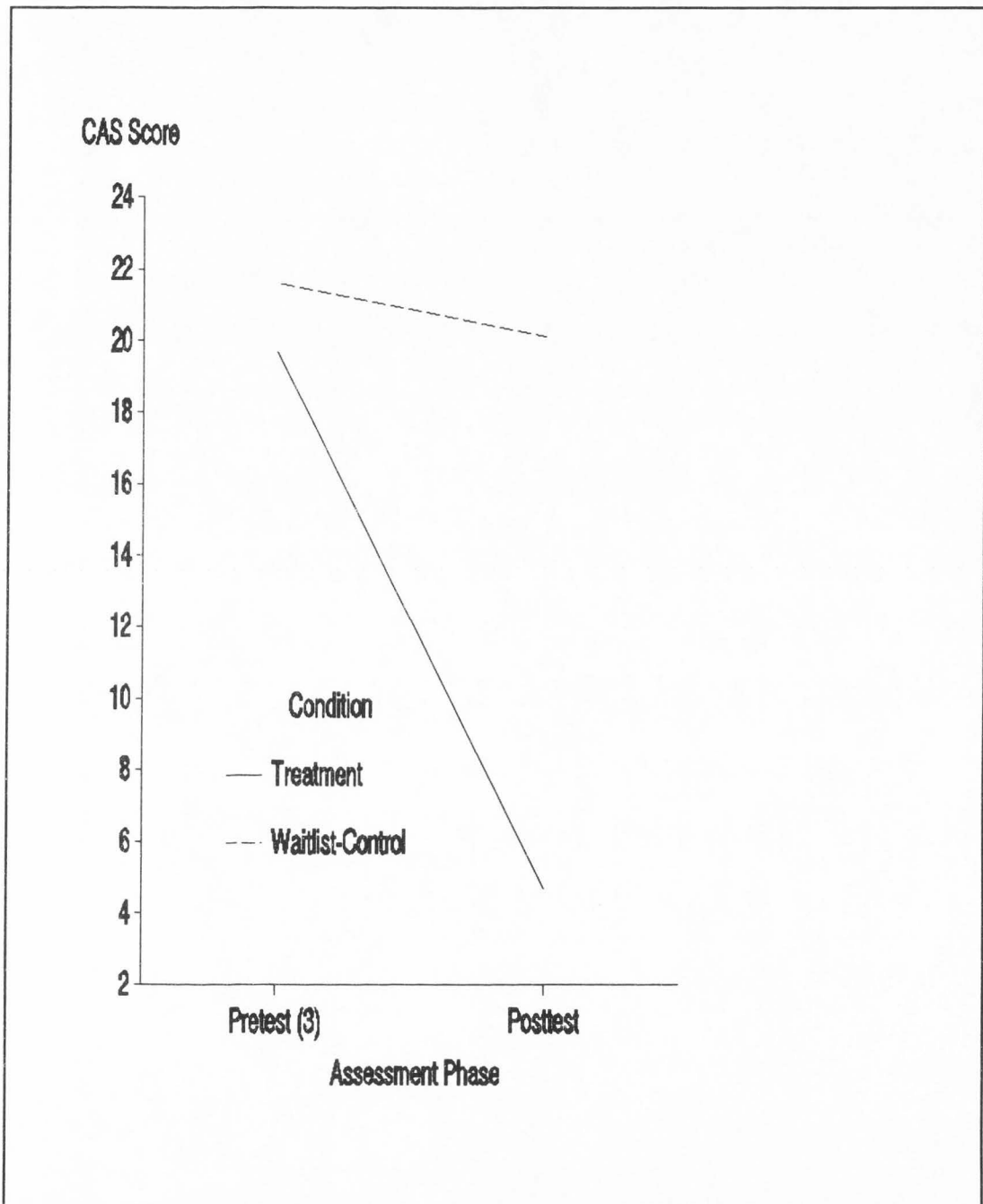


Figure 2. CAS mean scores across assessment stages by treatment condition.

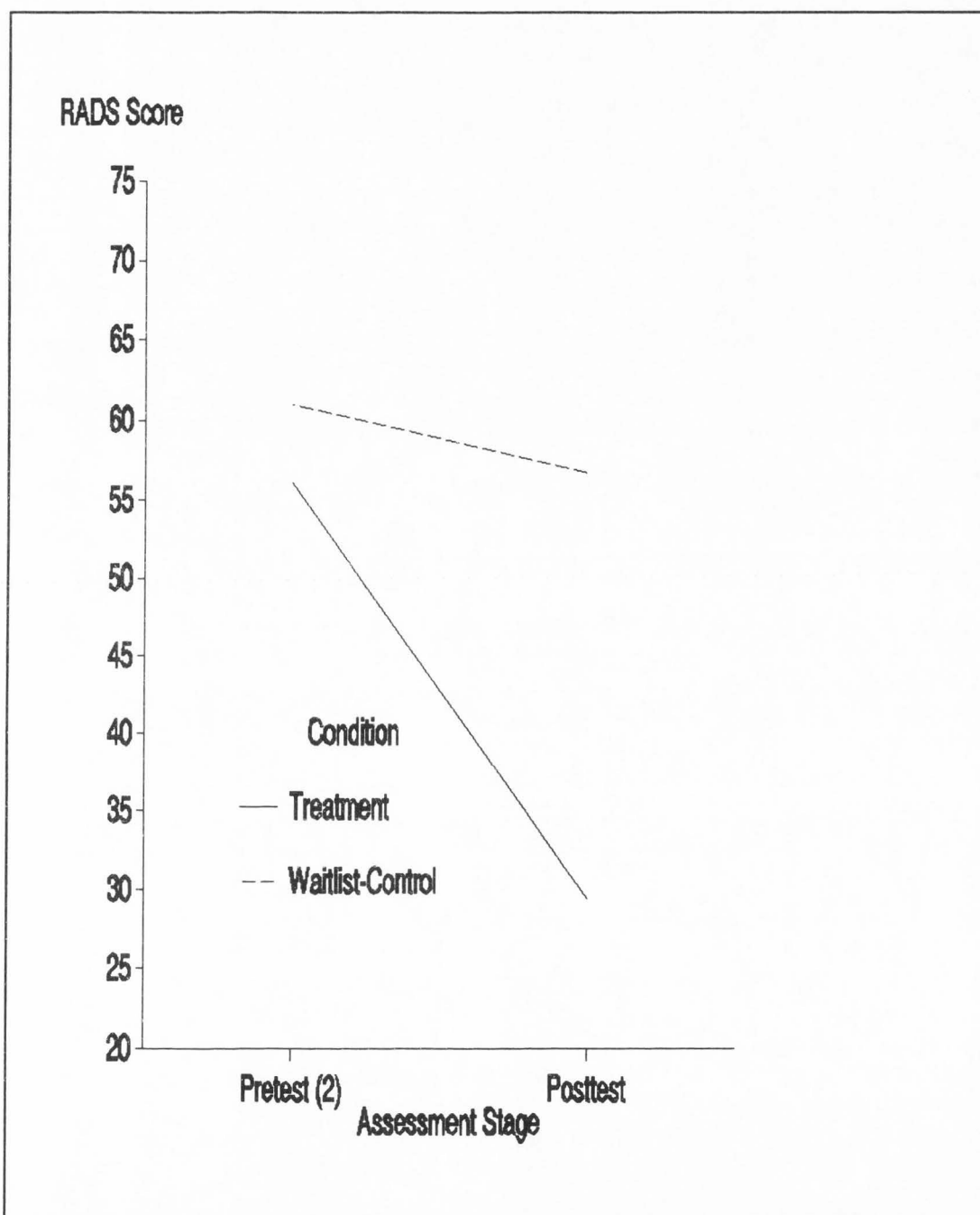


Figure 3. RADS mean scores across assessment stages by treatment condition.

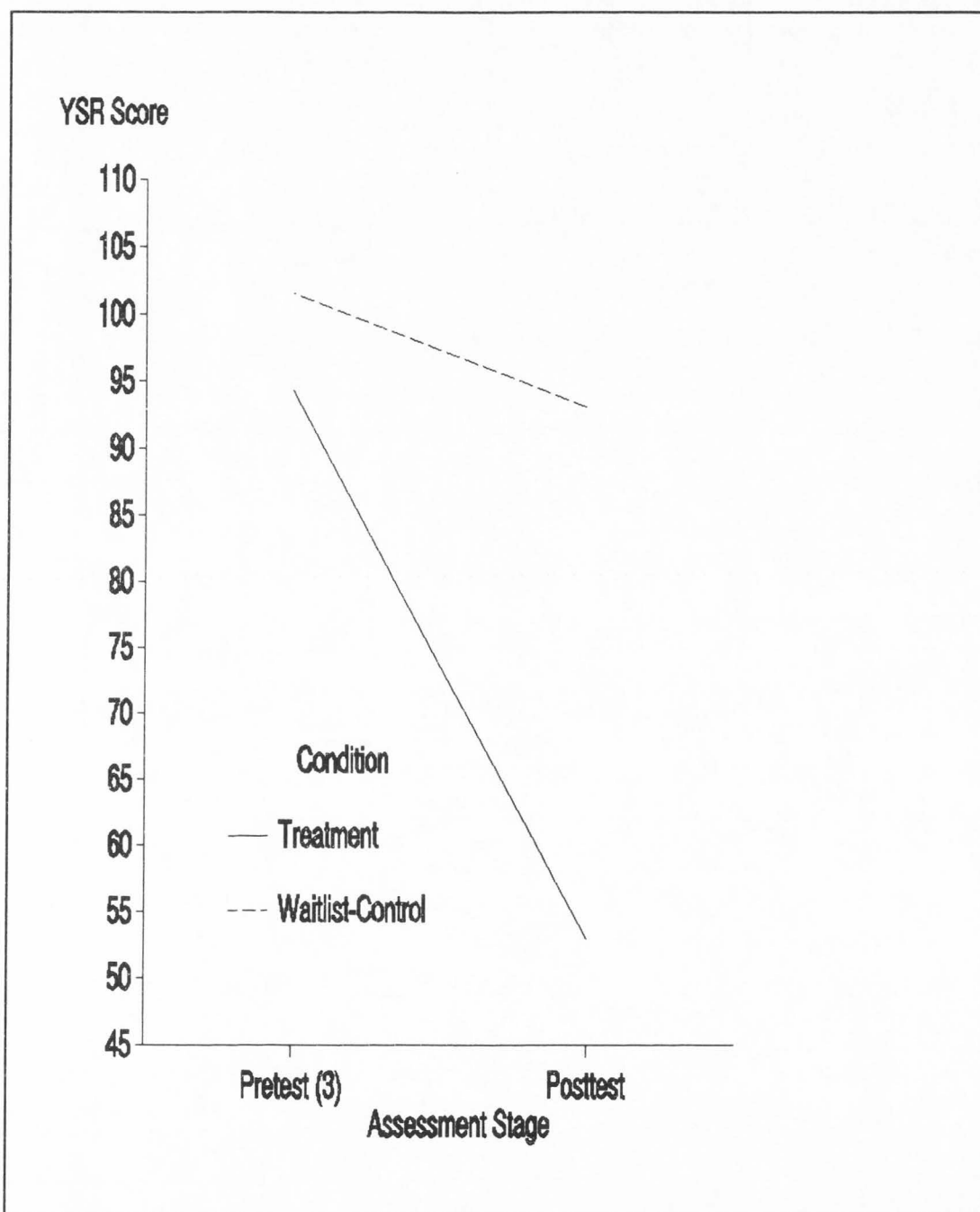


Figure 4. YSR mean scores across assessment stages by treatment condition.

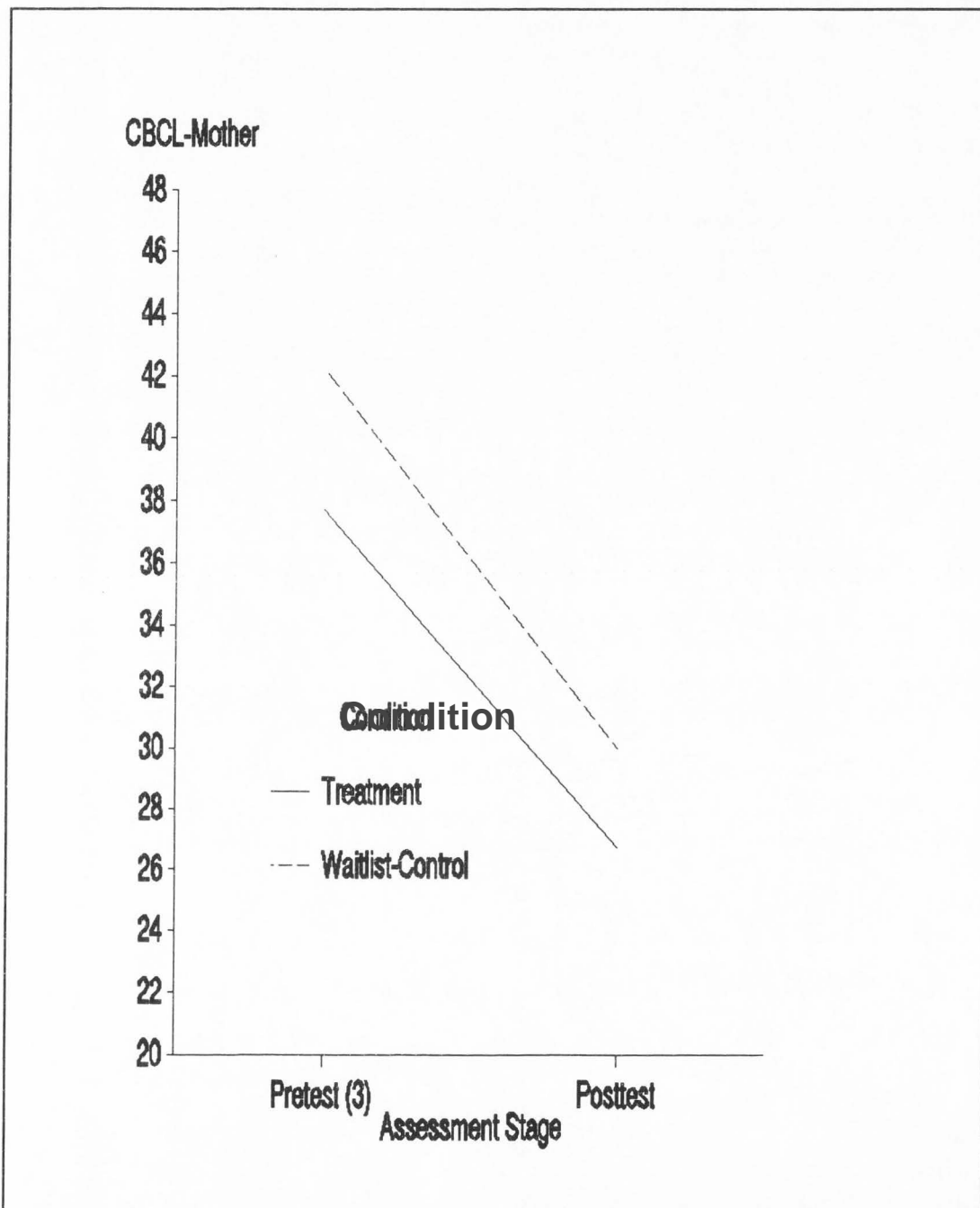


Figure 5. CBCL-mother mean scores across assessment stages by treatment condition.

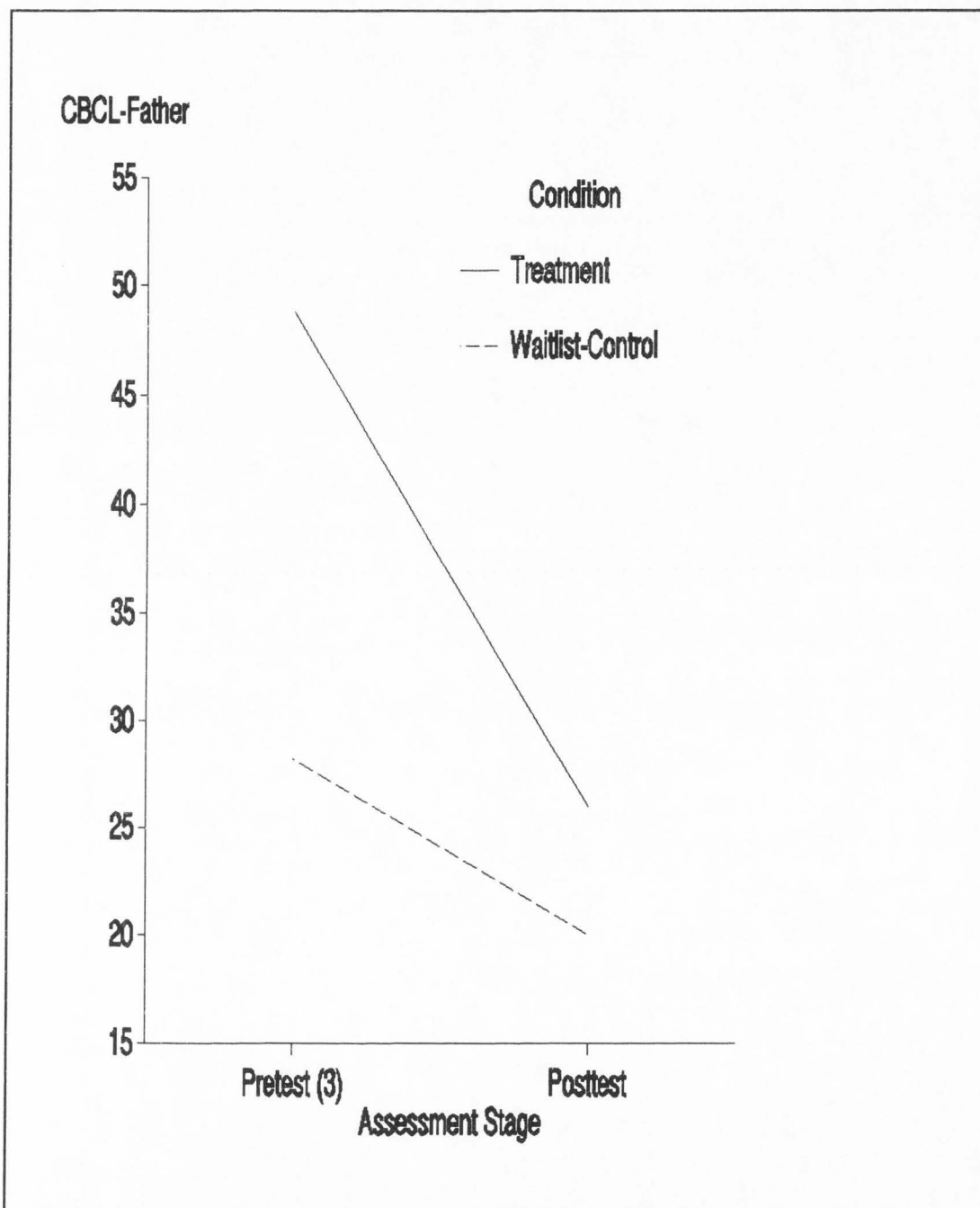


Figure 6. CBCL-father mean scores across assessment stages by treatment condition.

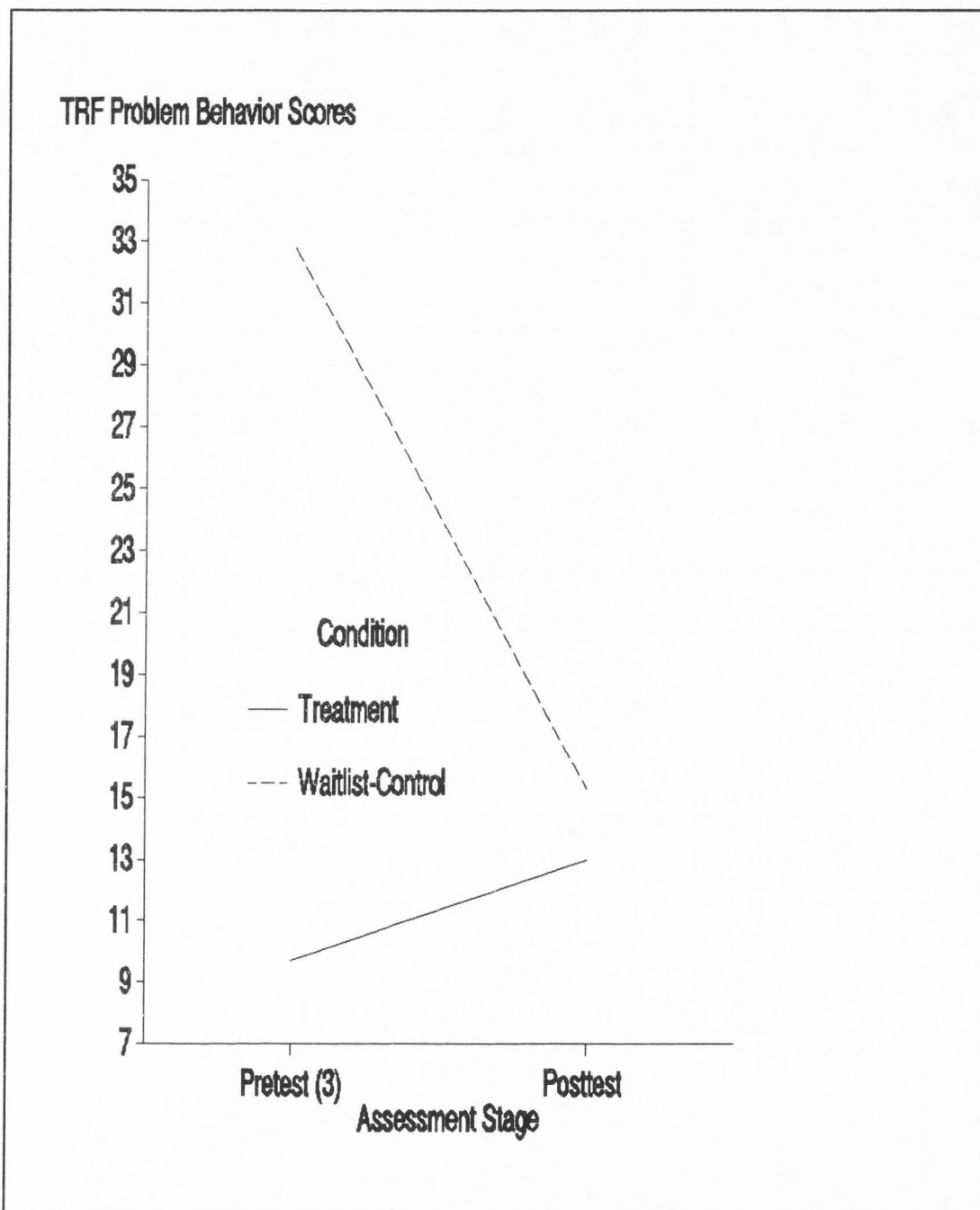


Figure 7. TRF mean problem scores across assessment stages by treatment condition.

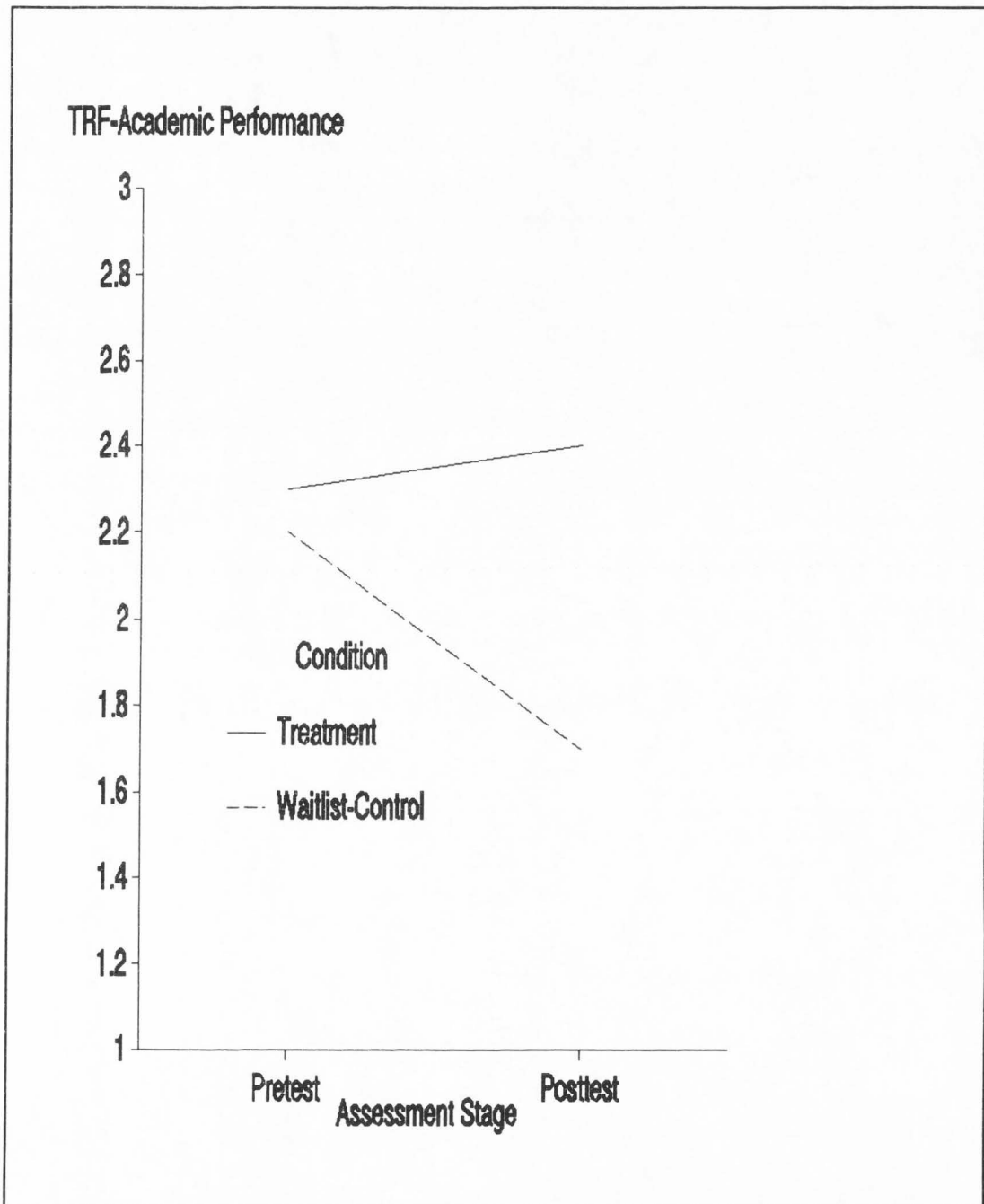


Figure 8. TRF mean academic performance scores across assessment stages by treatment condition.

conditions, as noted in Figure 3 there was a trend in the expected direction. On the RADS, the trend was that treatment group subjects at posttesting reported fewer symptoms than the waitlist-control subjects. Further testing hypothesis #1, treatment group subjects at posttesting were less clinically depressed than the waitlist-control subjects. Between pre- and posttesting, as noted in Table 4, treatment condition subjects decreased from 10 (100%) subjects receiving DSM III-R diagnoses to only one (10%) receiving a DSM III-R diagnosis. This is in contrast to the waitlist-control subjects with nine (100%) subjects having a DSM III-R diagnosis at both pre- and posttreatment assessment. These results indicate that subjects in the treatment condition at posttesting not only reported statistically significant fewer depression symptoms on the BDI and CAS than the waitlist-control subjects, but that there were also significant differences as well between the two groups in terms of final diagnoses, with the treatment condition subjects being less clinically depressed than the waitlist-control subjects.

Problem Behaviors

Table 5 presents mean scores obtained on the Youth Self-Report (YSR), Teacher's Rating Form (TRF), mother-completed Child Behavior Checklist (CBCL), and father-completed CBCL across conditions and assessment periods.

Pictorial representation of this data are presented in Figures 4 to 7.

Hypothesis #2 (stating that clinically depressed adolescents given treatment using the ACWDC would report, upon posttesting, significantly fewer behavioral problems than subjects given no treatment) was tested using an ANCOVA with the YSR pretest score as the covariate. At posttesting the treatment condition subjects reported statistically significant fewer problem behaviors than the waitlist-control subjects ($p < .05$). Even though significance was only at the $p < .05$ level, the difference in self-reported problem behaviors between groups at posttesting was quite substantial as presented pictorially in Figure 4.

Hypothesis #3 (stating that clinically depressed adolescents given treatment using the ACWDC would demonstrate, upon posttesting, significantly fewer problem behaviors at home and school than subjects given no treatment) was tested using ANCOVAs with the pretreatment scores as covariates. At posttesting there were no statistically significant differences between the two conditions for mother-, father-, and teacher-reported problem behaviors.

The graphical representation of the parent data, as noted in Figures 5 and 6, suggests that home problem behaviors of both groups of subjects decreased over time and that there were no discernable treatment effects. The

teacher data, presented in Figure 7, gives a more confusing picture of what non-statistically significant effects the treatment may have had on problem behaviors in the classroom. School problem behaviors of subjects in the treatment condition actually increased over time rather than decreased as expected. School problem behaviors of subjects in the waitlist condition actually decreased rather than remained stable or increased as expected.

Academic Performance

Academic performance for subjects in each condition, as obtained from the academic performance subscale of the Teacher Rating Form (TRF), is reported in Table 5. Pictorial representation of this data is presented in Figures 8.

Hypothesis #4 (stating that clinically depressed adolescents given treatment using the ACWDC would demonstrate, upon posttesting, significantly greater academic performance than subjects given no treatment) was tested using an ANCOVA with the TRF academic performance score as the covariate. Upon posttesting there were no significant academic performance differences between conditions. Teachers reported that subjects in both conditions had average academic performance at pretesting and posttesting.

However, visual inspection of data, as presented in Figure 8, suggests there was a trend of academic

performance in the expected direction. Subjects in the treatment condition increased over time in academic performance, but subjects in the waitlist condition decreased in academic performance over time. Even though this finding is not statistically significant, it does suggest that treatment may result in some subtle academic performance changes.

CHAPTER VI

DISCUSSION

Summary

The purpose of this study was to examine the effects of a cognitive-behavioral psychoeducational treatment program on the emotional, behavioral, and academic performance status of clinically depressed adolescents. Using the Adolescent Coping With Depression Course (ACWDC) (Clarke et. al, 1990) as the treatment, this study sought to determine whether treatment resulted in decreased self-reported depression (Hypothesis #1), decreased self-reported problem behavior (Hypothesis #2), decreased parent- and teacher-observed problem behavior (Hypothesis #3), and increased teacher-reported academic performance.

Nineteen clinically depressed adolescents were identified by screening 876 students in a local high school using a multi-stage screening procedure. All identified subjects met the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (third edition-revised) (DSM-III-R) (American Psychiatric Association, 1987) for major depression or dysthymia. These clinically depressed adolescents were randomly assigned to either a treatment condition ($n = 10$) or a waitlist-control condition ($n = 9$). Subjects in the treatment condition received treatment with the ACWDC, while subjects in the waitlist-control condition received no treatment until

posttesting was completed (eight weeks later). Using interviews, self-report questionnaires, and teacher and parent rating scales, subjects were assessed prior to and immediately after the completion of the treatment (or waitlist) period.

Analysis of the results indicated that subjects receiving treatment reported, on two out of three self-report measures, significantly less depression than subjects not receiving treatment. Subjects receiving treatment were also less clinically depressed⁶ and reported statistically fewer problem behaviors⁷ at posttesting than subjects not receiving treatment. However, these self-reported changes were not manifested in changes observed by others. The number of problem behaviors observed by parents and teachers for subjects receiving treatment was statistically the same as the number of observed problem behaviors for subjects not receiving treatment. In addition, there was no statistical difference in academic performance at posttesting between subjects receiving treatment and subjects not receiving treatment. Visual inspection of the data did reveal a

⁶In other words, there were fewer treatment subjects at posttesting with clinical depression, diagnosed according to DSM-III-R criteria, than waitlist-control subjects with clinical depression.

⁷Examples of "problem behaviors" include abusing substances, being argumentative, running away, withdrawing, crying frequently, and skipping school. The checklists completed by the subject, parents, and teachers all assessed similar behaviors.

trend that treatment-group subjects were improving their academic performance over time, whereas the academic performance of the waitlist-control subjects was actually declining over time.

Hypotheses #1 and #2 were supported by the obtained results since participation in the ACWDC by clinically depressed adolescents did result in a statistically significant reduction of self-reported depression and problem behaviors. Hypotheses #3 and #4 were not supported by the obtained results since participation in the ACWDC by clinically depressed adolescents did not result in a statistically significant improvement in parent- and teacher-observed problem behaviors or in a statistically significant improvement in teacher-reported academic performance.

Analysis of Results

Expected Findings

As expected, participation by clinically depressed adolescents in the ACWDC was associated with significant decreases in self-reported depression and problem behavior. These findings are consistent with the results obtained by Clarke and colleagues (1990) and Kahn and colleagues (1990) who also demonstrated that the ACWDC was effective in reducing self-reported depression in adolescents. These findings also expand on the work of these previous

investigators since in this study the ACWDC was also associated with reductions in other self-reported problems. These expected results provide evidence that the ACWDC not only helps depressed adolescents feel less depressed, but that the treatment program helps these depressed adolescents have fewer other self-reported problems.

Despite obtaining these expected results, there are a number of limitations to this study which make the above conclusions tentative. The following limitations are discussed within the framework of threats to internal and external validity.

Threats to Internal Validity

Campbell and Stanley (1963), in a classic paper, wrote that "internal validity" refers to how well extraneous variables, or threats, have been controlled in the experimental study being conducted. These threats must be controlled in order to have high internal validity and to conclude that observed changes are due to the treatment rather to some other unknown factor. As described by Campbell and Stanley (1963) and Borg and Gall (1989), internal threats include the following: (a) history, any event that occurs between a set of measurements in addition to the treatment being evaluated; (b) maturation, all the biological, physiological, and psychological changes that occur with the passage of time; (c) testing, the effects taking a pretest has on the scores obtained when a posttest

is administered; (d) instrumentation, any effects caused by changes of assessment procedures; (e) statistical regression, when subjects are chosen on the basis of extreme scores, the scores obtained on a second occasion will almost certainly be less extreme due to regression towards the mean; (f) selection, biases resulting from differential recruitment of subjects for treatment and control groups; (g) subject attrition, the differential loss of subjects during the course of an investigation which could result in observed changes independent of the intervention being evaluated; (h) the John Henry effect, the situation in which the control group subjects perform beyond their usual level because they perceive that they are in competition with the experimental group; and (i) experimental treatment diffusion, which occurs if the treatment condition is perceived as very desirable relative to the control condition and members of the control group seek access to the treatment condition by discussing the treatment with treatment condition subjects.

A major strength of this study is that a pretest-posttest control-group design with random assignment was employed which minimized the majority of these internal validity threats. Two of these threats, selection and subject attrition, were empirically verified as minimal through analyses of pretreatment data which demonstrated no significant difference (or bias) between groups prior to the experiment. Internal threats not well controlled

include the John Henry Effect and experimental treatment diffusion, but the effects of these threats on the obtained results are also seen as minimal since there was no observation of, or evidence for, subjects talking with one another and/or competing with one another regarding treatment. This minimization of internal validity threats strongly suggests that the obtained self-reported reductions in depression and problem behaviors by the treatment condition subjects were due to some aspect of the treatment (ACWDC) and not due to some unknown extraneous factor.

Threats to External Validity

Campbell and Stanley (1963) defined "external validity" as the extent to which the findings of an experiment can be generalized across settings, populations, or situations. If the study has high external validity, then findings are not specific to only the population and procedures employed and can be replicated and generalized to other settings or populations. Threats to external validity (as described by Campbell & Stanley, 1966; Borg & Gall, 1989; Rosenthal, 1966), include the following: (a) the Hawthorne Effect, when attention alone causes observed changes rather than the treatment; (b) novelty and disruption effects, when observed differences occur only because the treatment is novel or disruptive; (c) experimenter bias, when effective or ineffective results

are due to characteristics of the particular experimenter who administers the treatment; (d) treatment infidelity, when treatment is not implemented as described; (e) halo effect, when subjects give indiscriminant exaggerated positive responses to questions that do not necessarily reflect how they truly feel; and (f) sample representation, how well the sample represents the target population.

As a major limitation to this study, many of the threats to external validity in this study were uncontrolled which makes it difficult to predict with confidence that the self-reported decreases in depression and problem behaviors would be found by other researchers in a different setting conducting a similar study. These uncontrolled threats affect prediction/generalizability since the threats could have biased the obtained findings. For example, with regard to the Hawthorne and novelty effects, no attention or placebo-control group was employed. Thus, self-reported changes could have been due to attention or novelty influences alone. With regard to experimenter bias and treatment infidelity, the same experimenter administered the pre-and post-assessment clinical interviews as well as conducted the ACWDC. Even though standard or structural procedures were carefully followed by the experimenter, it would be especially helpful if replication studies used diagnostician(s) and therapist(s) who were blind to the experiment. With regard to halo effect, self-reported changes could have been due

to treated subjects biasing their responses on assessment measures in a favorable direction in order to please, whereas waitlist-control subjects would be less likely to do so. With regards to sample representation, the sample obtained were volunteers, from one school, and almost all were Caucasian and female. Thus, the obtained results cannot technically be generalized to adolescents with differing characteristics in other settings.

In summary, threats to internal validity were much better controlled than threats to external validity. Thus, the self-reported decreases in depression and problem behaviors were, more likely than not, due to some aspect of the treatment (ACWDC); yet, we must be more cautious how well these findings might generalize to other settings. Since these findings are a replication of findings by previous researchers (Clark et al., 1990; Kahn et al., 1990), it is reassuring that some degree of generalization has now been demonstrated. As noted by Borg and Gall (1989) replication increases the external validity of findings (minimizing the external validity threats) which maximizes the likelihood that the obtained findings would be found by other researchers with a different sample of adolescents with similar characteristics. Nonetheless, this and previous studies utilized mainly Caucasian females as subjects, and it is not known if these findings would generalize depressed adolescents who are male or non-Caucasian.

Unexpected Findings

Contrary to expectations, participation by clinically depressed adolescents in the ACWDC was not associated with reductions in teacher- or parent-observed problem behaviors or with improvement in teacher-reported academic performance. These findings suggest that participation in the ACWDC is not associated with initial behavior or performance changes readily observed by others.

Even though significant observed changes were not reported by the parents and teachers, it is still possible that smaller observable changes may have taken place but were not detected in this study due to the experimental methodology employed. First, the outcome measures completed by the teachers and parents (Child Behavior Checklist and Teacher Rating Scale) were designed to be global measures of behavior and thus may have been too general to detect initial treatment effects. Observable treatment effects may have been detected if more specific data was collected (e.g., number of school days missed, percentage of homework assignments completed, or number of arguments at home) or if more specific behavioral observations were conducted (e.g., percentage of time on-task in the classroom or percentage of time with a "bright affect" at home or school).

Second, observable treatment effects may have been masked by the lack of severe problem behavior or academic performance deficits in many of these subjects. Despite

being clinically depressed, many of the subjects were good students and did not demonstrate acting-out behaviors. Observable treatment effects may have been detected if more subjects had behavior problems or academic performance deficits to improve upon.

Third, the posttesting may have been conducted too quickly after treatment to allow teachers and parents sufficient time to observe treatment effects. It often takes time for others to notice improvement in behavior/performance, and it is quite possible that changes would have been reported by the parents and teachers at a later follow-up assessment. Unfortunately, due to time constraints of the school system and ethical issues related to delaying treatment for the waitlist-control group, a longer follow-up assessment was not possible to conduct.

Finally, it may be noted that an increase in sample size would increase the likelihood of detecting sudden changes in behavior or performance. Statistical significance between conditions for academic performance may have been achieved in a study with a larger sample size since there was a trend that treated subjects were improving in performance and non-treated subjects were declining in performance.

ACWDC Critique

During this study, a number of observations were made with regard to the content and structure of the ACWDC. Some of these observations were positive, and others were negative. With regard to the positive observations, the written materials of the ACWDC were excellent. These materials provided up-to-date information about depression, enabling a therapist to gain a quick understanding of the nature of depression and which psychological techniques to use for treatment. The student workbook was also well written and could easily be followed by most students. Another positive observation of the ACWDC is that it uses a structured class format, which allows information to be effectively conveyed.

Despite these positive observations of the ACWDC, there are a number of limitations. First, even though the course materials are well-written, the instructions are often difficult to follow as written since they do not allow much flexibility in carrying them out. As an example, during one session a female adolescent became tearful when discussing her boyfriend breaking up with her. To follow the treatment protocol, the experimenter had to continue with the lesson and defer her issues to a later session.

A second limitation is that the written materials were often too elementary conceptually for the subjects in this

study. As mentioned earlier, many of the subjects were good students and had no problems reading or understanding and could pick up the information quickly. However, the manner in which the information was conveyed in the ACWDC was often repetitive, leading quick learners to become bored. It is suspected that the clinical population with which the ACWDC was developed was much lower functioning than the non-referred subjects in this study.

A third limitation of the ACWDC is that the sessions are too numerous (16 sessions) and too lengthy (two hours each) to be used practically in a school setting by school staff. Running treatment groups in school settings is difficult since time constraints of the school schedule and staff limit the number and length of sessions. Clarke and colleagues (1990) do indicate that the ACWDC can be modified for applications in the school setting by deleting certain sessions and content, which was done during the current study.

Future Research Recommendations

Future research with the ACWDC should address the limitations of this and previous studies. To maximize the parent and teacher observation of treatment gains, it is recommended that the next study with the ACWDC employ direct behavioral observations, a longer follow-up period, and a larger sample, and recruit subjects who not only are clinically depressed, but have a range of problem behaviors

and school performance difficulties as well. To maximize conclusions that observed effects are due to treatment and not extraneous variables, it is recommended the next study employ separate persons for conducting the clinical interview and treatment sessions, a third minimal-treatment control group, methods to assess compliance to assessment and treatment protocols, and structures that prevent the possibility of competition and/or discussion between subjects in different groups. Third, to maximize generalizability, it is recommended that the next study employ more subjects who are male, minority, and drawn from a larger population base than was utilized here. Fourth, to maximize utility in the schools or other clinical settings, it is recommended that the next study develop and test a modified version of the ACWDC which has fewer sessions, more flexible lessons, and content not deemed too elementary by those depressed adolescents who happen to be good students. Eventually, treatment outcome comparisons will also be needed between the ACWDC and other credible forms of intervention.

Conclusions

Adolescent depression is the most frequently reported mental health problem for this age group, yet the number of studies focussing on psychological treatment efficacy has been minimal. The purpose of this study was to add to this treatment literature by examining the effects of the ACWDC

with clinically depressed adolescents.

As expected, clinically depressed adolescents treated with the ACWDC reported reductions in self-reported depression and associated problem behaviors. Contrary to expectations, these self-reported changes were not observed by parents or teachers in reductions of problem behaviors at home or school, nor in significant teacher-observed academic improvement at school. Taking into account the limitations of this study, overall, the ACWDC seems to help clinically depressed teenagers feel better (less depressed) and reduces their self-perceived problem behaviors. However, participation in the ACWDC is not associated with initial changes which can be readily observed by others. Smaller observable changes may take place as a result of participation, but at this time these changes have not been documented reliably in this or in previous studies.

In conclusion, cognitive-behavioral techniques, and more specifically the Adolescent Coping With Depression Course (ACWDC), have shown promise as effective psychological treatment strategies for clinically depressed adolescents. A promising element of the ACWDC approach is its applicability in school settings. Such approaches are more ecologically valid (Anastasi, 1988) and also increase the likelihood that a greater number of depressed adolescents will receive help before problems escalate to the point of a mental health referral.

REFERENCES

- Achenbach, T. M. (1988a). Youth self-report. Burlington, VT: University of Vermont.
- Achenbach, T. M. (1988b). Teacher's report form. Burlington, VT: University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1983). Manual for the child behavior checklist and revised child behavior profile. Burlington, VT: University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1987). Manual for the youth self-report and profile. Burlington, VT: University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1988). Manual for the teacher's report form and profile. Burlington, VT: University of Vermont.
- Achenbach, T. M., & McConaughy, S. H. (1987). Empirically based assessment of child and adolescent psychopathology. Beverly Hills, CA: Sage.
- Alessi, N. E., & Magen, J. (1988). Comorbidity of other psychiatric disturbances in depressed psychiatrically hospitalized children. American Journal of Psychiatry, 145, 1582-1584.
- American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed.-revised). Washington, DC: Author.

- Anastasi, A. (1988). Psychological testing. New York: MacMillan.
- Beck, A. T., & Steer, R. A. (1987). The Beck Depression Inventory: Manual. New York: Psychological Corporation.
- Borg, W. R., & Gall, M. D. (1989). Educational research. New York: Longman.
- Brent, D. A., Perper, J. A., Goldstein, C. E., Kolko, D. J., Allan, M. J., Allman, C. J., & Zelenak, J. P. (1988). Risk factors for adolescent suicide. Comparison of adolescent suicide victims with suicidal inpatients. Archives of General Psychiatry, *45*, 581-588.
- Butler, L., Mieztis, S., Friedman, R., & Cole, E. (1980). The effect of two school-based intervention programs on depressive-symptoms in preadolescents. American Educational Research Journal, *17*(1), 111-119.
- Campbell, D., & Stanley, J. (1963). Experimental and quasi-experimental designs for research on teaching. In N. L. Gage (Ed.), Handbook of research on teaching. (pp. 171-246). Chicago: Rand McNally.
- Carlson, G. A., & Garber, J. (1986). Developmental issues in the classification of depression in children. In M. Rutter, C. Izard, & P. Read (Eds.), Depression in younger people: Developmental and clinical perspectives (pp.399-434). New York: Guilford Press.

- Clarke, G. (1990). Group cognitive-behavioral treatment of adolescent depression. Symposium conducted at the meeting of the Association for Applied Behavior Therapy, San Francisco, CA.
- Clarke, G. N., & Lewinsohn, P. M. (1984). The coping with depression course adolescent version: A psychoeducational intervention for unipolar depression in high school students. Eugene, OR: Peter M. Lewinsohn.
- Clarke, G., Lewinsohn, P. M., & Hops, H. (1990). Adolescent Coping with Depression Course. Eugene, OR: Castalia Publishing Company.
- Dobson, K. (1989). A meta-analysis of the efficacy of cognitive therapy for depression. Journal of Consulting and Clinical Psychology, 57(3), 414-419.
- Frame, C., Matson, J. L., Sonis, W. A., Fialkov, M.J., & Kazdin, A. E. (1982). Behavioral treatment of depression in a prepubertal child. Journal of Behavior Therapy and Experimental Psychiatry, 13(3), 239-243.
- Garber, J., & Kashani, J. H. (1991). Development of the symptom of depression. In M. Lewis (Ed.), Child and adolescent psychiatry: A comprehensive textbook (pp. 293-310). San Francisco, CA: Williams & Wilkins.
- Greydanus, D. E. (1986). Depression in adolescence: A perspective. Journal of Adolescent Health Care, 7, 109S-120S.

- Hamilton, M. (1982). Symptoms and assessment of depression. In E. S. Paykel (Ed.), Handbook of affective disorders (pp. 3- 11). New York: Guilford.
- Harrington, R., Fudge, H., Rutter, M., Pickles, A., & Hill, J. (1990). Adult outcomes of childhood and adolescent depression. Archives of General Psychiatry, 47, 465-473.
- Hodges, K. (1986). Child Assessment Schedule. Eastern Michigan University: Author.
- Hodges, K., Cools, J., & McKnew, D. (1989). Test-retest reliability of a clinical research interview for children: The Child Assessment Schedule (CAS). Psychological Assessment: Journal of Consulting and Clinical Psychology, 1, 317-322.
- Hodges, K., Kline, J., Stern, L., Cytryn, L., & McKnew, D. (1982). The development of the Child Assessment Schedule for research and clinical use. Journal of Abnormal Child Psychology, 10, 173-189.
- Hodges, K., Saunders, W., Kashani, J., Hamlett, K., & Thompson, R. (1990). Internal consistency of DSM III diagnoses using the symptom scales of the Child Assessment Schedule (CAS). Journal of American Academy of Child Psychiatry, 29, 635-641.
- Hughes, J. (1988). Cognitive behavior therapy with children in schools. Elmsford, NY: Permagon Press.

- Kahn, J. S., Jenson, W. R., Clark, E., & Kehle, T. J. (1990). Comparison of cognitive-behavioral, relaxation, and self-modeling interventions for depression among middle-school students. School Psychology Review, 19(2), 196-211.
- Kashani, J. H., & Sherman, D. D. (1988). Childhood depression: Epidemiology, etiological models, and treatment implications. Integrative Psychiatry, 6, 1-8.
- Kazdin, A. (1990). Childhood depression. Journal of Child Psychology and Psychiatry, 31(1), 121-160.
- Kovacs, M. (1985). The Children's Depression Inventory. University of Pittsburgh School of Medicine: Author.
- Kovacs, M. (1989). Affective disorders in children and adolescents. American Psychologist, 44(2), 209-215.
- Kovacs, M., & Gatsonis, C. (1989). Stability and change in childhood-onset depressive disorders: Longitudinal course as a diagnostic validator. In L. N. Robins & J. E. Barrett (Eds.), The validity of psychiatric diagnosis (pp. 57-73). New York: Raven Press.
- Lewinsohn, P. M. (1991, August). Depression in adolescence. Paper presented at the meeting of the American Psychological Association. San Francisco, CA.

- Lewinsohn, P. M., Antonuccio, D. O., Steinmetz-Breckenridge, J. L., & Teri, L. (1984). The Coping with Depression Course: A psychoeducational intervention for unipolar depression. Eugene, OR: Castalia Publishing Company.
- Lewinsohn, P. M., Hoberman, H. M., Teri, L., & Hautzinger, M. (1985). An integrative theory of unipolar depression. In S. Reiss & R. R. Bootzin (Eds.), Theoretical issues in behavioral therapy (pp. 313-359). New York: Academic Press.
- McConaughy, S. H. (1985). Using the Child Behavior Checklist and related instruments in school-based assessment of children. School Psychology Review, 14(4), 479-494.
- Nolen-Hoeksman, S., Seligman, E. P., & Girgus, J. S. (1986). Learned helplessness in children: A longitudinal study of depression, achievement, and explanatory style. Journal of Personality and Social Psychology, 51(2).
- Petti, T. A. (1978). Depression in hospitalized child psychiatry patients: Approaches to measuring depression. Journal of the American Academy of Child Psychiatry, 17, 49-59.
- Petti, T. A. (1989). Depression. In T. H. Ollendick & M. Hersen (Eds.), Handbook of child psychopathology (pp. 239-246). New York: Plenum Press.

- Petti, T. A., Bornstein, M., Delamater, A., & Conners, C. K. (1980). Evaluation and multimodality treatment of a depressed prepubertal girl. Journal of the American Academy of Child Psychiatry, 19, 690-702.
- Poznanski, E. O., Grossman, J. A., Buchsbaum, Y., Banegas, M., Freeman, L., & Gibbons, R. (1984). Preliminary studies of the reliability and validity of the Children's Depression Rating Scale. Journal of the American Academy of Child Psychiatry, 23, 191-197.
- Radloff, L. S. (1977). A CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.
- Reynolds, W. M. (1987). Reynolds Adolescent Depression Scale: Professional manual. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W. M. (1989). Reynolds Child Depression Scale. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W. M. (1990). Depression in children and adolescents: Nature, diagnosis, assessment, and treatment. School Psychology Review, 19(2), 158-173.
- Reynolds, W. M., & Coats, K. I. (1986). A comparison of cognitive-behavioral therapy and relaxation training for the treatment of depression in adolescents. Journal of Consulting and Clinical Psychology, 54, 653-660.

- Rosenthal, R. (1966). Experimenter effects in behavioral research. New York: Appleton-Century-Crofts.
- Shelton, R. C., Hollon, S. E., Purdon, S. E., & Loosen, P. T. (1991). Biological and psychological aspects of depression. Behavior Therapy, 22, 201-228.
- Spitzer, R. L., Endicott, J., & Robins, E. (1978). Research diagnostic criteria: Rationale and reliability. Archives of General Psychiatry, 35, 773-782.
- Stark, K. D., Reynolds, W. M., & Kaslow, N. J. (1987). A comparison of the relative efficacy of self-control therapy and a behavioral problem-solving therapy for depression in children. Journal of Abnormal Child Psychology, 15(1), 91- 113.
- Strauss, C. C. Last, C. G., Hersen, M., & Kazdin, A. E. (1988). Association between anxiety and depression in children and adolescents with anxiety disorders. Journal of Abnormal Child Psychology, 16, 57-68.
- Weller, E. B., & Weller, R. A. (1991). Mood disorders. In M. Lewis (Ed.), Child and adolescent psychiatry: A comprehensive textbook (pp. 646-664). Baltimore, MD: Williams & Wilkins.

APPENDIXES

Appendix A
IRB Information

Statement of the PI to the IRB for Proposed
Research Involving Human Subjects

Proposal Title: Cognitive-Behavioral Treatment of Adolescent
Depression: Effects on Multiple Parameters

Princ. Investigator: Jay R. Skidmore, Ph.D. Psych Dept. Ext. 1451

Student Researcher: Steven E. Curtis, M.S. Psych Dept. Ext. 2027

A. Human subjects will participate in this research and be asked to do the following: 1) Complete depression questionnaire and interview and if they qualify, 2) be administered and academic test and participate in a depression treatment course.

B. The potential benefits to be gained from the proposed research are: Depressed adolescents will receive treatment when they might not have otherwise received it. Participation in the treatment may help some students feel happier and better about themselves, which could result in fewer behavioral, emotional, and academic difficulties.

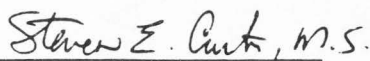
C. The risk(s) to the rights and welfare of human subjects involved are: This study does not involve risks, however some students may be identified who need more in-depth psychological treatment.

D. The following safeguards/asures to mitigate/minimize the identified risks will be taken: Students who need more in-depth psychological treatment will be referred, with parental and student consent, to Bear River Mental Health or some other mental health facility.

E. The informed consent procedures for subjects will be as follows: Prior to participation in the study, all students will be given a description of the study and a consent form for both themselves and parents to sign.

F. The following measures regarding confidentiality of subjects will be taken: Responses on the questionnaires and in the interview, along with issues discussed in the depression course will remain confidential between the principle investigator, research assistants, parents of the students involved, and the students themselves. No school official will have access to information pertaining to a particular subject without both parental and student consent.


Principal Investigator


Student Researcher



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322-1450

OFFICE OF THE VICE PRESIDENT
FOR RESEARCH
Telephone (801) 750-1180

MEMORANDUM

TO: Dr. Jay Skidmore and Steven E. Curtis

FROM: Sydney Peterson *SP*

DATE: March 28, 1991

SUBJECT: Proposal Entitled, "Cognitive-Behavioral Treatment of
Adolescent Depression: Effects on Multiple Parameters"

The above-referenced proposal has been reviewed and approved by the Institutional Review Board. Please call me at 750-6924 if you have any questions.

Appendix B
Informed Consents and Letters



Mountain Crest High School

255 South 800 East • Hyrum, Utah 84319
Phone (801) 245-6093

JOHN A. HANSEN
Principal
MICHAEL D. SALVESEN
Assistant Principal
NANCY BARTELT
Assistant Principal

January 10, 1991

Dear Parent,

Steven Curtis, M.S. of Utah State University is currently conducting a study which will evaluate the effects of an after-school educational group with adolescents experiencing low self-esteem, difficulty in concentration, loss of interest in activities and/or impaired performance. The groups, which will begin in February and end in May, are designed to help students feel better about themselves, which hopefully will result in fewer behavioral, emotional, and academic difficulties.

During the next several weeks at Mountain Crest High School, all students will be screened for potential involvement in this program. Classroom teachers will provide 15 minutes of class time for students to respond to items pertaining to their behavior, academic performance, and emotions. Those students that qualify for the opportunity to participate in this after school program will be contacted as well as their parents to provide additional information and to obtain permission for participation.

Please be aware that participation is voluntary and that responses to questionnaires will be kept confidential and will not be shared without parental consent.

If you have any questions or concerns, please contact Steven E. Curtis, M.S. at 752-2767 (home) or 750-2027 (office); Kris Hart, M.C.H.S. Counseling Office 245-6096; or Nancy Bartelt, Assistant Principal 245-6093. Thank you very much for your cooperation.

Nancy Bartelt

Nancy Bartelt
Assistant Principal

Steven E. Curtis

Steven E. Curtis, M.S.
Certified School Psychologist

Home of State Champions

January 14, 1990

Dear Teacher,

Enclosed are the questionnaires to be completed by your students. Please have them complete the questionnaires on January 15th during your 3rd hour classes. Please carefully follow the instructions below. Allow approximately 15 minutes for completion.

Steps:


1. Pass out questionnaires to students.
2. Read the following:

"Today each of the students in the school will be filling out some questionnaires. These questionnaires ask questions about how you feel about yourself and things in general. This is part of study conducted by Steve Curtis of Utah State University. All responses will be kept confidential and will not be shared with teachers or peers in your school. There are no right or wrong answers-respond to the questionnaires just the way you feel. First, complete the information on the first page, filling in your name, age, sex, grade, race, and date where indicated. Next, carefully read the instructions at the top of each questionnaire. After you've read the instructions, complete as directed. While questionnaires are being completed, please do not talk. If you have any questions, please raise your hand. When you have finished, turn your questionnaires over and sit quietly. I will collect the questionnaires when everyone is finished."

3. When students have finished, collect questionnaires. To assure confidentiality, collect the questionnaires individually in a face down manner. Do not have students pass them around.
4. Place questionnaires back in envelope, seal, and return to Kris Hart in the counseling office.

Should you have any questions, I can be reached at 750-2027 (office) or 752-2767 (home). Thank you for your participation.

Sincerely,


Steven Curtis

CONSENT FORM

Treatment Study

The purpose of this study is to evaluate the effects of psychoeducational treatment on the behavior, emotions, and academic performance of adolescents experiencing such difficulties as low self-esteem, difficulties with concentration, sadness, and poor academic performance. During this study, your student will be given an interview. Selected students will be invited to participate in a two-hour, after-school group, held twice weekly for eight weeks.

Both immediately prior and after the group, participating students will be asked to complete questionnaires concerning their emotions, behavior, and academic performance. Teachers and parents will also be asked to complete behavior and academic rating scales.

This study does not involve deception, nor risks of any kind. However, some identified students may need more help than can be offered through this study. Those students who do need more in-depth help will be referred, with parental consent, to an agency offering counseling services. Participation is voluntary and students may discontinue at any time during the study with no consequences.

Responses to the questionnaires, rating scales, and the interview, along with issues discussed during the treatment group, will remain confidential. The principle investigator, research assistants, and parents will be the only people having access to this information.

This research project has been approved by the Institutional Review Board at Utah State University. Any questions or concerns should be directed to Steven E. Curtis, M. S. 752-2767 (h) or 750-2027 (w).

If you wish to have your son or daughter participate in this research project, please sign below.

WE (Parent and Student) HEREBY FREELY CONSENT TO HAVE THE BELOW-NAMED STUDENT PARTICIPATE IN THIS STUDY UNDER THE CONDITIONS DESCRIBED ABOVE.

Print Student Name Here

Student Signature

Date

Parent Signature

Date

CURRICULUM VITAE

STEVEN ERIC CURTIS

Date of Birth: 12/30/56

Home Address: 1757 NW 61st #2 Seattle, WA 98107

Home Phone: (206) 789-9694 Business Phone: (206) 526-2164

CURRENT EMPLOYMENT

Pre-Doctoral Clinical Psychology Internship 1991-Present
Child Track (APA approved in clinical)

Department of Psychiatry and Behavioral Sciences XD-45 98107
 University of Washington School of Medicine - Seattle WA

EDUCATION

Ph.D. June 1992

Professional-Scientific Psychology
 (APA approved in combined clinical - counseling - school)

Department of Psychology
 Utah State University - Logan, UT
 Chair: Jay R. Skidmore, Ph.D.

M.S. - School Psychology 1988

Department of Psychology
 Utah State University - Logan, UT
 Chair: Gerald R. Adams, Ph.D.

B.A. - Psychology 1981

Department of Psychology
 University of California - Los Angeles, CA

CERTIFICATIONS

Nationally Certified School Psychologist 1991-93
 (#26035)

PROFESSIONAL AFFILIATIONS

American Psychological Association
 Association for Advancement of Behavior Therapy
 National Association of School Psychologists

AWARDS & HONORS

Student Representative of Ph.D. Program	1989-90
President's Fellowship - Utah State University	1988
Undergraduate Honors Program - UCLA	1979

CLINICAL TRAINING

Child Clinical Psychology Internship 1991-present

Settings: University of Washington School of Medicine/
Children's Hospital and Medical Center

Rotations: Adolescent Medicine Clinic/
Outpatient Psychiatry

Inpatient Child Psychiatry/
Consultation-Liaison

Child Neuropsychology/
Child Custody Evaluations

Population: Children/adolescents with chronic and other
medical illnesses; psychiatric/
developmental/neurological disorders;
custody issues

Duties: Child/marital/family psychotherapy; parent
education; psychological/neuropsychological
assessment; physicians/school consultation;
custody evaluations

Supervisors: Ben Low, Ph.D., Kim Kendall, Ph.D.,
Valerie Tarico, Ph.D., Betty Jones, Ph.D.,
Andy Callner, Ph.D., Robert Reichler, M.D.,
Bill Womack, M.D., Steve Sulzbacher, Ph.D.,
Eric Trupin, Ph.D., and Andy Benjamin, J.D.,
Ph.D.

Doctoral Practica (11 quarters): 1986-90

Settings: Psychology Department Community Clinic
University Student Counseling Center
Center for Persons with Disabilities (UAP)
Cache County School District

Population: Children/adolescents/adults with
psychiatric/developmental/adjustment/
neurological disorders

Duties: Individual/marital/family psychotherapy; psychological/neuropsychological assessment; school consultation; biofeedback training

Supervisors: Jay R. Skidmore, Ph.D., Elwin Nielsen, Ph.D., Joan Klienke, Ed.D., William Dobson, Ph.D. David Bush, Ph.D., and Phyllis Cole, Ph.D.

RESEARCH IN PROGRESS

Sulzbacher, S., & Curtis, S. Mitigating the neuropsychological effects of childhood cancer. Presently being conducted through Children's Hospital and Medical Center.

MANUSCRIPTS IN PREPARATION

Skidmore, J. R., Curtis, J. E., & Curtis, S. E. Predictors of cardiovascular reactivity: Personality, gender, ethnicity, and behavioral variables.

Curtis, S. E., Skidmore, J. R., & White, K. The type-A behavior pattern and cardiovascular reactivity in children: A meta-analysis.

PUBLICATIONS

Curtis, S. E. (1992). Childhood asthma: A teacher handout. In Helping children grow up in the '90s: A resource book for parents and teachers. Washington, DC: National Association of School Psychologists.

Curtis, S. E., & Adams, G. R. (1991). The development of the Stress-Response Scale for Adolescents. Journal of Adolescent Research, 6(4), 454-469.

Curtis, S. E. (1991). Childhood asthma: A teacher handout. NASP Communique, October.

Curtis, S. E., & Skidmore, J. R. Packaged self-management programs for childhood asthma. Psychology in the Schools (accepted).

UNPUBLISHED MANUSCRIPTS

Curtis, S. E., & Skidmore, J. R. (1992). Cognitive-behavioral treatment of adolescent depression: Effects on multiple parameters. Dissertation.

Curtis, S. E., & Adams, G. R. (1989). The Stress-Response Scale for Adolescents [Psychometric instrument, available from the author]. Utah State University, Logan, Utah.

Curtis, S. E. (1989). The development of the Stress-Response Scale for Adolescents. Masters Thesis.

CONFERENCE PRESENTATIONS

Curtis, S. E., & Skidmore, J. R. Type A behavior and cardiovascular reactivity in children: A meta-analysis. 1991 Annual Convention of the American Psychological Association, San Francisco, August 1991.

Curtis, S. E., & Skidmore, J. R. Packaged self-management programs for childhood asthma. Annual Conference of the National Association of School Psychologists, Dallas, April 1991.

Skidmore, J. R., Curtis, J. E., Curtis, S. E., & Forbush, D. Cardiovascular reactivity and the Framingham Type-A scale: But which version? 24th Annual Conference of the Association for Advancement of Behavior Therapy, San Francisco, November 1990.

Curtis, S. E., & Skidmore, J. R. Predictors of cardiovascular reactivity in childhood: A systematic review. Annual Convention of the Rocky Mountain Psychological Association, Tucson, April 1990.

Curtis, S. E., & Adams, G. R. The development of the Stress-Response Scale for Adolescents. 5th Biennial Conference on Adolescent Research, Tucson, April 1989.

OTHER PRESENTATIONS

Curtis, S. E. (1990). Anxiety: What it is and how to manage it. Presentation to students in Study Efficiency class of Utah State University.

Curtis, S. E. (1990). The role of the school psychologist within the educational system. Presentation to Cache Valley Parents of ADHD children support group.

PREVIOUS GRADUATE SCHOOL EMPLOYMENT

Child Clinical Graduate Assistantship 1990-91

Setting: Center for Persons with Disabilities (UAP)

Population: Children/adolescents with psychiatric/medical/school difficulties

Duties: Case manager in multidisciplinary team; psychological/neuropsychological assessment; individual/marital/family psychotherapy; parent education; teacher consultation

Supervisor: Phyllis Cole, Ph.D.

Certified School Psychologist 1988-90

Setting: Cache County School District - Logan, UT

Population: Elementary/middle/high school students

Duties: Coordinator of special education services of assigned schools; psychoeducational assessment; teacher and parent consultation; brief individual and family psychotherapy

Supervisor: Julie Landeen, Ed.D.

Psychological Examiner 1988

Settings: Center for Persons with Disabilities (UAP)/ Blackfoot School District - Blackfoot, ID

Populations: Handicapped adults in structured workshop; students referred for special education

Duties: Psychological and psychoeducational evaluations

Supervisor: Phyllis Cole, Ph.D. and Elwin Nielsen, Ph.D.

Graduate Research Assistantship 1986-87

Setting: Early Intervention Research Institute
Utah State University

Study focus: Early intervention with handicapped children

Duties: Data collection and analyses using SPSS

Supervisor: Karl White, Ph.D.

GRADUATE TEACHING EXPERIENCE

Course Instructor Winter and Spring 1990

Setting: Learning Assistance Center
Utah State University

Course: Math Anxiety: What it is
and how to manage it.

Supervisor: Margaret Dyerson, Ed.D.

Course Instructor Spring 1991

Setting: Com-Net Extension - Utah State University

Course: Psychometrics (Psychology 530; Upper
Division Undergraduate/Graduate)

Supervisor: Keith Checkettes, Ph.D.

OTHER PERTINENT GRADUATE EMPLOYMENT

Volunteer Graduate Research Assistant 1989-91

Setting: Department of Psychology -
Utah State University

Study focus: Effects of personality characteristics on
cardiovascular responses to stress.

Duties: Cardiovascular reactivity profile
collection; data analyses using SPSSX.

Supervisor: Jay R. Skidmore, Ph.D.

EMPLOYMENT PRIOR TO GRADUATE SCHOOL

Program Specialist 1984-1985

Setting: Eating Disorder Unit
Costa Mesa Hospital - Costa Mesa, CA

Population: Inpatient adolescent/adult eating disorders

Duties: Groups and activities coordinator;
participant with a licensed psychologist in
psychotherapy

Treatment Team Leader 1981-84

Setting: Adolescent Inpatient Psychiatric Unit
Capistrano By The Sea Hospital
Dana Point, California

Population: Adolescent psychiatric inpatients

Duties: Case manager; group/individual/family
psychotherapy with licensed professional;
coordinator of daily activities

Supervisor: Larry Stednitz, Ph.D.

Undergraduate Research Assistant 1980-81

Setting: Department of Psychology
University of California - Los Angeles, CA

Study focus: Efficacy of cognitive-behavioral
intervention versus medication for
attention-deficit children

Duties: Implementor of cognitive-behavior
modification program; data collection

Supervisors: Carol Whalen, Ph.D. and
Barbara Henker, Ph.D.

Psychiatric Aid 1978-81

Settings: Intensive Care Psychiatric Unit
Community Psychiatric Centers
Westwood and Santa Ana Psychiatric Hospitals
Westwood and Santa Ana, California

Population: Adolescent and adult psychiatric inpatients

Duties: General unit staff duties

REFERENCES

Jay R. Skidmore, Ph.D.
Assistant Professor
Director of Practicum Training
Department of Psychology
Utah State University
Logan, Utah 84322-2810
(801) 750-1451

Phyllis Cole, Ph.D.
Associate Professor
Coordinator of Clinical Services
Center for Persons with Disabilities
Utah State University
Logan, Utah 84322-6800
(801) 750-1989

Elwin Nielsen, Ph.D.
Associate Professor
Director of Professional-Scientific Psychology Ph.D Program
Department of Psychology
Utah State University
Logan, Utah 84322
(801) 750-1463

Julie Landeen, Ed.D.
Director of Special Education
Cache County School District
Logan, Utah 84321
(801) 752-3925

Stephen Sulzbacher, Ph.D.
Associate Professor
Department of Psychiatry and Behavioral Sciences, RP-10
University of Washington School of Medicine
Seattle, WA 98195
(206) 526-2164