ABSTRACT

SHIMPI, KRISTAN BENNETT. The Development and Evaluation of an Academic
Support Skills Curriculum for Adolescents with Attention Deficit Hyperactivity Disorder.
(Under the direction of Susan Osborne, Ph.D.)

A paucity of research exists evaluating how to teach adolescents with ADHD

skills to enhance their academic functioning in the classroom. Only one study exists that

evaluates a homework intervention for students with ADHD and their families

(Habboushe et al., 2001). No published studies evaluate other critical components of

academic success (e.g., organizational skills and self-awareness/advocacy) for

adolescents with ADHD.

To address this need, educators and clinicians from the ADHD Program of the

Duke Child and Family Study Center developed an academic summer treatment program

for adolescents with ADHD. The program curriculum, Skills for Academic Success,

provided students direct instruction in the following skill areas: self awareness/advocacy,

homework, and organizational skills.

This study evaluated whether or not participation in the Skills for Academic

Success Curriculum improved self-awareness/advocacy, homework, and organizational

skills of participating students. Additionally, behavioral functioning was assessed to

determine if improvements occurred at home and school as a result of student

participation in the Skills for Academic Success Curriculum. Data from year two (2003)

of the academic summer treatment program were collected to evaluate the effectiveness

of the Skills for Academic Success Curriculum. Group and case study participant data

were evaluated using both quantitative and qualitative methods.

The results of this study revealed positive changes in some areas of behavioral functioning, as reported by both parents and teachers. However, only one area was statistically significant (Oppositional factor). Student and teacher post-test reports indicated that students were using some of the homework and organizational strategies learned in the Skills for Academic Success Curriculum. In addition, students reported more self-awareness/advocacy skills after participating in the Skills for Academic Success Curriculum. Implications of these findings as well as suggestions for future research are discussed.

THE DEVELOPMENT AND EVALUATION OF AN ACADEMIC SUPPORT SKILLS

CURRICULUM FOR ADOLESCENTS WITH ATTENTION DEFICIT

HYPERACTIVITY DISORDER

by

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BIOGRAPHY

Kristan Bennett Shimpi was born on January 23, 1973 in Winston-Salem, North Carolina to Tom and Sylvia Bennett. She completed her Bachelor of Arts degree in Sociology from the University of North Carolina at Chapel Hill in 1995. Following graduation, she worked at the Attention Deficit Disorders Program at Duke University Medical Center, where she continues to work as an Educational Consultant. Kristan earned a Master of Education Degree in Special Education from North Carolina Sate University in1998. She currently lives in Chapel Hill, North Carolina with her husband, Rahul, and their son, Aidan.

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I will be forever indebted to the staff and faculty at the Duke ADHD Program. These individuals believed in my dream of creating an academic summer treatment program for students with ADHD. It was not always an easy journey, but the support was always there.

I am deeply grateful to the members of my Graduate Advisory Committee. Some pushed me when I needed it, some provided a calming reassurance, and some were always there, no matter the time of day or night. Dr. Susan Osborne, Dr. Cathy Crossland, Dr. Ruie Pritchard, and Dr. Ann Schulte, each in her own way helped me develop professionally and personally throughout this endeavor.

Finally, I wish to acknowledge the arrival of my first child, Aidan. His long journey from India into our family was a momentous occasion, and one that has helped me understand the real value of my professional path in the field of education.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

Introduction

It is estimated that between 3-5% of children have Attention Deficit Hyperactivity Disorder (ADHD), or approximately two million children in the United States (American Psychiatric Association, 2000). This means that in a typical public school classroom of 25-30 students, it is likely that at least one will have ADHD. The principal characteristics of ADHD are inattention**,** hyperactivity**,** and impulsivity**.** Symptoms that appear early in a child's life to meet criteria for a diagnosis must cause impairment in two settings, often home and school (American Psychiatric Association, 2000).

The assumption for many years was that children outgrew ADHD. Instead, the core symptoms of ADHD (e.g., inattention, hyperactivity, impulsivity) are manifested differently in the adolescent years, and 70-85% of children with ADHD will continue to have ADHD into adolescence (DuPaul & Stoner, 2003). Academic problems are among the common associated features of adolescents with ADHD, more specifically, problems completing homework assignments and turning them in on time. In addition, cognitive skills may also become an important academic factor in the adolescent years.

Elementary-age students with ADHD and above-average cognitive skills are often able to coast through the earlier grades without much effort. They may not have to pay attention much of the time to be successful in the average public school. In the middle and high school grades, however, they can no longer get by using intelligence and social skills. During these grades, they must devote long hours to studying and writing, planning and acting on a plan, which often demand more concentration (Robin, 1998).

Success in the middle school grades depends on having the skills of organization, time management, and goal setting. What are the best ways to teach these skills to adolescents with ADHD? Some researchers have offered guidelines and suggestions as to how these skills should be taught to students with ADHD, such as setting goals and using assignment sheets and to-do lists to complete homework. However, no empirical data exist to show if these methods are effective for this population (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003; Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998).

Instruction in these skills is often neglected in public school programs, as schools increasingly stress "access to the general education curriculum" mandated by the No Child Left Behind act. Other options for developing, implementing, and evaluating skills programs include summer programs where significant time can be devoted to learning and practicing such skills. One concern, however, is providing such instruction at the point of performance (i.e., the place where students must use such skills). School personnel are also hesitant to implement skills programs that lack empirical support. Summer program settings allow for the needed development, evaluation, and refinement of skills programs in response to demands for research-supported practice.

The research conducted with adolescents with ADHD indicates that the behavioral characteristics associated with the disorder do, in fact, exert an impact academic functioning (Barkley et al., 1990; Barkley et al., 1991; Manuzza et al., 1993; Todd et al., 2002; Wilson & Marcotte, 1996). In addition, these same findings have been observed clinically with the follow-up assessments of students participating in the Multimodal Treatment study of children with ADHD (MTA Study). Students who

responded positively to the behavioral intervention treatment and were successful

academically began having more difficulties once they entered the middle school grades.

Parents and students reported to researchers that school grades dropped, homework

completion was more difficult, and there was little awareness of how to maintain the

level of organization needed in order to be successful in the middle school grades (D.W.

Murray, personal communication, August, 1997).

Empirical research on enhancing the academic skills of students with disabilities

does exist. Most of this research involves evaluating homework interventions for students

with disabilities (Bryan & Sullivan-Burstein, 1998; Hughes, Ruhl, Schumaker, &

Deshler, 2002; Kahle & Kelley, 1994; Trammel, Schloss, & Alper, 1995). Common

themes in the studies reviewed related to homework interventions; all of the studies

included some type of assignment sheet as a way for students to keep track of homework

and/or goal setting**.**

Less research exists on evaluating how to teach organization skills. One study was

located that evaluated a time management strategy for teaching students with disabilities

(Flores & Schloss, 1995). This study, like the ones evaluating homework interventions,

also utilized a method for keeping tracking of school activities.

The research on evaluating self-awareness/advocacy skills is mostly qualitative in

nature (Durlak & Rose 1994; Eisenman & Tascione 2002; Phillips, 1990). Although this

small body of research is promising, these data do not include strategies to promote

generalization of the skills. Approaches for teaching students strategies for more active

involvement in Individualized Education Plan meetings (IEP) have been evaluated by

researchers at the University of Kansas Institute for Research in Learning (Van Reusen &

Bos, 1994; Van Reusen, Deshler, & Schumaker, 1989). These studies, mainly quantitative in nature, demonstrate that strategy instruction provides a systematic way for students with disabilities to be more active in IEP meetings.

The present dissertation research describes the development and evaluation of a skills program for teaching adolescents with ADHD skills for enhancing academic success. More specifically, students are given instruction on: how ADHD affects them in the classroom; how to talk to teachers about specific accommodations, and how these accommodations can help them in the classroom; how to identify characteristics of an organized study area; how to use lists to get ready for school on time; how to set and meet long and short-term academic goals; how to prioritize tasks and create weekly schedules of things to do; how to use a homework contract; and how to use problem-solving to address common homework barriers.

The goal of this study is to develop and evaluate the Skills for Academic Success Curriculum. It is hypothesized that learning skills taught in the Skills for Academic Success Curriculum will have a positive impact on participating students' academic and behavioral functioning, as reported by themselves, parents, and teachers.

The results of the present study will contribute to the limited research to evaluate the effectiveness of teaching adolescents with ADHD skills for enhancing academic success. Additionally, the results will provide more information about the academic functioning of adolescents with ADHD. The next chapter will provide a review of the literature and the specific research questions under investigation.

CHAPTER TWO

Review of the Literature

This review of the literature begins with an overview and characteristics of children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD). A review of the research addressing the long-term academic outcomes for adolescents with ADHD follows. Next, the empirical research on enhancing academic skills with students with disabilities is reviewed. Following the literature review, the study and program evaluation questions are described.

Attention Deficit Hyperactivity Disorder: An Overview

It has been documented that Attention Deficit Hyperactivity Disorder (ADHD) occurs in three to five percent of all school-age students (American Psychiatric Association, 2000). Children diagnosed with ADHD are characterized as having more difficulty with attention, hyperactivity, and impulsivity than others of comparable age and development. These difficulties must be documented as occurring in two separate settings, often home and school, to meet criteria for diagnosis. Some associated features of the disorder are poor frustration tolerance, temper outbursts, rejection by peers, academic failure, and poor self-esteem (American Psychiatric Association, 2000).

Researchers are making progress in identifying the causes of ADHD and how to effectively diagnose this disorder. What follows is a discussion of the etiology of ADHD and current diagnostic procedures.

Etiology of ADHD. The exact causes of ADHD are unknown, as is the case with many mental disorders. However, recent studies of the brain are providing some direction related to the etiology of ADHD. These studies show that certain brain areas have less activity and blood flow, and certain brain structures are slightly smaller than other areas. These differences in brain activity and structure are mainly evident in the prefrontal cortex, basal ganglia, and the cerebellum (Baumeister & Hawkins, 2001; Castellanos & Swanson, 2002; Hill et al., 2003; Jensen, et al., 1997; Kim, Lee, Shin, Cho, Lee, 2002; Logan, 1996; Oades, 1998; Pennigton, 1991; Samango,1999). These areas of the brain are known to help individuals inhibit behavior and sustain attention. Strong evidence also exists that suggest neurotransmitters in certain brain areas play a role in behaviors associated with ADHD (Castellanos & Swanson, 2002; Comings, 1997; Hynd, Hern, Voeller, Kytja, & Marshall, 1991; Mercugliano, 1995; Pliszkla, 2003; Swanson, 2003).

Diagnosis of ADHD. ADHD is classified as a mental disorder and is diagnosed by a licensed mental health professional, such as a pediatrician, psychologist, psychiatrist, or social worker. Currently, the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised* is used as a diagnostic tool to assist professionals in making the diagnosis (American Psychiatric Association, 2000). The three main areas of difficulty associated with ADHD are: inattention, hyperactivity, and impulsivity.

Individuals who display inattention typically have difficulty remaining on task and focusing. Children with this trait might shift from one activity to another during play, or find it difficult to focus on dull or repetitive tasks. Individuals who display hyperactivity typically are excessively restless, overactive, and easily aroused emotionally. Hyperactivity is often described as excessive or inappropriate levels of

motor and/or vocal activity. Parents often describe hyperactivity in a child with ADHD as always being up and on the go, or acting as if driven by a motor (Barkley, 1998). Individuals who display impulsivity typically have difficulty thinking before engaging in a behavior. They might also have problems thinking about the consequences of a behavior before acting. Impulsivity in childhood often presents as under-control of behavior and inability to delay a response or postpone gratification. Children with ADHD often respond without waiting for full instructions, make careless mistakes in schoolwork, and frequently make verbalizations without regard for others or the social consequences of the statement (Barkley, 1998).

Individuals diagnosed with ADHD differ to the extent in which these characteristics persist. Using research-validated diagnostic procedures, researchers have identified three subtypes of ADHD: Predominantly Inattentive Type, Predominantly Hyperactive-Impulsive Type, or Combined Type (inattention, hyperactivity-impulsivity).

For a diagnosis of the Predominantly Inattentive type of ADHD, six or more of the inattention symptoms listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised* must be present:

- often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities;

- often has difficulty sustaining attention in tasks or play activities;

- often does not seem to listen when spoken to directly;

- often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace;

- often has difficulty organizing tasks and activities;

- often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework);

- often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools);

- often is easily distracted by extraneous stimuli;

- often is forgetful in daily activities (American Psychiatric Association, 2000, p. 92).

For a diagnosis of Hyperactive-Impulsive type, six or more of the hyperactivity or impulsivity symptoms listed in the DSM-IV-TR must be present:

- often fidgets with hands or feet or squirms in seat;

- often leaves seat in classroom or in other situations in which remaining seated is expected;

- often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness);

- often has difficulty playing or engaging in leisure activities quietly;

- often is "on the go" or often acts as if "driven by a motor;"

- often talks excessively;

- often blurts out answers before questions have been completed;

- often has difficulty awaiting turn;

- often interrupts or intrudes on others (American Psychiatric Association, 2000, p. 92).

For a diagnosis of Combined Type, six or more symptoms of inattention, plus six or more symptoms of hyperactivity or impulsivity, must be present.

In each of the types of ADHD, the symptoms must be present for at least six months, and these symptoms have to cause problems in two settings (often home and school) prior to age seven (American Psychiatric Association, 2000).

Subtypes and gender differences. Not all children with ADHD present with the same behavioral characteristics, and not all children with ADHD will have the same problems. Some children with ADHD may be hyperactive, and others with the inattentive type may appear to be under-active. Some children with ADHD may have great difficulties with attention. Other children may be mildly inattentive but overly impulsive. And still other children may have significant problems in all three areas (e.g., inattention, hyperactivity, and impulsivity).

In a recent chart review study, Weiss, Worling, and Wasdell (2003) investigated the clinical characteristics of ADHD subtypes. The prevalence of the different subtypes were as follows: 31.5% ADHD –Inattentive Type (IA), 5.5% ADHD-Hyperactive-Impulsive Type (HI), and 63% ADHD – Combined Type (C). For data analysis purposes, children were assigned to one of two groups: ADHD-IA or ADHD-C. When compared to the ADHD-C subtype, The ADHD-IA subtype group was older, consisted of more females, and had higher prevalence rates of learning disabilities and internalizing disorders. The ADHD-IA subtype was considered less impaired, but this group had more academic achievement difficulties when compared to the ADHD-C subtype. Children in the ADHD-IA subtype were also less likely to receive pharmacological treatment (Weiss, Worling, & Wasdell, 2003).

The validity of the DSM-IV ADHD subtypes was evaluated in a study by Faraone, Biederman, Weber, and Russell (1998). Structured diagnostic interviews and psychometric measures of cognitive and social functioning were used to evaluate a clinic-referred sample of 413 children and adolescents. The findings from this study indicated there were significant differences in the DSM-IV subtypes of ADHD. The children and adolescents in the ADHD-C subtype demonstrated more impairment in multiple behavioral domains. However, the ADHD-IA subtype often needed more academic assistance in school. These findings suggest that individuals with the ADHD-C subtype possibly have a more severe disorder that requires different treatment from those individuals with the ADHD-IA subtype (Faraone, Biederman, Weber, & Russell, 1998).

Researchers have examined the question of possible gender differences with ADHD. Gaub and Carlson (1997) conducted a meta-analysis of eighteen studies that addressed gender differences and ADHD. The review revealed little variance across the studies, and no evidence to suggest that gender significantly effects impulsivity, academic performance, social skills, peer relationships, and diagnostic history. Slight differences in some areas were found with females. The females had more intellectual impairment and lower rates of hyperactivity and externalizing behaviors when compared to males (Gaub & Carlson, 1997).

Comorbidities associated with ADHD. Children with ADHD are more likely than their typically developing peers to have an internalizing disorder (e.g., anxiety, depression), with 27-30% of children with ADHD meeting criteria for a comorbid anxiety disorder (Biederman, Newcorn, & Sprich, 1991). With regard to comorbid depression or mood disorders such as dysthymia (a milder, chronic form of depression),

reviews of the literature reveal the percentages ranging from 15-75 % (Tannock, 2000). Externalizing disorders, such as Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) are frequently found in children with ADHD. Prevalence ranges are from 54-67% for children with ADHD who also meet criteria for ODD, and 20-56% for children with ADHD who also meet criteria for CD (Szatmari, Boyle, & Oxford, 1989). Children with ADHD and comorbid Conduct Disorder are at greater risk for Antisocial Personality Disorder, substance abuse, and traffic-related accidents (Barkley, Fischer, Edelbrock, & Smallish, 1990).

New Conceptualizations of ADHD

In response to the research findings described above and recently available research techniques that permit researchers to locate differences in brain functioning, ADHD has been reconceptualized (Baumeister & Hawkins, 2001; Castellanos & Swanson, 2002; Hill et al., 2003; Jensen, et al., 1997; Kim, Lee, Shin, Cho, Lee, 2002; Logan, 1996; Oades, 1998; Pennigton, 1991; Samango,1999). This reconceptualization was initiated by Russell Barkley, one of the leading researchers in the field of ADHD diagnosis and treatment. He has formulated a new theory regarding individuals with ADHD. Barkley's new theory is explained in a treatment manual (Quay & Hogan, 1999), and an overview of this theory and its implications for understanding and treating ADHD are presented below.

Theory of behavioral inhibition. In the past, ADHD was been defined as deficits in the areas of cognitive and behavioral functioning (e.g., inattention, hyperactivity-impulsivity). In a handbook of behavior disorders, Barkley (1999) made the argument

that instead of deficits with attention, ADHD is possibly a result of deficits in the development of the prefrontal cortex region of the brain. As a result of these neurological deficits, individuals with ADHD have developmental deficits in behavioral inhibition, executive functioning, and self-regulation. Barkley defined behavioral inhibition as "not just the delay in responding that results from response inhibition or the self-directed actions within it that are protected, but also the eventual execution of the goal-directed responses generated from those self-directed actions" (p. 229). In other words, individuals with ADHD will respond when immediate reinforcement is available (e.g., going out with friends instead of studying for upcoming test).

Treatment at the point of performance. Executive functions include: non-verbal working memory, internalization of speech, self-regulation of affect, motivation, arousal, and reconstitution. These behaviors allow individuals to have a sense of time and anticipate the future. Being able to delay responses (i.e., behavioral inhibition) is dependent on the executive functions of the individual.

Thus, Barkley termed ADHD not a disorder of skill, but instead, of performance. Individuals with ADHD often know what to do, but they do not do what they know. For example, an individual with ADHD can give an appropriate suggestion for how he should have responded in a particular situation; however, when in the actual situation, he does not respond appropriately. However, because an individual can identify the skill as appropriate, this does not also mean he can also operationalize and practice how to respond appropriately in the specific situation. For example, a student might say that he would be more likely to complete homework assignments if he wrote them down, but the steps for maintaining a homework assignment book versus writing assignments on scrap

paper may not be readily apparent to the student. All of these components: identifying the skill, knowing how to perform the skill, and monitoring performance, are needed to demonstrate that skill leads to performance. Therefore, the teaching and practicing of skills is critical when considering treatment. Furthermore, skills are more likely to be used when they are learned and practiced in the context where they will be used.

Barkley called this "Treatment at the point of performance. The most useful treatments are those in place in natural settings at the point of performance, where the desired behavior is to occur" (p.251). It is often unclear when working with students with ADHD whether the underlying issue is whether or not the skill is present, or if the skill is present but the student does not demonstrate the skill in the appropriate situation. Until research can help tease apart the skill versus will question, professionals working with individuals with ADHD will have to continue to use clinical judgement when making treatment decisions regarding skill instruction and performance reinforcement.

Robin (1998) addressed the issue of treating at the point of performance with the use of a school-based consultant. He suggested first meeting with the adolescent and the family to conduct a detailed assessment of school functioning and establish school and home goals. A school meeting is then scheduled, which is attended by the consultant, family, adolescent, and school personnel. At this meeting, everyone discusses the goals that have been set and establishes a plan for the adolescent to reach the goals. If the parents, teachers, and adolescents are all in agreement regarding treatment goals, and the treatment occurs at home and school – the points of performance for adolescents – it increases the likelihood that the goals will be met and effective communication will occur (Robin, 1998).

What does the research reveal with regards to treatments for ADHD? One of the largest treatment studies conducted, the Multimodal Treatment study of children with ADHD (MTA Study), evaluated the leading treatments of ADHD, including a component to treat at the point of performance. This landmark study is considered the gold standard when discussing treatments for children with ADHD (MTA Cooperative Group, 1999a). It is important to note that prior to the MTA Study, no direct long-term comparison studies of the various treatments had been conducted. An overview of this study and the results are below.

The MTA Study was conducted at six different leading research universities and medical centers across the United States and Canada. The 579 elementary-aged children and their families who participated in the study were randomly assigned to one of four treatment groups for a 14-month period: medication treatment, behavioral treatment, a combination of medication and behavioral treatment, or a community control group. The behavioral treatments included an intensive eight-week summer treatment program utilizing contingency management programming, weekly parent training sessions, and a school-based intervention designed to enhance communication between the home and school environments. The school-based intervention was designed to be a treatment at the point of performance.

At the end of the 14-month treatment period, results indicated that the medication treatment and the combination treatment were both significantly superior to behavioral treatment and the community control group in treating ADHD symptoms. The combination treatment group performed better than the medication treatment group in domains such as peer relations, parent-child relations, and academic outcomes. One of

the unique features of this study is the longitudinal component. Participants have been followed for over eight years and will continue to be followed into adulthood to monitor the long-term effects of the 14-month treatment period.

With regard to specific types of behavioral interventions, four interventions have demonstrated effectiveness for children with ADHD: direct contingency management, clinical behavior therapy, social skills training, and cognitive-behavioral therapy. Hinshaw (2000) provided a brief overview of these interventions.

Direct contingency management involves using positive and negative contingencies in highly structured environments such as residential treatment facilities, special education classrooms, or summer treatment programs. Research in this area has shown that negative consequences (e.g., time out and response cost), when combined with rewards, are effective for children with ADHD. One of the major drawbacks of this treatment is the fact that it is difficult to maintain strict contingencies in the home and school settings over long periods of time.

Clinical behavioral therapy includes both parents and teachers as intervention agents. This therapy is considered a consultative model. Parents and teachers work together to develop strategies to improve the behavior of children with ADHD and coordinate rewards and consequences in both the home and school setting. This treatment requires active involvement of all adults who are involved with the child with ADHD. Although this type of intervention has shown positive results with children with ADHD, the improvements are not as strong as with the more traditional contingency management programming.

Social skills training is often conducted with small groups of children with ADHD. Topics may include cooperation, validation, and participation. The more successful social skills groups are ones that are highly structured with a set curriculum. The research findings are mixed with regard to how effective this treatment is for children with ADHD. Hinshaw (2000) recommended combining social skills training with parent training in order to achieve maximum benefit.

Cognitive-behavioral therapy provides children with ADHD training in self-instructions. Children are taught to "think out loud" and problem-solve in order to change their behavior. The research data in this area have demonstrated some effectiveness; however, the results with children with ADHD have not been as promising. A possible cause of these results is the poor self-regulation abilities of this population.

ADHD in Adolescence

The assumption for many years was that children outgrew ADHD. Instead, the core symptoms of ADHD (e.g., inattention, hyperactivity-impulsivity) are manifested differently in the adolescent years, and 70-85% of children with ADHD will continue to have ADHD into adolescence (DuPaul & Stoner, 2003).

Robin (1998) identified five areas of potential difficulty for adolescents with ADHD related to inattention:

- focusing on the important stimuli in the environment;

- maintaining concentration and avoiding distraction;

- being task-oriented;

- being disorganized and forgetful about information learned;

- moving from one task to another without completing the task.

Adolescents with ADHD often become bored with repetitive and mundane activities, including homework and chores. So, a student may begin an assignment but switch to another activity when the assignment becomes difficult or tedious. Tasks requiring sustained mental effort are also extremely difficult.

Impulsivity in the adolescent with ADHD can be divided into three components: behavioral, cognitive, and emotional. With regards to behavior, the adolescent with poor impulse control frequently acts without thinking, often choosing short-term pleasure without concern for long-term consequences of the act. Cognitive difficulties present through sloppy or incomplete work, not paying attention to details, and poor handwriting. Emotional impulsivity often manifests as extreme agitation, poor frustration tolerance, and violent outbursts. The adolescent with ADHD might overreact emotionally to a situation and respond with verbal and/or physical aggression.

Hyperactivity is not always immediately evident in a teenager with ADHD. However, feelings of restlessness are often felt internally. The adolescent with ADHD might fidget or squirm if seated for long periods of time, need only a few hours of sleep at night, and have high energy levels. Taken together, the characteristics described above have serious implications for academic achievement for many adolescents with ADHD.

Academic problems are among the most common associated features of adolescents with ADHD, more specifically, completing homework assignments and turning them in on time. In addition, cognitive skills may also become an important academic factor in the adolescent years. Elementary-age students with ADHD and above-

average cognitive skills are often able to coast through the younger grades without much

effort. They may not have to pay attention much of the time to be successful in the

average public school. In the middle and high school grades, however, they can no longer

get by using intelligence and social skills. During these grades, they must devote long

hours to studying and writing, planning and acting on a plan, which often demand more

concentration (Robin, 1998). The research conducted with adolescents with ADHD

indicates that the behavioral characteristics associated with the disorder do, in fact,

impact academic functioning.

Studies of ADHD in Adolescence

Several studies of children diagnosed with ADHD in childhood have been

conducted to evaluate ADHD in the adolescent years. The following review examines

studies that specifically address academic outcomes of adolescents with ADHD (Barkley,

Fischer, Edelbrock, & Smallish, 1990; Barkley, Anastopoulos, Guevremont, & Fletcher,

1991; Manuzza et al., 1993; Todd et al., 2002; Wilson & Marcotte, 1996). These studies

were selected for review, as the focus for the present research is enhancing the academic

success of adolescents with ADHD.

Manuzza et al. (1993). The researchers in this study examined the adult outcomes

of male participants diagnosed with and without hyperactivity in childhood. The sample

included 103 Caucasian males with ADHD and 100 selected comparisons. At the time of

the original assessment, the participants with ADHD were between the ages of 6-12. The

comparison group only participated in the follow-up assessment that occurred when

participants were between the ages of 16-23.

Hyperactivity was assessed using a DSM-III R interview. The comparison group was selected using a chart review of adolescents from a medical center outpatient clinic. The participants in this group had to have no history of parent or teacher-reported behavior problems prior to age 13. Educational achievement was measured by years of schooling and degrees obtained. Adults with ADHD completed 2.5 fewer years of schooling when compared to adults without ADHD; one fourth of the adult ADHD group dropped out of school by the 11th grade; and only 12% of the ADHD sample completed a Bachelor's degree or higher. The comparison group had a 2% high school drop out rate, and 50% had completed a Bachelor's degree or higher. These results highlight the nature and extent of potential educational risks for adolescents with ADHD.

Wilson and Marcotte (1996). This retrospective study was conducted with a group of 85 male and female adolescents with ADHD and a comparison group of adolescents without ADHD. Participants were selected through a chart review and classified into one of two groups (one group with ADHD and one group without ADHD) based on DSM-III criteria.

The results showed that when compared to the group without ADHD, adolescents with ADHD performed significantly lower on measures of academic performance. These measures included school grade point averages taken over a period of time. The grade point averages were 2.16 for adolescents with ADHD, compared to 2.63 for the group without ADHD (p< .0025). The adolescents with ADHD also had significantly lower scores on social/emotional and adaptive functioning assessments. These assessments included The Child Behavior Checklist (T=67.39, p<.0025) and The Vineland Adaptive

Behavior Scale. The standard scores on the daily living subscale and socialization

subscale of the Vineland Behavior Scale were 89.03 (p<.05) and 87.57 (p<.01).

Wilson and Marcotte also examined the presence of Conduct Disorder (CD) as a

function of impairment. Adolescents with ADHD and comorbid CD performed even

lower than adolescents with ADHD on academic measures (mean grade point average

2.01, p<.0025) and had more impairment with adaptive functioning (standard scores on

the daily living sub scale 93.67, p<.0025 and socialization sub scale 90.34, p<.0025).

The measure of academic performance in this study should be evaluated with

caution. School grade point averages are considered subjective measures of academic

performance and vary from teacher to teacher and school to school. In addition, the study

did include females, the sample included mostly Caucasian participants, and therefore,

findings cannot be generalized to minorities with ADHD.

Todd et al. (2002). This study evaluated educational and cognitive performance

from a sample of 1,154 child and adolescent twins with and without ADHD ages 7-17.

The investigators wanted to know if ADHD subtype (e.g., primarily inattentive, primarily

hyperactive-impulsive, or combined) could be used as a predictor of cognitive function

and educational achievement. The assessment consisted of a DSM-IV diagnostic

assessment interview, demographic and school performance history, and cognitive and

achievement testing.

Adolescent twins in both the combined ADHD subtype and predominately

inattentive subtype had lower scores on both cognitive and achievement test scores,

poorer school grades, and received more special education services when compared to the

twins with primarily hyperactive-impulsive type, and the twins without ADHD. More

specifically, the twins with ADHD-Combined Type had significantly lower scores on the Block Design and Vocabulary subscales of the Weschler Intelligence Scale for Children (WISC). In addition, the combined type group had lower reading, spelling, and math scores on the Wide Range Achievement Test (WRAT). The twins with ADHD-Primarily Inattentive Type had moderately decreased scores on the Vocabulary subscale of the WISC and the reading and spelling subtests of the WRAT. Forty-two percent of the twins without ADHD had grades of A/B's, compared to 26.3% of the twins with ADHD-primarily inattentive type, and 23.8% of the twins with ADHD-combined type. Forty-seven percent of the twins with ADHD-Primarily Inattentive Type had an Individualized Education Plan (IEP) and received special education services, compared to 52.1% of the twins with ADHD-Combined Type.

The results of this study should be interpreted keeping in mind the following considerations: parent-report data was the only source of information used with ADHD subtyping and no diagnoses of learning disabilities were made, which could be a factor in the academic outcomes measured.

Barkley et al. (1990). This eight-year follow-up study evaluated 123 adolescents referred from a university medical center with and without ADHD using research diagnostic criteria. The adolescents were between the ages of 12-17 at the time of referral. Seventy-eight percent of the original sample was retained at the eight-year assessment. The research diagnostic criteria completed by participants included a comprehensive assessment battery that consisted of the following: structured interviews, rating scales, self-report measures, psychological and neuropsychological tests, and direct observations. Respondents included parents, teachers, and adolescents.

The researchers found that adolescents with ADHD were more likely to have been retained or suspended when compared to the group without ADHD. Retention rates for adolescents with ADHD were 29.3% compared to 10.6 % for adolescents without ADHD. Forty-six percent of adolescents with ADHD were suspended compared to 15.2% for those without ADHD.

When the researchers compared the adolescents with ADHD to the group that had comorbid Conduct Disorder (CD), they found that 60% of the group with ADHD had comorbid CD. In addition, the ADHD plus CD group had more suspensions and expulsions than the group with only ADHD. Suspension and expulsion rates for adolescents with ADHD and comorbid Conduct Disorder were 67.4% and 21.7% respectively, compared to 30.6% and 1.6% for adolescents with ADHD and no Conduct Disorder. These data indicate that the presence of comorbid Conduct Disorder does, in fact, play a role in the academic outcomes of adolescents with ADHD.

Barkley et al. (1991). The authors of this study examined the differences between two groups of adolescents, one group of 84 adolescents with ADHD and a community comparison group of 77 adolescents with no history of attention problems. The adolescents with ADHD were recruited from referrals from a university medical center. The community comparison group was recruited from local newspaper advertisements. Parent, teacher, and adolescent self-report ratings were collected. In addition, psychological tests that included the Peabody Picture Vocabulary Test (PPVT), Wide Range Achievement Test-Revised (WRAT-R), Kagan Matching Familiar Figures Test-20 (MFFT-20), a continuous performance task and the Selective Reminding Test were

administered to each participant. Behavioral observations were also collected on each participant.

Based on structured psychiatric parent interviews, 68% of the adolescents with ADHD also had Oppositional Defiant Disorder, and 39% went on to develop Conduct Disorder. Significantly more adolescents with ADHD received special education services and had been retained in grade as a method of addressing academic performance difficulties. WRAT-R scores indicated the adolescents with ADHD were more impaired in reading (p<.006), writing (p<.005), and math (p<.001) when compared to the community comparison group. The Verbal Selective Reminding Test data indicated significant impairment in the ADHD group with regard to immediate recall (p<.001), storage (p<.001), and long-term retrieval of information (p<.001). The Verbal Selective Reminding Test is used to assess verbal learning and memory; a list of 12 unrelated words is read and the participant is asked to recall as many words as possible. When behavioral observation data were compared, the adolescents with ADHD completed fewer academic tasks than the community comparison group; however, the accuracy of problems did not differ between groups. The academic task required that adolescents complete a packet of math problems while sitting alone in an observation room for a total of 15 minutes. Both study samples were predominantly Caucasian males, which again, limits the generalizability of these findings.

Taken together, the studies reviewed, even with their limitations, make a compelling argument that ADHD does, in fact, persist into adolescence, and the negative academic outcomes are substantial enough to warrant intervention. Although academic outcomes were broadly defined in the studies reviewed above, Robin (1998) outlined

more specifically the common problems for adolescents with ADHD related to

academics. He noted that adolescents with ADHD often demonstrate one or more of the

following academic difficulties:

- failure to complete homework

- poor understanding of material

- poor study habits, low test grades

- coming to class unprepared

- failing report card grades

- poor classroom participation

- failing to ask the teacher for help

- sloppy handwriting

- disrupting the class

- arguing with teachers

- getting into fights with peers, truancy (p. 255).

As noted by different investigators, using samples from different geographic areas

and multiple sources of information, in the research reviewed, these maladaptive

behaviors often lead to retentions, suspensions, or school drop out for adolescents with

ADHD (Barkley et al., 1991; Barkley et al., 1990; Manuzza et al., 1993; Todd et al.,

2002; Wilson & Marcotte, 1996).

The research on behavioral interventions has mainly been conducted with

elementary-age students (The MTA Cooperative Group, 1999a). Although the research in

this area has demonstrated some short-term effectiveness, very little research has been

done with adolescents with ADHD. Leading researchers and clinicians in the field of

ADHD research and treatment (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003;

Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998)

have offered guidelines and recommendations for professionals working with adolescents

with ADHD. These recommendations can be grouped into three main areas related to

academics: homework, organization skills, and self-awareness/advocacy. The following

section includes a rationale for why these skills are crucial in the adolescent years,

provides a review of the empirical work done in each of these areas, and summarizes the

recommendations of leading researchers and clinicians in the field of ADHD.

Homework

This section includes a rationale for why homework is an important part of the

educational experience in the middle school grades. The empirical research on homework

interventions for students with disabilities is next. Finally, the researcher and clinician

guidelines for professionals working with adolescents with ADHD are reviewed.

Rationale for Homework

Homework is assigned in the middle school grades so that students can practice and

review newly learned information. The assumption is often made that students naturally

develop good homework habits; however, these habits are developed through frequent

reinforcement and practice. In the middle school grades, homework can count for as

much as 50% of a course grade and can itself determine whether a student will pass a

course. It also has a direct impact on test scores (Markel & Greenbaum, 1996).

Homework is often used by teachers as a way for students to finish work not completed in class, practice skills learned through class work, and communicate with parents (Polloway, Epstein, Bursuck, Jayanthi, & Cumblad, 1994).

Not surprisingly, students with disabilities have difficulties completing homework assignments. In fact, Polloway, Epstein, and Foley (1992) found that 56% of students with learning disabilities had problems completing homework assignments. Students with learning disabilities were also more likely to complain about completing homework, have more problems getting started on homework assignments, and took longer to complete homework when compared to non-disabled peers (Polloway, et al., 1992). As described above, although Polloway et al. (1992) did not address students with ADHD directly, there is considerable overlap in the academic difficulties experienced by students with ADHD and Learning Disabilities (Hallahan, Kauffman, & Lloyd, 1998).

Some specific areas of difficulty with regard to homework completion for students with ADHD include: not copying the assignment information correctly, leaving assignments or other necessary materials at school, or not being able to estimate the length of time an assignment will take to complete (Markel & Greenbaum, 1996).

Research on Homework

An extensive search using PSYCINFO and ERIC research databases was conducted to locate empirical research specifically addressing homework interventions with adolescents with ADHD, and more broadly, students with disabilities. There is a considerable amount of literature regarding homework communication and homework modifications; however, this literature is not empirical in nature. The focus of the present

review was empirical research specifically addressing homework interventions. Only one study could be found that addressed homework interventions and students with ADHD (Habboushe et al., 2001). Several studies addressing homework interventions and students with disabilities were found (Bryan & Sullivan-Burstein, 1998; Hughes, Ruhl, Schumaker, & Deshler, 2002; Kahle & Kelley, 1994; Toney, Kelley, & Lanclos, 2003; Trammel, Schloss & Alper, 1995). A review and critique of these studies, along with the common themes found in the research, are presented below.

Habboushe et al. (2001). Habboushe et al. (2001) described The Homework Success Program, which was designed to address the unique needs of students with ADHD using a structured protocol incorporating a conjoint behavioral consultation model. Parents, students, and school personnel all had roles in this program that took place in a clinic setting. Five families participated in the seven sessions that included the following topics: ADHD and homework problems, giving effective commands, providing positive reinforcement, managing time and goal setting, using negative consequences, integrating skills and problem anticipation, review and problem-solving difficulties.

All participating families reported reductions in homework-related difficulties, as measured by the Homework Problems Checklist. Although improvements with homework completion were relatively small, accuracy of homework significantly increased. Parents were highly satisfied with the program at the midpoint and end of treatment, as measured by the Treatment Evaluation Inventory-Short Form. However, communication and levels of parent stress, as measured by the Conflict Behavior Questionnaire and Parenting Stress Index, did not improve for the participating families.

Although these clinic-based findings are promising, most students with ADHD and their families have little access to such programs. Interventions need to be developed for and evaluated in schools settings. In addition, research on such programs using experimental grouping methods is needed.

Kahle and Kelley (1994). Kahle and Kelley (1994) compared two interventions addressing homework problems – the first was a parent training program and the second combined goal setting with contingency contracting as an intervention. Forty students in grades 2-4 and their parents participated in the study and were randomly assigned to one of three groups: parent training treatment, goal setting and contingency contracting, or control. The control group consisted of families living more than 45 minutes from the research site.

The parent training treatment included the following components:

a) establishing a routine for homework (regular time and place),

b) identifying two homework-related behavior problems to operationalize and monitor,

c) monitoring positive and negative attention towards children during homework time,

d) offering incentives for completing homework.

The goal setting treatment included the following components:

a) establishing a routine (regular time and place) for doing homework,

b) instructing how to divide homework into small steps to complete,

c) setting specific goals set for homework completion.

Goal achievement and/or renegotiating goals were also discussed, and a contingency contract outlining daily rewards for meeting goals was written. Although some features were the same across interventions, the key difference was that in the parent training intervention, parents monitored their positive and negative attention towards their children during homework time.

Homework problems, measured by the Homework Problems Checklist, decreased significantly for both treatment groups when compared to the control group. Also decreasing for both treatment groups were homework-related behavior problems (e.g., refusing to do homework, daydreaming during homework), as reported by the Homework Problems Report Card. Accuracy of homework improved only for the goal setting group, and higher consumer satisfaction was noted for the goal setting group.

The authors noted that if homework problems (e.g., failing to bring home assignment and necessary materials, not knowing exactly what homework has been assigned) are the primary issue, both parent training and goal-setting are considered equally effective treatments. However, if homework accuracy is the main issue, the goal setting treatment does appear to have advantages over parent training. It is important to note that in this study participants were mainly Caucasian and from intact middle-class families, creating significant limitations in regard to generalization. Because these students were in the elementary grades, we do not know if the same procedures would be effective with students in middle or high school grades. In addition, although this study is unique in that it did include a follow-up component, unlike the previously reviewed study, more follow up is needed to see if treatment gains were maintained after the two-week post-treatment phase.

Hughes et al. (2002). Hughes et al. (2002) evaluated an assignment completion strategy with nine middle school students identified as Learning Disabled. The assignment completion strategy PROJECT was taught to all students and stands for:

Prepare your forms

Record and ask

Organize

Jump to it

Engage in the work

Check your work

Turn in your work

The specific steps of the strategy were as follows: The step for Preparing forms consisted of having students fill in the monthly calendar days and any special events when homework could not be completed. Next, the teacher gave an assignment, and the student recorded the assignment on the assignment sheet. Students were also taught to ask any needed questions about the assignment. The third step involved organizing the assignment to be completed. A second mnemonic BEST was embedded in this step. The steps for completing BEST are:

Break the assignment into parts

Estimate the number of study sessions

Schedule the sessions

Take your materials home

The remaining steps of PROJECT (Jump to it, Engage in the work, Check your work, and Turn in your work) were used when the student actually completed the assignment and turned it in. Jump to it was used to help the student overcome task avoidance; Engaging in the work involved the student asking a peer for help if needed; Checking work required the student to evaluate their own work; Turning in work involved the student actually turning in the assignment to a set location.

Strategy instruction occurred in small groups of four to five students, 30 minutes per day, four times a week. Simulated assignments were given to students to practice strategy steps, and classroom teachers used a checklist to monitor all steps of the strategy. Once students achieved mastery with the simulated assignments (defined as 90% of the steps performed correctly), a generalization checklist was used to assess strategy use in the regular classroom with real assignments.

Maintenance of strategy use was assessed six weeks after instruction ended and involved assessing student use of the strategy assignment sheet. Students were evaluated using multiple methods (e.g., teacher ratings, student interviews) to determine whether or not assignments were turned in on time and to evaluate the quality and accuracy of the assignments. Assessment also included the collection of quarterly school grades.

Eight of the nine students mastered the strategy and demonstrated improvement with all aspects of homework completion. Similarly, these students showed improvements in quarterly grades, verifying the positive effects of strategy instruction and use.

The authors noted some important considerations to keep in mind when reviewing these data. Unfortunately, none of the students in the study used the assignment

completion strategy consistently in their general education classroom. Also, strategy use is not effective if the student does not have the skills to complete the assignment successfully; simply writing down the assignment does not equal completion of the assignment. Finally, students must be motivated to use the strategy if it is to be effective. The authors recommend additional strategy instruction in goal setting and motivation for some students to help them understand the relationship between homework completion and future goals. In addition, teachers should plan motivational assignments relevant to students' lives to promote engagement with the assignments.

Bryan and Sullivan-Burstein (1998). Bryan and Sullivan-Burstein (1998) evaluated three strategies for assisting students with homework completion. The study took place over a two-year period with eleven elementary grade teachers and 123 students in grades 1-6. Participating teachers grouped students into one of four categories: students with learning disabilities and homework problems, students with learning disabilities and no homework problems, average-achieving students with homework problems, and average-achieving students with no homework problems.

The first step in this project involved a review of the homework research by participating teachers. Each teacher took turns summarizing and presenting research to the group and discussing how applicable the interventions were for their classroom settings. Teachers then designed homework interventions based on the research findings. The teachers chose the following interventions to implement in their classrooms: (1) real-life homework assignments plus a reward, (2) homework planners, and (3) self-monitoring of homework completion.

The first strategy, reinforcement and real-life assignments, was chosen to help students make the connection between assignments and their home life. On Friday of each week, rewards were given to students who completed weekly homework assignments. This strategy was conducted during the first year of the study.

Strategy two took place in year two of the study and consisted of having the same students from year one use homework planners. At the beginning of the school year, students were given instruction over a two-week period on how to use the planners. Parents were also notified and asked to sign the planners each evening.

Strategy three was also added to the homework planner intervention in year two and involved having the same participating students self-monitor homework completion. On a daily basis, students graphed homework completed on time, late, or not turned in at all.

All strategies implemented resulted in significant increases in homework completion by students identified as learning disabled with homework problems and average-achieving students with homework problems. The same groups of teachers and students participated in all strategies, so it is difficult to say whether one strategy was more helpful than another, or if simply adding more strategies had an effect on the increase in homework completion. In addition, students were not randomly assigned to the different strategy conditions; assignments were made based on teacher and parent report.

Trammel et al. (1995). Trammel et al. (1995) used a multiple baseline design across subjects to evaluate two interventions: self-monitoring and self-graphing/goal

setting to enhance homework completion. Eight students with specific learning disabilities in grades 7-10 participated

The self-monitoring phase of the study lasted eleven days and required students to record assignments on the study-generated assignment sheet. The student and resource teacher reviewed the assignment sheet each day prior to the end of the school day for accuracy. The self-graphing phase of the study involved having students graph homework completed on a daily basis. The graphs were displayed in the resource room to show students' homework completion. In addition, students set homework completion goals for the next three-day period. At the end of the three days, another goal was set that was the same or better than the one before.

Although self-monitoring was viewed as successful, the self-graphing/goal setting seemed to add to the effectiveness of the self-monitoring. Inter-observer reliability checks were conducted to evaluate whether or not assignments were completed appropriately. Reliability coefficients for teachers ranged from .80-1.0. Parents and students also reported that the interventions helped improve homework completion.

Toney et al. (2003). Toney et al. (2003) evaluated two treatments (parent monitoring and self-monitoring) designed to address homework problems. Thirty-seven middle school students (24 males and 13 females) along with their parents participated.

Parents in the parent monitoring treatment received instruction on how to structure a homework routine and monitor homework completed. The training included a 90-minute instructional session. In this session, parents were taught how to complete a daily checklist with their child both before and after the homework session to ensure that all steps of the instruction were being followed. Parents were instructed to provide

rewards to students if 80% of the checklist items were completed. The checklist included the following items:

1) My child wrote down his/her homework assignments and obtained teachers' initials.

2) My child turned in homework.

3) My child brought home materials needed to complete the assignments.

4) My child completed all homework assignments.

5) My child checked his/her work.

6) My child began homework within 30 minutes of arriving home.

7) My child completed his/her homework in the quiet, designated study place.

8) My child reviewed his/her homework for at least 15 minutes.

9) My child organized the binder and book sack so that he/she can find and turn in homework assignments.

10) My child received his/her reward for completing 7 out of the 9 above items.

(p. 42).

In the self-monitoring treatment, students learned how to monitor their own behavior in order to complete homework assignments. Students completed a homework-monitoring checklist each day that was similar to the checklist used in the parent monitoring intervention. Parents were allowed during this treatment to prompt students to begin homework, if needed. Rewards were earned for completion of the checklist each day.

Pre-test and post-test assessments of the two treatment groups were conducted using the Homework Problems Checklist and then compared to a waitlist control group. Homework Problems Checklist scores significantly decreased for both treatment groups when compared to the waitlist control group. These improvements were maintained at a two-week follow-up visit. There were no statistically significant differences noted between the two treatments.

This study showed that adolescents are capable of monitoring homework completed if given instruction and the tools to do so, and they can improve homework behaviors. The parent monitoring treatment group rated their experience more positively than the self-monitoring group, and parents in the parent-monitoring group were more compliant with the treatment than those in the self-monitoring group. Additionally, although Homework Problems Checklist scores did improve for all students, some students still scored in the clinically significant range after treatment. Mean (SD) pretreatment scores for the parent and self-monitoring treatments were 33 (4.5) and 31 (7.88); posttreatment scores were 13 (8.69) and 16 (8.33); follow-up scores were 14 (5.00) and 16 (6.66).

There are some common themes across the studies reviewed related to homework interventions. All of the studies included some type of assignment sheet as a way for students to keep track of homework and/or goal setting. From reviewing these data, this researcher determined that an assignment sheet and goal setting should be components of homework interventions designed for adolescents with disabilities. A common problem with the research conducted to date is lack of generalization and maintenance of newly learned skills. How much instruction is needed and what types of ongoing supports are

needed in order to maintain treatment gains remain important questions that need to be addressed in future research.

Researcher and Clinician Recommendations

A review of current treatment manuals (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003; Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998) was conducted to identify recommendations for how to teach homework skills to students with ADHD. All the professionals listed above addressed this issue for students with ADHD. A review of the common recommendations and guidelines are below.

Markel and Greenbaum (1996). These clinicians addressed the importance of completing homework in the context of goal setting. Delineating specific responsibilities for the parent and student is critical in the homework process. Markel and Greenbaum (1996) outlined the following homework completion strategies for parents:

a) create and consistently implement a homework plan

b) decide on a location and time each day for homework

c) ensure that the needed materials are accessible in the designated homework area

d) be available if assistance is needed

Student responsibilities include:

a) being a part of the development plan

b) have input in deciding when and where to do homework

c) adhering to the plan, and asking for help when needed

Markel and Greenbaum (1996) also discussed the importance of having long and short-term homework goals. An example was provided from a student named Myles. His long-term goal was to attend college. His short-term objectives were to start his homework in class, finish it at home, and turn it in on the due date. Myles also noted obstacles that could get in the way of meeting his goal: "I sometimes don't understand what I'm supposed to do, I often don't know how to begin, the work is boring, I'm always losing things, I can't find my homework" (Markel & Greenbaum, 1996, p.273).

Robin (1998). Robin recommended the following process to assist adolescents with ADHD in the homework process:

(1) writing down the homework assignment in an assignment book, sheet, or some other organized medium

(2) bringing home from school the assignment book, textbooks, notebooks, and other materials needed to complete homework

(3) parental monitoring of the assignment book

(4) availability of a quiet, non-distracting, well-lit, and comfortable place in which to do the homework

(5) an agreed-on time for starting homework

(6) presence of a parent in the house when the adolescent is supposed to be doing homework

(7) an organized plan of attack for sequencing multiple homework assignments in one evening

(8) use of a calendar to track long-term projects and upcoming tests and to

allocate time to short versus long-term tasks

(9) steps taken after completing the assignment to make sure it will get to school

and be handed in on time (p. 271).

Robin (1998) also recommended using a formal homework plan that addresses the specific difficulties the student is having with regard to homework. Some areas that can be addressed in the homework plan include: keeping track of assignments, bringing home materials, scheduling and setting a time for doing homework, and organizing homework completion.

One advantage of this plan is that it includes specific information on how the student will complete the steps 1-9 listed above on a daily basis. Signatures of commitment are obtained by both the student and parent after the contract is written

Goldstein and Goldstein (1998). These researchers recommended using color-coded homework folders and textbooks (e.g., math textbook and notebook are both the color blue) to assist the student in remembering materials needed for homework completion. In addition, different color folders can be used for different types of assignments – papers for parents go in one folder, homework to complete goes in another folder.

One of the barriers to completing homework often cited by parents of adolescents with ADHD is not being able to find materials needed to complete assignments. Hence the need for instruction in organizational skills.

Organizational Skills

This section provides a rationale for why organizational skills are an important part of the educational experience in the middle school grades. The empirical research on interventions designed to teach students with disabilities organizational skills follows. Finally, the research on teaching organizational skills, and the clinician guidelines for professionals working with adolescents with ADHD are reviewed.

Rationale for Organizational Skills

Organizational skills are an important component of being an effective student in the middle school grades. Task completion is one of the main difficulties for students with ADHD, and organizational skills are directly related to task completion (e.g., students cannot complete tasks unless they know where the needed materials can be found). According to Zentall, Harper, and Stormont-Spurgin (1993) "task completion requires the ability to (a) plan and manage activities within a time framework, (b) systematically arrange objects and assignments within space for rapid retrieval and (c) structure and approach to the task. These specific abilities define organization" (p. 112).

Notably, organizational deficiencies are included in the diagnostic criteria for ADHD. For example, the two characteristics of "often has difficulty organizing tasks and activities, often loses things necessary for tasks or activities" appear in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised* (p. 92).

Research on Organizational Skills

An extensive search using PSYCINFO and ERIC research databases was conducted to locate empirical research specifically addressing organizational skills and

adolescents with ADHD, and more broadly students with disabilities. Articles about how to define and assess organization were found but are not included in this section of review, as the focus of the review was empirical research specifically addressing the efficacy of teaching organizational skills. No studies could be found that addressed organizational skills and adolescents with ADHD. One study that addressed time management and students with disabilities was found (Flores & Schloss 1995), in addition to field test data regarding the Skills for School Success Curriculum, which provides students instruction on organizational skills. A review and critique of this research are below.

Flores and Schloss (1995). Using a multiple baseline design across skills, Flores and Schloss (1995) evaluated the effectiveness of teaching time management skills. Eight students (5 male and 3 female) with mild to moderate mental retardation or severe learning disabilities participated.

The first intervention phase of the study lasted two weeks. In this phase, students learned how to use calendars. Students met daily with a facilitator to ensure that they were actually carrying the calendars in the various school settings. Next, students learned how to record activities on the calendar, and how to use the calendar to meet responsibilities. This instruction consisted of class discussions on the process and importance of recording activities as a way to meet obligations. More specifically, the process involved discussion on: "(1) carrying the calendar, (2) recording activities in the calendar, and (3) utilizing the calendar to meet responsibilities " (p. 39).

The data collected consisted of facilitator checks with students to measure the percentage of obligations met. These data showed that carrying a calendar and recording

activities in the calendar increased the number of student-met responsibilities. Prior to calendar use, only 37% of responsibilities were met by students, compared to an average percentage of 88% after learning the intervention. Students used the calendar in several settings during the study and had positive comments regarding the use of the calendar.

Archer and Gleason (1989). Archer and Gleason (1989) developed and field-tested materials to help students with study and organizational skills. The Skills for School Success Series (designed for students in grades 3-6) and the Advanced Skills for School Success Series (designed for students in grades 7-12) have been extensively field-tested over the past ten years. The curriculum materials provide students instruction and practice in the following areas: organization skills, completing assignments, class participation, studying and test taking, and how to use reference materials.

Field-test data assessing various skills before and after curriculum implementation from thirty-two middle school classes of students labeled at risk show significant improvements in organization skills. Prior to the intervention, 62% of students came to class with paper and pencil or pen. Following instruction using the Skills for School Success Series, 94% of students came to class with all needed materials. Similarly, when taught calendar skills, students increased in the number of recorded homework assignments.

Results from the Flores and Schloss (1995) study and field-test data suggested that a well constructed program implemented in a systematic manner does improve the organizational skills of adolescents with disabilities. Following is a summary of the recommendations of leading researchers and clinicians in the field of ADHD.

Researcher and Clinician Recommendations

A review of current treatment manuals (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003; Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998) was conducted to identify recommendations for how to teach organizational skills to students with ADHD. Although all clinicians mention organizational problems with regard to students with ADHD, Pfiffner (1996) and Robin (1998) were the only two clinicians who addressed the issue of teaching organizational skills to students with ADHD. A review of their recommendations and guidelines is below.

Pfiffner (1996). Pfiffner (1996) recommended that students with ADHD be explicitly taught strategies to be better organized. Teachers should teach organizational skills and model good organization for students with ADHD on a daily basis. Pfiffner started first with school supplies and made specific suggestions. Students should use one three-ring notebook with a pouch to hold pencils and other supplies and dividers for each school subject.

Pfiffner (1996) also suggested that teachers conduct weekly desk checks to help students organize their belongings and throw away unnecessary materials. Taped to the side of the student's desk should be a work-completed folder for completed assignments. This folder provides a specific place for completed work to go.

Another important component of organization is time management. Pfiffner reported that students often need to learn how to estimate the amount of time needed to complete an assignment. Students then time themselves while completing the assignment to check the accuracy of the estimate, and if necessary, revise the estimate.

Robin (1998). Robin (1998) stressed the importance of to-do lists and prioritizing

as organizational tools. To-do lists can help with organizing time, and also be

incorporated into an assignment calendar. Robin offered the ABC priority ratings:

     A = Must do today or I'm dead meat

     B = Important but don't touch until all A's are done

     C= Will probably put off unless I am having a great day (p. 294)

This activity can help the student learn how to prioritize and complete academic tasks.

     Robin (1998) also included the book bag as an organizational area to target with

the adolescent with ADHD and suggested "The Big Dump" as an intervention. The

adolescent dumps all contents of the book bag out and creates three piles of papers or

other items: "Act on the paper now, file it someplace, or trash it" (Robin, 1998, p.291).

The goal of "The Big Dump" is to provide a structured method for keeping the book bag

organized.

     Although how-to materials are available for professionals who work with

adolescents with ADHD, very little empirical research has been conducted to evaluate the

effectiveness of the how-to strategies. Research is needed so that professionals working

with students with ADHD know what methods are most effective. Organization and

homework skills are critical to the success of adolescents with ADHD; however, an

understanding of how their disability affects them in the classroom, and how to

effectively advocate for themselves are also crucial if adolescents are to be successful in

the school environment.

Self-Awareness/Advocacy

Self-awareness/advocacy is an important part of the educational experience in the middle school grades. Following is a review of the empirical research on interventions designed to teach self-awareness/advocacy with disabilities is next. Finally, the researcher and clinician guidelines for professionals working with adolescents with ADHD are reviewed.

Rationale for Self-Awareness/Advocacy

Developing self-awareness is the first step in learning self-advocacy skills, according to Van Reusen, Bos, Schumaker and Deshler, (1994). Learning about one's self involves identifying strengths and weakness, interests, and preferences. For students with disabilities, developing an awareness of the accommodations they need will help them ask for these necessary classroom accommodations. Self-advocacy can be defined as a student's ability to communicate, negotiate or assert his interests, desires, needs, and rights. It involves making decisions and taking responsibility for those decisions (Van Reusen, Bos, Schumaker & Deshler, 1994).

Michaels (1994) surveyed adolescents with learning disabilities. More than half of the surveyed adolescents reported that they had never discussed their learning disabilities with teachers and relied on their parents to advocate for them. This lack of involvement in the advocacy process is a critical concern, because the adolescent years are a time when individuals are assumed to take more control of their lives and become more independent and self-reliant.

Research on Self-Awareness/Advocacy

An extensive search of PSYCINFO and ERIC research databases was conducted to locate empirical research that addressed self-awareness/advocacy with adolescents with ADHD, and more broadly, students with disabilities. Several articles that offered general guidelines for how to talk to students about their disabilities, as well as strategies for self-advocacy at the post-secondary level, were found but not included in this review, as these articles did not evaluate interventions to enhance self-awareness/advocacy skills of students with disabilities. Three studies that evaluated interventions to enhance self-awareness/advocacy with students with Learning Disabilities were located (Durlak & Rose 1994; Eisenman & Tascione 2002; Phillips, 1990).

Durlak and Rose (1994). This study employed a multiple-baseline design across behaviors to evaluate direct instruction training in self-determination skills. Participants were eight high school students, all diagnosed with specific learning disabilities.

The training was done with groups of four students that met twice a week for 30 minutes each time. Self-determination training was conducted using a direct instruction format (e.g., target behaviors were described to students, target behaviors were demonstrated to students, students asked questions for clarification purposes, students rehearsed training steps, and students practiced steps until mastery was achieved). The behaviors targeted were as follows: "(1) stating the specific nature of the learning disability, including individual strengths and weaknesses; (2) stating the impact of the disability on academic and social performance; (3) identifying the accommodations that might be helpful in dealing with deficit areas; and (4) identifying strategies for arranging accommodations with their regular classroom teachers" (p. 52).

One week after training, maintenance tasks were introduced. These tasks required students to write or orally state the steps of the training. All students completed the maintenance check with 100% accuracy the week following training using researcher-designed checklists. Students were then given five generalization tasks to complete; the average number completed by all students was 4.38. These generalization tasks included having students ask for clarification of lecture material, requesting a teacher appointment to discuss their disability, requesting accommodations, asking a librarian for research assistance, and making an appointment with a counselor for additional resources and assistance.

Formal pre and post-test assessment measures included the Assertiveness Scale for Adolescents (ASA) and the Piers-Harris Children's Self-Concept Scale. Informal investigator-designed checklists were also collected. The Self-Awareness Checklist consisted of ten statements that were rated by the teacher on a scale of 1-5, with 1 being very low and 5 being very high. Teachers were asked to describe "student behaviors related to personal skills (e.g., realistically assess abilities and future goals, communicate well with teachers)" (p. 53). The Self-Advocacy Checklist consisted of 16 statements that were also rated by the teacher on a scale of 1-5, with 1 being very low and 5 being very high. Teachers were asked to describe "student behaviors that were tied to assertiveness and related interpersonal skills (e.g., asks appropriate help from peers, speaks in appropriate voice tone for situation)" (p. 53).

Although analyses of the formal and informal assessment measures did not yield statistically significant improvements, the results of this study do have important implications. The researchers suggest that students probably need additional practice in

developing self-determination skills. Only one week of maintenance and generalization were included in this study. In addition, maintenance skills were assessed using a paper-pencil task instead of performance-based assessment of skills learned. Only one female and one non-Caucasian student participated in this study of eight students. Future research with larger, more diverse samples is needed.

Phillips (1990). Phillips (1990) developed The Self-Advocacy Plan to assist adolescents with Learning Disabilities in learning and using self-advocacy skills in order to prepare for the transition from high school to college. The plan was a ten-week program in which adolescent students with LD met once a week. These teacher-led sessions included the following discussion topics: learning disability concepts and definitions, learning strengths and weaknesses, successful people with Learning Disabilities, legal issues related to Learning Disabilities, and assistance available at the post-secondary level. To reinforce the content presented in the seminar, the students completed on-site college visits to meet with college support personnel and other college students receiving support services. In addition, small group meetings occurred so students could discuss their learning styles and strategies. At these meetings, students shared written learning logs of their strengths and weaknesses.

Participants in this study included 15 adolescents (13 male and 2 female, all Caucasian) with Leaning Disabilities. The qualitative data collection methods included open-ended interviews and seminar field notes. These data were collected and summarized for common themes. After completing the plan, 14 of the 15 students reported having more knowledge of services that were available to them in the school setting and asked for these services to be made available to them. These students also

reported they were more knowledgeable about their own learning characteristics, and stated what they did that helped or hindered their success in the school setting. Although promising, the self-report data collected in this study need to be verified by more independent and objective forms of data collection.

Eisenman and Tascione (2002). This qualitative study of 22 high school students with Learning Disabilities ages 17-19 (12 female and 10 male, 15 Caucasian and 7 African-American) evaluated a teacher-created intervention designed to foster self-realization in the belief that realization will enhance self-advocacy. The authors used the following definition of self-realization:

> self-realization refers to the fact that people who are self-determined use a comprehensive and reasonably accurate knowledge of themselves and their strengths and limitations to act in such a manner as to capitalize on this knowledge. This self-knowledge and self-understanding form through experience with and interpretation of one's environment and are influenced by evaluation of significant others, reinforcement, and attributions of one's own behavior (p. 35).

The teacher used writing as a method of promoting self-realization. The writing intervention activities, created by the teacher, were embedded in the English curriculum. Writing prompts included:

1) disability-related experiences ("how their specific disabilities affected them; when and how they first learned about their special education placements; positive and negative experiences about special education; how they viewed themselves and their disabilities now") (p. 37)

2) a proposal for grade transitioning ("students outlined steps for successful transition from one grade to another or middle school to high school") (p. 37)

3) position on whether students in special education should participate in state testing

4) how to persuade students to be advocates for themselves

5) a description of information learned in curriculum

Students' writing and work portfolios, along with a teacher's journal, were collected, summarized, and coded for common themes. Several themes emerged from the student work: students showed a lack of awareness regarding their disabilities, they expressed embarrassment or anger regarding their disabilities, and students had questions regarding their disabilities and related classroom accommodations.

Through writing assignments and class discussions, students became more aware of and knowledgeable about their disability and how to be effective advocates for themselves. One student wrote the following self-assessment –

Now that I know more about special education, I can be more successful. Now that I know more about being a self-advocate and being self-determined, I can use this knowledge when I attend college. I know now that I could ask for accommodations, like more time for a paper or for research. With this process, I know I could succeed in post-secondary learning. If we know about why we are in special education classes and why we need to be self-determined, we can be more successful on our jobs and in school (p. 41).

Other students made similar comments through their writing assignments. The study sample, although small, was more diverse than the ones reviewed previously with respect to gender and ethnicity.

Researchers at the University of Kansas Institute for Research in Learning Disabilities have developed curriculum materials to teach adolescents with learning disabilities self-advocacy skills. The IEP Participation Strategy (Van Reusen, Bos, Deshler, & Schumaker, 1987) is typical of the University of Kansas model of learning strategy instruction. Learning strategies are "techniques, principles, or rules that facilitate the acquisition, manipulation, integration, storage, and retrieval of information across situations and settings" (Alley & Deshler, 1979, p. 13). Strategies are organized steps or procedures to be used when learning, remembering, or performing. Simply, learning strategies are the tools students use to help themselves understand and learn new skills, incorporate this new information with what they already know in a way that makes sense to them, and that will help them recall the skill. Two studies have been conducted that evaluate this strategy (Van Reusen & Bos, 1994; Van Reusen, Deshler, & Schumaker, 1989). A review and critique of these studies follows.

Van Reusen et al. (1989). In the IEP Participation Strategy, adolescents with Learning Disabilities were taught to use self-advocacy procedures in their Individualized Education Program (IEP) meetings. Participants included 16 high school students, half assigned to the treatment group (2 Caucasian females, 3 African American males, and 3 Caucasian males) and half to the control group (1 Caucasian female, 7 Caucasian males). The treatment group received instruction in the IEP Participation Strategy – IPARS. The mnemonic device, designed to assist students in participating in IEP meetings, stands for:

Inventory your learning strengths, weaknesses to be improved, goals and

interests, and choices for classroom learning

Provide your inventory information during the conference

Ask questions

Respond to questions

Summarize your IEP goals (p. 26)

The control group did not receive strategy instruction. A multiple-baseline across subjects

design, in addition to a post-test-only control group design, were used to evaluate the

effectiveness of strategy instruction.

The results indicated that students who learned the strategy specified 86% of the

goals listed on their IEP, the control group contributed only 13% of the IEP goals. Also,

as a group, students who learned the strategy collectively made more than twice as many

appropriate contributions during IEP meetings when compared to the control group (e.g.,

784 relevant contributions, compared to 336). The IEP meetings in this study were highly

structured (i.e., the teacher administered and asked the same ten probe questions at each

of the conferences), which resulted in more opportunities for students in the treatment

group to make appropriate contributions.

Van Reusen and Bos (1994). The IEP Participation Strategy was evaluated with

21 high school students with Learning Disabilities and their families. Students and

parents were assigned to either the treatment group and received instruction in the IEP

Participation Strategy, or the contrast group that participated in an informational lecture

and discussion. The Learning Strategies Model (Ellis, Deshler, Lenz, Schumaker, &

Clark, 1991) was used with the treatment group and included the following steps:

describe, model, prepare, verbally rehearse, practice and give feedback, and generalization.

In the describe step, students were given a definition of the IEP process and a rationale for learning the strategy. In the model and prepare steps, students inventoried their strengths and weakness, and the researcher modeled the steps of the appropriate strategy for the students. The strategy steps were practiced and memorized during the verbal performance step (see Van Reusen et al., 1989). Practice and feedback steps included having students role play strategy use in a simulated conference. The generalization step occurred right before the students' IEP meeting and required students to discuss when and how they would use the strategy.

The contrast group participated in a two-hour information and discussion session. Questions and concerns about the IEP meeting were addressed with the students and their families. Inventory sheets of strengths and weaknesses were completed by the students, and a generalization session was conducted prior to the IEP meeting, as was done with the treatment group.

Data were collected in the following areas: quantity of goals identified by the student, quantity and quality of student contributions during the IEP meeting, and length of meeting. Students from the strategy instruction group provided significantly more information regarding their strengths ($p = .002$), weaknesses ($p = .038$), and goal identification ($p = .033$).

A critical question remains unanswered for students who participated in this study – will they use the strategy in other learning situations beyond the IEP meetings for which they were specifically coached?

With limited research available concerning self-awareness and self-advocacy, it is also important to consider the recommendations of researchers and clinicians regarding ways to teach these skills to adolescents with disabilities. A review of these recommendations is below.

Researcher and Clinician Recommendations

A review of current treatment manuals (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003; Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998) for recommendations for how to teach self-awareness/advocacy to students with ADHD revealed that self-awareness/advocacy skills are largely neglected in the treatment literature. Barkley (1998), Dendy (2000), and Markel and Greenbaum (1996) were the only professionals that briefly addressed this issue for students with ADHD. Their recommendations are addressed below.

Barkley (1998). In his handbook for diagnosis and treatment, Barkley briefly mentioned enhancing knowledge of the disability as an intervention. He noted that oftentimes students are told by teachers or parents that they are "hyper" or cannot focus, but students have no real understanding of what it means to have ADHD. Barkley (1998) suggested starting this discussion by identifying the students' strengths and weaknesses and recognizing individual differences. An understanding of the disorder is important in acknowledging the need for help.

An important aspect omitted from this self-awareness/advocacy intervention is an understanding by the adolescent not only about ADHD, but specifically how ADHD affects him or her in the classroom. In addition, how to talk to teachers about ADHD and

specific modifications that can help the student be more successful in the school environment should be a part of the training. Knowledge of the disability is only one piece of the puzzle in understanding its impact on academic functioning.

Dendy (2000). Dendy (2000), in a recent publication written primarily for teachers, mentioned that students with ADHD need to understand the impact ADHD has on their lives, appreciate strengths and weaknesses, learn to compensate for deficits in the classroom by requesting accommodations, and work with teachers and parents to problem-solve academic problems. She recommended self-advocacy as an important tool when students with ADHD attend and actively participate in their IEP meetings. However, Dendy (2000) did not provide specific information on how to prepare students with ADHD to be effective self-advocates.

Markel and Greenbaum (1996). These clinicians recommended talking to students about difficulties they are having with behavior and learning in the classroom as a way to address self-awareness. According to Markel and Greenbaum (1996), the teacher should explain that many people have difficulties with school-related activities and that one should not to be ashamed. The teacher should stress the importance of taking more control over school performance as a means of improving academic performance.

Although the recommendations of the above-mentioned professionals point out the need for teaching and practicing self-awareness/advocacy, they provide no specific guidelines as to how to teach self-awareness/advocacy to adolescents with ADHD –a critical piece if the goal is to help these students become advocates for themselves, and become more independent and self-reliant in the adolescent years.

Statement of the Problem and Program Evaluation Questions

Frequent underachievement and poor academic outcomes are common characteristics of adolescents with ADHD. These characteristics are presumed to be the result of inconsistent work productivity and low academic engagement (DuPaul & Eckert, 1998). Research indicates that as a result of these difficulties, adolescents with ADHD are at greater risk for grade retention, special education placement, and school drop out (Barkley et al., 1991; Barkley et al., 1990; Manuzza et al., 1993; Todd et al., 2002; Wilson & Marcotte, 1996). Academic difficulties are further compounded for this population due to the fact that 20-30% of students with ADHD have a comorbid learning disability (Semrud-Clikeman, et al., 1992).

The most common treatment for ADHD is psychostimulant medication (Pelham et al., 1993). This type of medication has been found to assist with sustained attention, impulse control and social behaviors of approximately 70-80% of children with ADHD (Kavale, 1982). Although this treatment does have positive effects, other research indicates that as many as 47% of children treated with psychostimulant medication do not show a positive response (Rapport, Denney, DuPaul, & Gardner, 1994). These data make a compelling argument that additional treatments are needed to address the academic needs of students with ADHD. In addition, even when medication is an effective treatment, students still may need explicit instruction and support in organization, homework, and self-advocacy skills in order to be academically successful.

At the present time, the primary psychosocial intervention used to treat ADHD is contingency management programming (DuPaul, Stoner, & O'Reilly, 2002). The research in this area does show short-term behavioral gains in students; however, the

same is not true for academic improvements (Pelham et al., 1993). In addition, when the

contingencies are removed, the behavior gains are not maintained (Wells et al., 2000).

The research on academic interventions has mainly been conducted in clinic

settings, not in classroom environments. Additionally, the focus of this body of research

has been on reducing disruptive behaviors, not academic performance (DuPaul & Eckert,

1995). Given that up to 80% of students with ADHD demonstrate academic performance

problems, interventions in this area are clearly needed (Cantwell & Baker, 1991).

More specifically, Robin (1998) identified five areas of potential difficulty for

adolescents with ADHD that interfere with successful academic performance:

- focusing on the important stimuli in the environment

- maintaining concentration and avoiding distraction

- being task-oriented

- being disorganized and forgetful about information learned

- moving from one task to another.

Difficulties with these types of behaviors make it hard for adolescents with ADHD to

complete repetitive and mundane activities, such as homework. Researchers agree that

adolescents with ADHD may benefit from direct instruction in these areas of potential

difficulty, yet there is a paucity of research in this area (DuPaul & Stoner, 2003).

As described in the previous review, students with ADHD frequently experience

academic difficulties. Although researchers and clinicians agree that these individuals

would benefit from direct instruction in self-awareness/advocacy, homework, and

organizational skills, there are few empirical studies that actually evaluate such programs.

This lack of empirical support for intervention programs leaves researchers and clinicians

in a quandary regarding what skills to teach, how to teach them effectively, and whether such programs impact student behavior and academic outcomes in school settings.

Purpose/Study Overview

The research data on self-awareness/advocacy, homework, and organizational skills are mainly limited to students identified as Learning Disabled or at-risk. Little research has been done with adolescents with ADHD. Many researchers and clinicians offer guidelines for how to intervene with this unique population, yet a comprehensive curriculum has not been developed and empirically studied (Barkley, 1998; Dendy, 2000; DuPaul & Stoner, 2003; Goldstein & Goldstein, 1998; Markel & Greenbaum, 1996; Pfiffner, 1996; Robin, 1998). The research literature corroborates that most children continue to show symptoms of ADHD in adolescence. The developmental outcomes for these individuals oftentimes depends their participation in effective treatments in the home and school environments. Within the educational environment, there is a clear need for a curriculum designed specifically for this age population.

In response to this need, educators and clinicians at the Duke Child and Family Study Center developed the Skills for Academic Success Curriculum, as one of the components of their academic summer treatment program, that is designed to address the unique behavioral and academic needs of adolescents with ADHD.

The purpose of the present project was to describe the development of an academic summer treatment and to evaluate the Skills for Academic Success Curriculum for adolescents with ADHD. This curriculum provides direct instruction in the following three skill areas: self-awareness/advocacy, homework, and organization skills. More

specifically, students are given instruction on: how ADHD affects them in the classroom; how to talk to teachers about specific accommodations, and how these accommodations can help them in the classroom; how to identify characteristics of an organized study area; how to create lists to get ready for school on time; how to set and meet long and short-term academic goals; how to prioritize tasks and create weekly schedules of things to do; how to use a homework contract; and how to problem-solve common homework barriers. The development and pilot testing of this curriculum are detailed in Chapter three.

Program Evaluation Questions

The purpose of this project was to develop and evaluate the Skills for Academic Success Curriculum using the program evaluation questions listed below.

Program Evaluation Question 1: Following student participation in the Skills for Academic Success Curriculum, do their parents report improved behavioral functioning of their children at home as measured by the Conners' Parent Rating Scale?

Program Evaluation Question 2: Following student participation the Skills for Academic Success Curriculum, do their teachers report improved behavioral functioning of their students at school as measured by the Conners' Teacher Rating Scale?

Program Evaluation Question 3: As measured by the Skills for Academic Success Self-Report, do students report improvement in self-awareness/advocacy skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 4: As measured by the Skills for Academic Success Self-Report, do students report improvement in homework skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 5: As measured by the CHADD Questionnaire, do students' teachers report improvement in homework skills following student participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 6: As measured by the Skills for Academic Success Self-Report, do students report improvement in organizational skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 7: As measured by the CHADD Questionnaire, do students' teachers report improvement in organizational skills following student participation in the Skills for Academic Success Curriculum?

CHAPTER THREE

Development of the Academic Summer Treatment Program

This chapter describes the development of the academic summer treatment program. A rationale for the need for such a program, a description of the components of the program, staff training and supervision, and lessons learned from the first year of the program's implementation are presented.

The Need for an Academic Summer Treatment Program

The need for an academic summer treatment program arose from clinical observations of students participating in the follow-up of the Multimodal Treatment Study of children with ADHD (MTA Study). Students who responded positively to the behavioral intervention treatment and were successful academically began having more difficulties once they entered the middle school grades. Parents and students reported to researchers that school grades dropped, homework completion was more difficult, and there was little awareness of how to maintain the level of organization needed in order to be successful in middle school (D.W. Murray, personal communication, August, 1997). Success in the middle school grades depends on having self-awareness/advocacy, homework, and organizational skills, yet these skills are not taught to students in the traditional public school programs. The academic summer treatment program was designed to provide adolescents with ADHD the skills required to be successful in middle school.

There were three main goals for students who participated in the program. The first goal was to make students aware of their behavior related to their academic success. The second goal was to ensure students could perform academic support skills, such as how to be more organized, setting and meeting long-term goals, and prioritizing homework-related tasks. The final goal was to provide students with opportunities for practice and feedback on academic support skills to increase application of these skills in academic settings.

Components of the Academic Summer Treatment Program

Students attended the summer program three hours a day for four weeks. There were four main components to the academic summer treatment program: a comprehensive behavior management system, the Skills for Academic Success Curriculum, learning strategy instruction, and cooperative group work. Approximately one hour a day was devoted to the Skills for Academic Success Curriculum, learning strategies instruction, and cooperative group work. The behavior management system was implemented during the entire program. A description of each component of the program follows.

Behavior management system. Although the focus of the program was to teach students skills for academic success, also included as a part of the program was a strong behavioral intervention based on the current research literature on psychosocial interventions used to treat ADHD (Hinshaw, 2000; Pelham & Murphey, 1996; Pelham, Wheeler, & Chronis, 1998; Wells, et al., 2000). A response cost plus reward system was used based on the current research literature on effective behavioral interventions for

students with ADHD (Hinshaw, 2000). This type of behavior management system was used in the program to create a high level of student motivation so that maximum teaching and learning could occur. Students also learned to evaluate and monitor their behavior in relation to the classroom rules employed in the program.

The following is a list of the classroom rules that were implemented in the program:

1. I will be respectful of others.

2. I will raise my hand to speak.

3. I will work quietly.

4. I will follow directions.

5. I will participate and complete my work.

6. I will work on my individual goal _____.

The rules were created by the program director and supervising clinician. These rules were explained in detail to students on the first day of the program. Positive and negative examples were generated to assist students in understanding the rules. In addition, students and counselors role-played certain behaviors that were both positive and negative examples of the rules. A review of the rules also occurred each day after students arrived. During the first week of the program (with input from the students), the program director and counselors also identified an individual goal for each student to work on in addition to adhering to the classroom rules.

Because the students in the program were learning to evaluate their own behavior in relation to the above-mentioned rules, each student had a self-monitoring checklist at

his/her desk. Each time a student violated a classroom rule, a mark was placed in the appropriate column of the checklist. If a student did not violate classroom rules during an interval, a star was put in the box.

A counselor reviewed evaluations with each student individually every 30 minutes. In this review, the counselor checked to see how accurately the student was recording adherence to classroom rules. Once the student demonstrated accuracy with self-monitoring (e.g., 30 out of 36 intervals), the counselor reduced the frequency of the checks to one-hour intervals, then two-hour intervals, and eventually, once at the end of the day. Each counselor was assigned individual students for whom to provide reinforcement and feedback. Students and counselors graphed behavior totals daily and weekly as a way to monitor progress. One copy of the checklist was kept in the student notebook and another copy stayed with the counselor. An example of the self-monitoring checklist can be found in Appendix A.

All students started off with $200 Bonus Bucks each day. Each rule violation cost the student $10 Bonus Bucks, and each adherence to a classroom rule earned the student $5 Bonus Bucks. Rule violations and Bonus Bucks earned were marked on the checklist in the appropriate category. The checklist with rule violations and salary totals went home for parent signature each day.

A "chill out" was used as a consequence for inappropriate behaviors such as aggression, destruction of property, and repeated noncompliance. The term "chill out" was used instead of "time out" because it is more age-appropriate for adolescents. A chill out resulted in an automatic loss of $50 (5 minutes of not participating and completing work). The goal was for the student to remain a part of class as much as possible;

therefore, the chill out was only used for behaviors that were termed "non-negotiable." These non-negotiable behaviors are defined below:

- Aggression - hitting or kicking. Threatening to hurt someone was also considered aggression.

- Destruction of property - tearing up assignment, writing on desk, or ripping book pages.

- Repeated noncompliance - losing all $200 Bonus Bucks for violating 20 classroom rules in a day. If this occurred, the student was told to stop violating classroom rules. If after this command the student violated another classroom rule, the program director stated that any further rule violations would result in a chill out. Then, if a student violated another classroom rule, he was assigned a chill out.

The length of chill out was 5 minutes. If a student refused to go to chill out, or exhibited negative behaviors in the chill out, he lost the 10 minutes of free time at the end of the day.

Skills for academic success curriculum. The curriculum consisted of eight sessions and provided students direct instruction in self-awareness/advocacy, homework, and organizational skills. The Skills for Academic Success Curriculum activities were led by the program director. Counselors provided assistance to students during these activities by answering questions and reviewing assignments.

Each session included group discussion and independent practice activities. In addition, homework assignments were assigned at the conclusion of each session and reviewed the following day. Following is a brief overview of the content of each session.

A copy of the curriculum manual that includes the actual session transcripts and supporting documents can be found in Appendix B-I.

   Understanding ADHD: session one. The goal for this session was for students to understand how ADHD affects them in the classroom. A brainstorming activity was completed by students to help facilitate a discussion about ADHD (e.g., what it is, what it means to them). These ideas were shared and misconceptions were identified for later discussion. Next, students watched the video *ADHD in adolescence: Our point of view*. Students were then asked if this information was new for them, how well it fit with what they already knew, and if they had any comments or questions. Medication questions were discussed and answered.

Activities to identify areas of strength followed. Students were asked to identify things they were good at, or positive effects of having ADHD (e.g., creative, have lots of energy, curious). A handout was distributed to assist students in identifying areas of difficulty. Students indicated with a thumbs-up or down if they checked the item. The point of this activity was to normalize ADHD-related difficulties within the group. A list of famous people with ADHD was introduced next with the goal of showing that having ADHD is not always negative, and that there are successful people with ADHD. Students summarized what they had learned about ADHD by creating a collage poster that depicted strengths they had identified in themselves and others who may have ADHD.

The homework assignment for this session was for the students to write one thing that has been difficult for them because of ADHD, and one positive way ADHD has affected them or how they have overcome a difficulty. A copy of the transcript and supporting documents for session one can be found in Appendix B.

Learning strategies: session two. The goal for this session was for students to identify their learning strengths and weaknesses. The session was introduced by having the students identify how they learn best, and identify the things they do that get in the way of their learning. Students were asked about their best and worst classes during the last school year and what helped them do well in their best classes. In groups of two, students interviewed each other about learning strategy strengths and needs.

The homework for this session required students to read a homework scenario and decide when and where they would study and how they would study utilizing their learning strengths. A copy of the transcript and supporting documents for session two can be found in Appendix C.

Homework: session three. The goals for this session were for students to learn to problem-solve common homework problems and generate steps they could take to achieve homework-related goals. Students were asked to identify some problems they have experienced in the past that made it hard to be successful with homework. After a list was generated, students were grouped in pairs to come up with solutions to common homework problems. These ideas were then shared with the group. Next, students discussed the importance of setting goals related to homework for the next school year. The homework contract was introduced as a way to help students meet these goals. The program director presented an example contract with goals completed, but with no student steps to meet this goal filled in. As a group, students offered suggestions of specific steps.

 The homework assignment for this session involved having the student take home the goal sheet generated in the group and review the goals with a parent. The worksheet was returned the next day with a parent signature to document that the sheet was reviewed. A copy of the transcript and supporting documents for session three can be found in Appendix D.

Organization: session four. The goals for this session were for students to identify characteristics of an organized study area, notebook, and book bag. In addition, students practiced list-making to get ready for school on time. The concept of the importance of good organizational habits was introduced by one of the program counselors who played the role of a disorganized student. He entered the room late for class, could not find the assignment requested from the program director despite much searching in his book bag. After this role-play, students were asked what problems they noticed about the

"student's" organizational habits and what solutions they might have to make him a more organized student. Next, the concept of an organized study area was introduced, and students were asked to describe the characteristics of a well-organized study area.

List-making was introduced as a way to organize oneself to get somewhere on time with everything one needs. The program director shared the list of things that she does each morning in order to get to work on time.

The homework assignment for this session was for students to make a list of all the things they need to do to get ready in the morning for the summer program (with the goal being that this list will be similar to the academic school year). A copy of the transcript and supporting documents for session four can be found in Appendix E.

Time management: session five. The goals for this session were for students to begin to learn how to estimate time accurately, learn a strategy for how to prioritize tasks, and develop a weekly schedule to optimize homework time. In the first activity, students were asked to place their heads down and raise their hands when they thought one minute of time had passed. Students were then asked to estimate how long it takes to do certain tasks in the morning.

Next, a strategy for prioritizing tasks was introduced and reviewed with students. Students then brainstormed in pairs how they would prioritize the things that needed to be done in the scenario using the strategy. The pairs then shared with the group, and a consensus list was generated on the board by the program director using student input.

The last activity was for students to complete an after-school activity sheet that included the tasks to do, estimated time needed to do each task, and when the tasks must be done. Each item listed was also given a priority rating. The after-school activity sheet

was reviewed with the parent and signed for homework. A copy of the transcript and supporting documents for session five can be found in Appendix F.

Tracking grades and assignments: session six. The goal for this session was to help students understand the importance of completing homework and tracking their grades. Students also learned to plan ahead for important due dates and projects using a calendar and a work schedule.

The topic was introduced by soliciting from students why they should not do homework (e.g., seems like busy work, better things to do, might be hard) and then why they should do homework (e.g., helps you practice new skills, allows you to check that you understand the information, necessary to make good grades).

Next, students were asked to guess what numerical grade a student would earn in math using an example of test, homework, and class participation grades. The point of this activity was to demonstrate that even though the student in the example did well on tests and participated in class, she did not turn in four assignments and the ones she did were incomplete or not very accurate. These behaviors brought her grade down from a B to an F.

Planning for projects was the next topic discussed. In order to maintain a good homework grade in middle school, students must plan ahead for long-term projects. Work should be broken down into manageable parts that are done a little at a time. Students practiced planning for projects with a work schedule activity sheet. The importance of keeping track of grades was then introduced, and students were given charts to use during the next academic year to keep track of course grades.

A blank calendar for the month of July was given to each student. The homework assignment was for students to write important events or scheduled activities for the month and review these events and activities with a parent. Students were asked to get a parent signature to indicate they had reviewed the calendar with a parent. A copy of the transcript and supporting documents for session six can be found in Appendix G.

Self-advocacy: session seven. The goal for this session was for students to prepare for and practice self-advocacy skills. Students were first asked if they had an IEP or 504 Plan to help them in school. A student volunteer was asked to provide an explanation of what this plan was (i.e., written plans that specify certain kinds of accommodations that are needed to learn best in school). The term accommodation was defined and examples were solicited from the group. A list of common accommodations was distributed to students, and they were asked to check off the ones that they felt would be most helpful during the next school year.

Students were asked if they had attended an IEP or 504 meeting, or a parent-teacher conference, what these meetings were like, and the purpose of such meetings. Students were then asked to describe effective ways to communicate with teachers, and a list was generated on the board. The purpose of meeting participation was also reviewed with students (i.e., an opportunity for students to take an active role in developing an education plan that addresses his or her particular academic needs).

Next, the program director and one of the counselors role-played a student asking for help from a teacher. An outline provided some starter sentences. Students then completed the Talking to a Teacher handout and practiced this speech taking turns role-playing as student and teacher. Pairs volunteered to role-play for the group.

The homework for this session was for the student to practice this speech (as the student) with one of their parents and get the handout signed. A copy of the transcript and supporting documents for session seven can be found in Appendix H.

Goal setting and final review: session eight. The goals for this session were for students to review key points learned in the Skills for Academic Success Curriculum and apply what they learned to themselves by setting academic goals. Students had been practicing setting goals throughout the program and had generated some homework-related goals from the homework contract they created with their parents.

Students were then asked to set goals for themselves for the next school year, based on something that they learned in the program and that needed improvement. A review game for the program was then conducted. Students were divided into two teams, like a game show. The program director asked questions about the content of the sessions, and the first team to respond correctly was awarded a point. A copy of the transcript and supporting documents for session eight can be found in Appendix I.

Learning strategy instruction. A learning strategy is a student's approach to completing a task. More specifically, a learning strategy is a student's way of organizing and using a particular set of skills in order to learn content or accomplish other tasks more effectively and efficiently in school (Schumaker & Deshler, 1992). Over the last twenty-five years, Deshler and colleagues have developed and evaluated a model for teaching students how to organize and perform specific academic skills to enhance educational performance. The strategies use an acronym to prompt students to perform a specific set of skills. The development and use of such strategies addresses the "will" component of the "skill vs. will" conceptualization of ADHD. It is important to note that

"skill" must be addressed first. Students cannot successfully perform steps of the strategy if they first have not learned the skill. Learning strategies teach students how to learn, rather than what to learn. The Learning Strategies Model (Ellis, Deshler, Lenz, Schumaker, & Clark, 1991) was followed in the academic summer treatment program and included the following steps: describe, model, prepare, verbally rehearse, practice and give feedback.

The Error Monitoring Learning Strategy (Schumaker, Nolan, & Deshler, 1985) was taught to students. In this strategy, students learn to detect and correct errors in their written work. Proofreading skills and instructional strategies for how to write rough and final drafts are taught to students. This strategy was chosen based on recent research that indicates 65% of students with ADHD also have problems with written expression, making it the most common academic problem associated with ADHD (Dendy, 2000). The Error Monitoring Strategy helps students become more active participants in the writing and editing process. The mnemonic WRITER was taught to the students and stands for:

Write on every other line

Read your paper for meaning

Investigate your paper using COPS

Take your paper to someone for help

Execute the final copy

Reread your paper.

The editing strategy COPS required students to ask themselves the COPS questions in the Investigate your paper using COPS stage of WRITER:

Capitalization - Did I capitalize the first word of each sentence and proper nouns?

Organization – Did I make any handwriting, margin, messy, or spacing errors?

Punctuation – Did I use end punctuation, commas, and semicolons appropriately?

Spelling – Do the words look like they are spelled correctly, can I sound them out, or should I use the dictionary or Spelling Ace?

Students were provided daily writing prompts and practiced each step of WRITER. As noted earlier, students must be able to perform the specific skills required of the strategy. As such, some students needed additional instruction in punctuation skills. This supplemental instruction took place as a review game prior to daily strategy instruction.

The learning strategy activities were led by the program director, a certified Learning Strategies instructor. Counselors provided academic assistance to students during these activities by answering questions and reviewing writing assignments.

Cooperative group work. Cooperative group work was included in the academic summer treatment program to provide students with practice in setting and meeting goals related to long-term projects. In addition, students practiced working cooperatively with another student. Cooperative group work and peer-mediated academic practice are important aspects of most school programs.

The structure of cooperative group work was as follows: during the first week, students were given instruction on presentation skills and working cooperatively and were assigned a partner. The class as group researched a topic together, with the program

director modeling how to complete long-term projects. This modeling included having

the program director complete a weekly planning sheet with items needing to be

completed listed by each day of the week. In addition, items that were not completed on

the specified day were moved to the following day. The goal of using a planning sheet

was to teach students how to break down a project into small and manageable parts to be

completed throughout the week and not the night before the project was due. During

week two, students kept the same partners from week one and researched information

about ADHD. The following topics were provided for the groups to research: ADHD and

Friendships, ADHD and School, and What is ADHD?

The ADHD and Friendships Group was asked to visit the following web site

http://www.add.org/content/kids/friends.htm and report on what they found. In addition,

the following question was posed for each student in the group: "Thinking about the tips

given on the web site for how to get along with friends, which ones do you think are most

important for you to work on next year at school?" Finally, the students visited the

following web site http://www.adhdlivingguide.com to learn how to have more success

with friends.

The ADHD and School Group was asked to visit the following web site

http://www.add.org/content/teens/help4.htm to learn about teachers who are ADD-

friendly and ADD-toxic. They were asked if they had teachers in the past that were either

ADD-friendly or ADD-toxic and discussed characteristics of these types of teachers.

Next, the group was asked to visit the following web site about tips for school and

ADHD http://www.add.org/content/school.htm and report on some of the things they

learned. Last, they read " Will's Story" http://www2.adhdlivingguide.com and were asked if his story also described them and why or why not.

The What is ADHD? Group was asked to visit the following web sites for information on ADHD http://www.add.org/content/kids/whatis.htm and http://www.add.org/content/kids/stuff.htm and report on some new information they found.

During weeks three and four, new pairs of students were established, and new topics were generated by the students for investigation. Each week, students were assigned to a different role - leader, scribe, or researcher - so that they could have the experience of different roles within a cooperative group. Counselors worked with groups to assist in goal setting, estimating length of the parts of the assignments, and summarizing the material.

On Friday of each week, the groups presented their findings. Program staff developed outlines for each group to provide some support with how to divide roles and responsibilities and how to manage and plan for work completion.

A strategy card was introduced the first week and reviewed daily during the cooperative group work to keep students on task. Students were prompted to ask themselves every few minutes if they understood the directions and were helping their group in some way to complete the project. An example of the strategy card can be found in Appendix J.

The Program Package

The program was four weeks in length, and the students attended the program daily for three hours each day. The researcher in this study served as the program director and lead teacher in the summer program. Two counselors assisted in the implementation of the behavior management system. Two Ph.D.-level psychologists facilitated the parent education workshops. One of the psychologists also served as the supervising clinician during the program.

A series of four parent education workshops were conducted one evening a week during the program. These workshops were designed to teach parents specific strategies to support the academic success of their adolescents. The workshop curriculum, designed by the supervising clinician, was based on the work of leading clinicians in the field of ADHD treatment (Barkley, 1998; Robin, 1998). Workshop sessions included the following topics: Overview of ADHD and introduction to school success, home-school communication, homework support, and homework contracting.

Staff participants. Four staff members implemented the academic summer program each day. Staff qualifications and training are described below.

A master's degree-level program director served as the lead teacher in the summer program. She held a M.Ed. in special education and graduate licensure in Specific Learning Disabilities. The program director was trained under the direction of Dr. Keith Conners at Duke Medical Center and assisted in the implementation of the psychosocial treatment of the Multimodal Treatment study of children with ADHD (MTA). She had seven years of experience working with families and children with ADHD. For a comprehensive review of the psychosocial intervention implemented in the MTA Study,

see Wells et al., 2000.

Two bachelor's degree-level research assistants from the Duke ADHD Program served as program counselors and assisted in behavior management procedures. These counselors were selected based on an interview with the program director and references submitted for review. Two Ph.D.-level psychologists served as clinical supervisors.

Staff training. Prior to participation in the summer program, both counselors successfully completed the training requirements. This training included an online self-study program and a one-day training seminar. The online self-study program (http://www.para.unl.edu/) was developed by researchers at the University of Nebraska. The goal of the online self-study was to provide accessible training focusing on preservice, in-service, and on-the-job training for paraeducators working with students with disabilities. This program was selected so that counselors could complete part of the program training prior to the start of the academic summer treatment program at home when it was convenient for them and their current work schedules.

The self-study training required counselors to complete five online training modules: roles and responsibilities, ethical issues, organization and management of the classroom, behavior management, and effective communication with students and other professionals. Completing the training modules included reading the online material and taking each module quiz.

The objectives for the roles and responsibilities module were for counselors to have:

- knowledge of the role expectations of their position as counselors in relationship to teachers, administrators, and students
- knowledge of job descriptions and their functions

- ability to differentiate appropriate job roles for counselors and teachers

The objectives for the ethic module were for counselors to:

- demonstrate knowledge of ethical guidelines relating to students and parents

- demonstrate knowledge of ethical guidelines regarding teachers and staff

- demonstrate a working knowledge of ethical behavior in the classroom

The objectives for the classroom organization and management module were for counselors to be able to:

- describe the impact of classroom arrangements on learning and behavior

- identify ways for finding additional instructional time

- identify strategies for making the best use of available instructional time

- identify potential counselor roles in managing the instructional process

- understand the importance of making the classroom a positive learning environment

The objectives for the behavior management module were for counselors to be able to:

- explain the purposes and philosophy of behavior management

- delineate the counselor's role in carrying out the classroom behavior management plan

- describe strategies for managing students during group activities

- demonstrate skills for increasing positive behavior in students

- demonstrate awareness of the importance of the ethical application of behavior management strategies

The objectives for the effective communication module were for counselors to be able to:

- demonstrate awareness of the importance of communication in school

- demonstrate knowledge of effective communication and listening strategies with students and staff

- examine techniques to aid in the communication with students

- demonstrate the ability to question and direct student responses

- demonstrate knowledge of ways to appropriately deal with conflicts between themselves and teachers or administrators

Counselor candidates completed each of the online training modules and took the online quizzes. Candidates for the counselor positions were required to complete each module with 85% accuracy. Candidates who did not achieve this level of accuracy on the first attempt restudied the module and took a second quiz. Both counselors completed module post-test assessments with at least 85% accuracy. These assessments were reviewed with the counselors before the half-day training seminar.

The half-day training seminar was held on a Friday afternoon from 1:00-5:00pm one month before the start of the academic summer treatment program. The training seminar was designed to provide counselors with basic skills and information for working with students with ADHD and was led by the program director. Training topics included

the following: overview of ADHD and related conditions, effective communication strategies, positive reinforcement, and the program behavior management system.

The objectives for the overview of ADHD and related conditions topic were for counselors to understand characteristics of ADHD and common comorbidities, and the impact of these characteristics on classroom behavior. The objective for the effective communication strategies topic was for counselors to be able to generate ideas for better communication strategies when given a problem statement (e.g., "Jim, would you collect the papers?" would be better stated as "Jim, please collect the papers"). Positive reinforcement training objectives included: how to be specific, label the behavior you like; praise immediately when you see a positive behavior; keep praise free from put-downs and instructions; be genuine and enthusiastic; and provide pertinent praise often (Pfiffner, 1996).

The behavior management system used in the academic summer treatment program was reviewed with the counselors, as outlined in program operations manual (Academic Summer Treatment Program Operations Manual, 2002). The operations manual was collaboratively developed by the program director and clinical supervisor. The behavior management system utilized in the MTA Study served as guide, and modifications were made to address the unique needs of adolescents with ADHD in an academic setting.

First, counselor candidates and the program director generated operational definitions for classroom rules. Role-plays were conducted first with the program director serving as the classroom teacher and counselors serving as students, then counselors serving as teachers and the program director acting as a student, so that counselors could

practice implementing the behavior management system. This practice included

rewarding students with bonus bucks (e.g., "Jim, nice job raising your hand to speak. You

earn $5 Bonus Bucks") and taking away bonus bucks (e.g., "Jim, you did not raise your

hand to speak. You lose $10 Bonus Bucks").

A review of student behaviors (see list below) followed. Counselor candidates

generated ideas of how they would handle specific situations when given examples of

typical inappropriate behaviors. The program director assisted in problem-solving

common solutions and provided feedback and redirection as needed.

- Throwing things at another student

- Inappropriate nonverbal behavior - sticking tongue out

- Non compliance issues - not starting to work - putting head down on

  desk, leaving the room, refusing to pick up the pencil when directed to do so

- Not following the rules of the games (e.g., refusing to participate or teasing those

  who do not understand rules).

- Copying from another student's paper

- Calling out during activity

- Falling asleep during an activity

- Doodling

- Not keeping the chair legs on the floor

- Pencil tapping

- Hitting another student - what defines an aggressive act?

- Making threats of aggressive acts

- "Bad-mouthing" an assignment, teacher or exhibiting an overall negative attitude about request

- Talking-back

- Self-injurious behaviors - stabbing self with pencil, hair-pulling

- Socially inappropriate acts (e.g., nose picking)

In addition to the behavior management training that occurred prior to the beginning of the academic summer treatment program, ongoing supervision occurred throughout the program. A description of this supervision follows.

Clinical supervision. During the summer program, weekly clinical supervision occurred on Wednesday afternoons after students had departed. The program director, program psychologist, and counselors attended these meetings. The supervision meetings were co-led by the program director and program psychologist. Both student and parent clinical issues were discussed, in addition to programming and curriculum concerns. The first half of the hour was devoted to student concerns and the second half to parent concerns and issues. The remaining half-hour was devoted to curriculum and planning.

The program psychologist followed up by addressing clinical issues and problems that arose with the individual family and student. An example of clinical issues addressed was making referrals for additional evaluations based on student behavior (e.g., suspected depression, anxiety, etc.).

The program director addressed educational and program-related issues (e.g., student arriving late to program or student not participating in program activities) with the individual family and student. With counselor input, curriculum issues (e.g., timing of

daily activities and appropriateness of specific activities) were addressed by both the program director and program psychologist.

Counselor supervision. On Fridays of each week after student departure, counselors participated in supervision meetings led by the program director. At these supervision meetings, counselors were given feedback on their consistency in implementing the behavior management system. This feedback included setting a goal for improvement in one area for the next week of the program. Some examples of goals included providing more reinforcement to students (i.e., giving bonus bucks more frequently), ignoring mildly inappropriate behaviors, and providing consistent consequences for inappropriate behaviors (i.e., taking away bonus bucks). To help structure supervision and goal setting, counselors completed a weekly How Am I Doing Rating Scale. A copy of this rating scale can be found in Appendix K. Counselors rated how they thought they were doing in regard to specific behavior management areas and selected one area to work on for the next week. Some examples of evaluation statements included:

- I consistently provide specific praise when delivering Bonus Bucks (e.g., "Good job participating and completing your work. You earn $10 Bonus Bucks").

- I wait at least five seconds after giving a direction for the student to comply.

- I appear calm and use a neutral voice when giving a student negative feedback (i.e., taking away Bonus Bucks for a rule violation).

Lessons Learned from the First Year

The academic summer treatment program was piloted during the summer of 2002. As a result of this experience and observations of staff and participating families, portions

of the program were revised. Following is a summary of the changes that were made

related to screening, data collection, assessment tools, and the content of the Skills for

Academic Success Curriculum.

Screening. The researchers recognized after implementing the program during the

first year that more information about students and families was needed during the

screening phase of the program to better address the unique needs and comorbidities of

participating students. To address this need, a formal screening measure was created and

the diagnosis of ADHD and relevant comorbidities were assessed using the Diagnostic

Interview for Children and Adolescents–IV (DICA-IV) for the summer of 2003 as

described below.

A formal screening measure was created to better assess current functioning of

participating students and their families. This interview tool was administered to each

parent and adolescent at the screening visit and provided information about the following

areas: contact information, ADHD diagnosis, academic history, home and school

functioning, comorbidities, treatment history, and understanding of ADHD. A copy of

this screening tool can be found in Appendix L.

In order to have a more accurate assessment of behavioral functioning, the diagnosis

of ADHD and relevant comorbidities were assessed using the Diagnostic Interview for

Children and Adolescents–IV (DICA-IV). The DICA-IV is a computerized version of the

Diagnostic Interview for Children and Adolescents (DICA). It supplements a clinical

examination by covering all of the major child/adolescent categories from Diagnostic and

Statistical Manual, 4th edition (DSM-IV), and is effective in screening for a broad range

of behavioral problems. The following modules of the DICA-IV were administered:

Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, Conduct

Disorder, Major Depressive Disorder, Mania or Hypomania, Dsythymic Disorder,

Separation Anxiety Disorder, Generalized Anxiety Disorder, Obsessions, and

Compulsions. The program psychologist met with parents individually to review the

DICA and other psychiatric history.

     Data collection. Post assessment data collection occurred on the last day of the

program during the first year. Parents reported that they were not able to fully evaluate

the effectiveness of the program, because they wanted to wait until the adolescents

returned to the traditional school environment to determine whether or not there were, in

fact, changes in behavioral and academic functioning. To address this need, a booster

session with opportunities for parent feedback, was added to the 2003 program after the

first 9-weeks of the following academic school year.

     Assessment tools. Also, the researchers recognized the need for a more direct

assessment the Skills for Academic Success Curriculum skills. To address this need, the

Skills for Academic Success Self-Report was created. In addition, the CHADD

questionnaire was added to assessment measures. Following is a more detailed

explanation of these measures.

     The Skills for Academic Success Self-Report was created by the program director

and psychologist. A review of the curriculum topics was conducted by the program

director and psychologist in order to generate questions addressing the specific skills

taught in the Skills for Academic Success Curriculum. The questions were designed to

assess whether or not the student was using skills that were included in the program

curriculum.

The five point Likert-scale self-report measure included two assessments areas, the first being self-awareness/self-advocacy. There were 11 questions in this area, and the responses ranged from Strongly Disagree to Strong Agree. The second assessment area included homework and organizational skills. There were 9 questions in this area, and the responses ranged from never to very often.

Prior to using the questionnaire, the program counselors reviewed it to determine whether it assessed all components of the curriculum. The questionnaire was considered by its developers to have face validity, as it was designed as a direct assessment measure of the Skills for Academic Success Curriculum. However, no data are currently available on its psychometric qualities. A copy of The Skills for Academic Skills Self-Report can be found in Appendix M.

The CHADD Questionnaire was developed by the Adolescent Subcommittee of CHADD's (Children and Adults with Attention Deficit Disorder) Public and Professional Education Committee at the 1995 CHADD conference.

The questionnaire assesses a student's strengths and areas of concern in the classroom related to academic performance. The assessment areas include:

- bringing necessary materials to class

- completing homework on time

- recording assignments consistently

- turning in completed work

- completing long-term assignments

- cooperating and participating in class

- taking notes in class to study

- performing satisfactorily on tests

- relating positively to teachers

- demonstrating a respect for property

- arriving to class on time

Although this measure is not norm-referenced, it targets specific areas taught in the Skills for Academic Success Curriculum and was designed to be used specifically for students with ADHD. Robin (1998) noted that psychometric research on this measure is needed. A copy of the CHADD Questionnaire can be found in Appendix N.

Skills for academic success curriculum content changes. The program director recorded field notes during the first implementation of the curriculum. Following is a summary of the field notes collected from each session.

Field notes from session one. During the brainstorming activity, the program director noticed that it was difficult for students to write down what they knew about ADHD. So, a multiple-choice game was added as an additional activity to assist students in this discussion. The quiz was to be completed in groups of two to help facilitate discussion. A copy of this game can be found in Appendix O.

In addition, to help students understand that lots of people have ways to help themselves function better, a role-play was added entitled "Medicine, Me, and ADD" to be completed by the program director and a counselor. A copy of the role-play script can be found on the following web site link - http://www.add.org/content/kids/meds.htm

A second activity was developed in which students summarized what they had learned about ADHD. In this activity, students took turns being a news reporter on W-

ADHD News Channel 8 to report on what they had learned about ADHD. This activity replaced the collage activity in which students summarized what they had learned about ADHD by creating a collage poster depicting their characteristics and strengths.

Field notes from session two. After the Learning Strategies Strengths Interview, the program director asked students if they thought they could work effectively with the students they interviewed. This question was added to the session to help students not only understand how they learn best, but also how to pick good partners with whom they could work with to complete group work successfully.

During the Learning Strategies Needs checklist activity, the program director noticed that students were checking almost every item in each section. In order to help students identify the areas that needed most improvement, students were asked to circle the items in the first two areas (homework and organization) that need the most improvement. In the group discussion, students were also asked what they had been doing in the summer program to work on the areas that needed most improvement.

Field notes from session three. During the homework-strategies discussion, the program director wrote down the list of problems students came up with related to completing homework. To help students make clear the connection between the problems and the consequences, the program director generated a chart with both the problems and the direct consequences listed.

The program director thought that a visual display of goals set during the program would help students understand what they need to do each day to meet their goals. An activity was added that required students trace and make cutouts of their feet. Students then picked two goals and wrote them each on the feet cutouts. Then, students filled in

the steps they planned to take on the toes. The students' goal feet were taped to a Homework Success Steps Poster to be displayed in the classroom. These feet cutouts were laminated and given to students at the end of the summer program.

Field notes from session four. The program director thought that an additional activity related to an organized study area was needed. Students visited the classroom computers in pairs to view digital pictures of poorly organized study areas. Students then created lists of what was wrong with each study area, and generated solutions to improve the organization of the study area. Their responses were recorded on a Study Space Activity Sheet. A copy of the activity sheet can be found in Appendix P.

Field notes from session five. During the group discussion of the prioritizing strategy, the program director realized that students were unclear about the last step of the strategy (Will probably put off unless I'm having a great day). Students did not make the connection that having a great day meant that they would have completed all of the other items on their list and had extra time. The program director provided more explanation for the last step to help with clarification.

Field notes from session six. The program director thought that the grade chart activity did not seem as relevant as the other activities. To make the activity more relevant and give students additional practice in tracking grades, students were asked to keep track of whether or not they turned in homework each night during the program along with their behavior salaries each day. This additional activity, although not recording actual school grades, allowed students to keep track of progress and assignments during the summer program. A copy of this assignment tracking form can be found in Appendix Q.

One of the counselors participated in the tracking grades example to make it more personalized to the program. The students really enjoyed the counselor role-play of a disorganized student, so the program director thought that using an example of a counselor in the program would make the activity more fun.

Field notes from session seven. The Talking to a Teacher role-play activity for students to practice advocacy skills was considered an optional activity, if time permitted. The program director thought that practicing this talk was extremely important, so that students would feel more comfortable talking to their parents during the homework activity and teachers during the next academic year. This activity became part of the session and not optional.

Field notes from session eight. During the parent education workshops, each parent and student dyad developed a homework contract with support from the program director and supervising clinician. The goal of this activity was to facilitate goal setting. The program director reinforced goal setting using the homework contract by incorporating it into session eight.

The modifications and additions described above were added to the operations manual that was used in the academic summer treatment program during the summer of 2003. The next chapter describes the participants, procedures, and instruments used to evaluate the Skills for Academic Success Curriculum, which was implemented in 2003.

CHAPTER FOUR

Methodology

The procedures described in chapter three were implemented during year two of the academic summer treatment program (2003) and are described below.

Participants

Participants for the 2003 program were recruited by referrals from mental health clinics, area schools, and newspaper advertisements. No compensation was provided for study participation. Seven students with ADHD in grades 5-7 attended the academic summer treatment program during the summer of 2003. Two families declined research participation. Five students (all male, ages 11-13) and their families participated in the study.

All students were identified as having ADHD based on the Diagnostic Interview for Children and Adolescents–IV (DICA-IV) along with parent interviews conducted by the supervising clinician. Three students met criteria for ADHD-Combined Type, and two met criteria for ADHD-Primarily Inattentive Type. Two students also met criteria for Oppositional Defiant Disorder. In addition, two of these students were reported by their parent as having a Learning Disability in the area of written expression. All students were receiving pharmacological interventions during the program. Two students were Caucasian, two students were African American, and one student was Caucasian/Asian.

One student had an Individualized Education Plan (IEP) and was receiving special education services, two students had Section 504 plans and received classroom accommodations, and two students were not receiving any assistance in their current school placements. Table 1 presents descriptive information for the participating students.

_____

Table 1

Descriptive Information for Student Participants

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Variable					
Grade	6	5	5	7	7
Age	12	11	12	13	13
Gender	Male	Male	Male	Male	Male
Ethnicity	Caucasian	Caucasian/ Asian	African American	African American	Caucasian
ADHD Type	Combined	Combined	Inattentive	Combined	Inattentive
ODD	Yes	Yes	No	No	No
Areas of LD	Written expression	None	None	Written expression	None
Medication	Yes	Yes	Yes	Yes	Yes
IEP	No	No	No	No	Yes
504 Plan	No	Yes	Yes	No	No

Case Study Participant

One student was selected as a case study participant in order to provide more detailed information about student response to the Skills for Academic Success Curriculum. Brian was selected for case study research because of his significant impairments with school functioning. Prior to participating in the summer program, he had great difficulties communicating with his teachers and parents about his needs. The researcher was interested in knowing if direct instruction in academic support skills would help Brian's oppositional behaviors related to completing assignments and overall compliance. A pseudonym was used to protect the confidentiality of the case study participant.

Brian was 12 years old and had just completed the sixth grade at the start of the study. He had earned a D in language arts, a B in math, a B in social studies, and an A in science for the last quarter of the school year. Brian did not receive special education services or have classroom accommodations prior to participation in the summer program.

A comprehensive evaluation of Brian was conducted in February of 2001, 15 months prior to participation in the academic summer treatment program. On the Woodcock-Johnson Psycho-Educational Battery, Third Edition, Brian's standard scores were as follows: broad reading = 119, broad mathematics = 118, broad written language = 118, academic fluency = 127. On the Wechsler Individual Achievement Test, writing composite, Brian's standard scores were as follows: writing = 102, spelling = 104, written expression = 99 (average standard score = 100, standard deviation = 15). His IQ scores on the Weschler Intelligence Scale for Children – Third Edition were as follows:

full scale = 126, verbal scale = 121, performance scale = 127. The difference between his

Full Scale IQ and WIAT writing met the discrepancy criteria required in North Carolina

for identification of a specific learning disability in written expression.

During a parent interview, Brian's mother reported that he had difficulties with

losing his temper, oppositional behavior, and generalized anxiety. Brian's mother rated

him as having significant impairments in the following areas of the Conners' Parent

Rating Scale: Oppositional, Psychosomatic, and Conners' Global Index: Emotional

Lability. Significant impairment was indicated by ratings of at least one standard

deviation above the mean. A summary of Brian's scores on the Conners' Parent Rating

Scale, along with interpretive guidelines, are presented in Table 2.

Table 2

Brian's Pre-test T-scores for Conners' Parent Rating Scale – Revised: Long Version

Factor	Score	Clinical Interpretation
Oppositional	66	Moderately Atypical
Cognitive Problems/Inattention	56	No Impairment
Hyperactivity	60	No Impairment
Anxious-Shy	44	No Impairment
Perfectionism	43	No Impairment
Social Problems	53	No Impairment
Psychosomatic	61	Mildly Atypical
Conners' ADHD Index	56	No Impairment
Conners' Global Index: Restless-Impulsive	58	No Impairment
Conners' Global Index: Emotional Lability	61	Mildly Atypical
Conners' Global Index: Total	60	No Impairment
DSM-IV: Inattentive	57	No Impairment
DSM-IV: Hyperactive-Impulsive	59	No Impairment
DSM-IV: Total	58	No Impairment

Based on the DICA completed by Brian's mother, along with an interview with the program psychologist, he met criteria for ADHD-Combined Type and Oppositional Defiant Disorder. Brian did not meet criteria for the following disorders: Conduct Disorder, Major Depressive Disorder, Mania or Hypomania, Dsythymic Disorder, Separation Anxiety Disorder, Generalized Anxiety Disorder, Obsessions, or Compulsions.

The greatest concerns of Brian's language arts teacher were that he frequently blurted out answers, fidgeted, and did not complete homework assignments. The language arts teacher rated Brian as having significant impairments in the following areas of the Conners' Teacher Rating Scale: Hyperactivity, Conners' ADHD Index, Conners' Global Index: Restless-Impulsive, Conners' Global Index: Total, DSM-IV: Inattentive, DSM-IV: Hyperactive-Impulsive, and DSM-IV: Total. Significant impairment was indicated by ratings of at least one standard deviation above the mean. A summary of Brian's scores on the Conners' Teacher Rating Scale, along with interpretive guidelines, are presented in Table 3.

Table 3

Brian's Pre-test T-scores for Conners' Teacher Rating Scale – Revised: Long Version

Factor	Score	Clinical Interpretation
Oppositional	51	No Impairment
Cognitive Problems/Inattention	59	No Impairment
Hyperactivity	83	Markedly Atypical
Anxious-Shy	51	No Impairment
Perfectionism	42	No Impairment
Social Problems	45	No Impairment
Conners' ADHD Index	80	Markedly Atypical
Conners' Global Index: Restless-Impulsive	80	Markedly Atypical
Conners' Global Index: Emotional Lability	57	No Impairment
Conners' Global Index: Total	74	Markedly Atypical
DSM-IV: Inattentive	67	Moderately Atypical
DSM-IV: Hyperactive-Impulsive	81	Markedly Atypical
DSM-IV: Total	76	Markedly Atypical

In summary, Brian's parent and teacher both reported clinically significant impairments with ADHD-related behaviors. Information collected included previous evaluations, rating scales, and parent interviews.

Evaluation Design

A pre-test/post-test design with no control group was used to evaluate the Skills for Academic Success Curriculum, the component of primary interest in this evaluation of the academic summer treatment program conducted during the summer of 2003. Data collected were also evaluated using case study methodology, including both quantitative and qualitative methods, to explore one individual's response to the program curriculum.

Setting

The academic summer treatment program was operated in the classroom in the ADHD Program of the Duke Child and Family Study Center. The 630-square foot room contained two long tables where student instruction occurred. Four computers were located against the back wall of the room. These computers were used for free time activities. A game area was located in the left corner of the classroom. Students were allowed to play board games in this area. A TV/VCR cart was kept at the back of the classroom and was used for movies and video game play during free time. The class rules and a daily schedule were posted at the front of the classroom, easily visible for all students. A dry erase board was also located at the front of the classroom. Students attended the program daily for four weeks during the summer months for three hours each day.

Independent Variable

The treatment, or independent variable, evaluated in this study was the Skills for Academic Success Curriculum. The curriculum provided students direct instruction in the following three skill areas: self-awareness/advocacy, homework, and organizational skills. A description of the session topics can be found in Chapter three. A copy of the curriculum manual that includes the actual session transcripts and supporting documents can be found in Appendix B-I. Students participated and practiced skills learned in the Skills for Academic Success Curriculum for one hour each day using the schedule that follows. No Skills for Academic Success Curriculum activities occurred on Fridays, as the schedule was modified to include reward activities.

Week 1:

Monday   Self-awareness of ADHD

Tuesday   Review Self-awareness of ADHD

Wednesday   Learning Strategies

Thursday   Review Learning Strategies

Week 2:

Monday   Homework

Tuesday   Review Homework

Wednesday   Organization

Thursday   Review Organization

Week 3:

Monday   Time Management

Tuesday   Review Time Management

Wednesday   Tracking Grades/Assignments

Thursday   Review Tracking Grades/Assignments

Week 4:

Monday   Advocacy

Tuesday   Review Advocacy

Wednesday   Goal Setting and Review

Thursday   Final Review

Measures

In order to evaluate the behavioral functioning of participating students, the parents and teachers of each student completed Conners's Rating Scales (Conners, 2000). Due to the specific behaviors of students with ADHD that interfere with academic success, the researcher wanted an assessment of behavioral functioning prior to and following participation in the academic summer treatment program.

The Conners' Rating Scales were originally designed to provide a comprehensive checklist of common behavior problems often observed by parents and teachers of school-aged children referred for psychiatric treatment. Currently, it is widely used as a way to monitor treatment effectiveness (Conners, 2000). There are separate rating scales for parents and teachers, which can be important in assessing treatment effectiveness, as parents and teachers oftentimes see different behaviors depending on the setting (e.g., home or school).

Conners' rating scales. The Conners' Parent Rating Scale contains the following subscales: Oppositional, Cognitive Problems/Inattention, Hyperactivity, Anxious/Shy, Perfectionism, Social Problems, Psychosomatic, Conners' ADHD Index, Conners' Global Index: Restless-Impulsive, Conners' Global Index: Emotional Lability, Conners' Global Index: Total, DSM-IV: Inattentive, DSM-IV: Hyperactive-Impulsive, and DSM-IV: Total. A brief description of each subscale follows.

Individuals scoring high on the oppositional subscale are likely to break rules, have problems with persons in authority, and are more easily annoyed and angered than most individuals their age.

Individuals scoring high on the cognitive problems/inattention subscale have more difficulty with academics than most individuals their age, have problems organizing their work, have difficulty completing tasks or schoolwork, and appear to have trouble concentrating on tasks that require sustained mental effort.

Individuals scoring high on the hyperactivity subscale have difficulty sitting still, feel more restless and impulsive than most individuals their age, and have a need to always be on the go.

Individuals scoring high on the anxious/shy subscale have more worries and fears than most individuals their age. They are prone to be emotional, are very sensitive to criticism, are particularly anxious in new or unfamiliar situations, and appear to be very shy and withdrawn.

Individuals scoring high on the perfectionism subscale set high goals for themselves, are fastidious about the way they do things at home or at school, and may be more obsessive about their work or tasks than most individuals their age.

Individuals scoring high on the social problems subscale are likely to perceive that they have no friends, are likely to have low self-esteem and little self-confidence, and will likely feel more socially detached from their peers than most individuals their age.

Individuals scoring high on the psychosomatic subscale report more physical symptoms than most children or adolescents their age.

Individuals scoring high on the Conners' ADHD index are considered to be at risk for an ADHD diagnosis.

The Conners' global index score is considered to be the most sensitive to treatment effects. It contains the restless-impulsive and emotional lability indices.

Elevations on the Diagnostic and Statistical Manual – fourth edition (DSM-IV) symptom subscales indicate a probable ADHD diagnosis. It contains the inattentive, hyperactive-impulsive, and total indices (Conners, 2000).

The Conners' Teacher Rating Scale contains the same subscales as mentioned above, with the exception of the psychosomatic subscale. Scores on the Conners' Rating Scales are determined by raw scores that are converted to T-scores with a mean of 50 and a standard deviation of 10. Scores greater than 60 indicate impairment. Interpretive guidelines for T-scores are as follows: 61-65 mildly atypical, possible significant problems; 66-70 moderately atypical, significant problem; 71-90 markedly atypical, significant problem (Conners, 2000).

The Conners' Rating Scales are considered to have strong psychometric characteristics with respect to validity and reliability. The rating scales' technical manual data are presented below (Conners, 2000).

Seven subscales of the Conners' Parent Rating Scale were developed using factor analysis (Oppositional, Cognitive Problems/Inattention, Hyperactivity, Anxious-Shy, Perfectionism, Social Problems, and Psychosomatic) with the goal of assessing distinct dimensions of problem behavior. Low to moderate mean inter-correlations were found among these subscales (.34 for males and .32 for females). Six of the subscales of the Conners' Teacher Rating Scale were developed using factor analysis (Oppositional,

Cognitive Problems, Hyperactivity, Anxious-Shy, Perfectionism, and Social Problems).

Low to moderate inter-correlations were found among these subscales (.36 for males and

.27 for females). These low to moderate correlations indicate that the subscales of the

Conners' Rating Scales measure different behavior and are an appropriate method of

assessing the construct of behavior.

For the six factor-derived scales that appear on both the parent and teacher

version of the rating scale (Oppositional, Cognitive Problems, Hyperactivity, Anxious-

Shy, Perfectionism, and Social Problems) correlations between parent and teacher ratings

ranged from .12-.47 for males and .21-.55 for females. The correlations for the DSM-IV

symptom subscales and the Conners' Global Index was higher, ranging from .28-.50 for

males and .16-.47 for females. The ADHD Index correlations were .49 for both males and

females. These data are consistent with previous reports that parents and teachers

perceive the same children and adolescents quite differently.

The Conners' scales were evaluated to determine the ability of the instrument to

distinguish between individuals with and without ADHD. The ADHD group scored

significantly higher than the control group on all of the parent rating subscales, with the

exception of Perfectionism, for which no differences were found. In addition, there were

significant differences between the ADHD group and control group on all of the teacher

rating subscales, with the exception of the Hyperactivity and Anxious-Shy subscales

(Conners, 2000).

The internal reliability was measured using the Cronbach alpha coefficient. For

the parent rating scale, the reliability coefficients range from 0.728-0.942, and for the teacher rating scale the reliability coefficients range from 0.773-0.958. These coefficients are considered highly satisfactory.

The stability of the instrument's subscales was examined over a 6-8 week period. For the parent rating scale, the reliability coefficients range from .47-.85, and for the teacher rating scale the reliability coefficients range from .47-.88. These coefficients are considered moderate to high.

For this study, the Conners' Rating Scales were completed by both the adolescent's mother and language arts teacher as pre-test and post-test measures to determine if student participation in the Skills for Academic Success Curriculum improved behavioral functioning at home and in the classroom setting. Although the same parent completed both pre and post Conners' Rating Scale assessments, different teachers completed pre and post teacher ratings. Different teacher ratings were necessary due to the fact that participating students advanced to a new grade following participation in the summer program.

Skills for academic success self-report. In addition to the Conners' Rating Scales, a researcher-designed questionnaire (The Skills for Academic Success Self-Report) was completed by study participants as a pre- and post-test measure to determine if students reported improvement in self-awareness/advocacy, organization, and homework skills following their participation in the Skills for Academic Success Curriculum. The five point Likert-scale self-report measure included two assessments areas, the first being self-awareness/self-advocacy. There were 11 questions in this area, and the responses ranged

from strongly disagree to strong agree for questions 1-9. The responses ranged from never to very often for questions 10-11.

The second assessment area included homework and organizational skills. There were 9 questions in this area, and the responses ranged from never to very often. These assessment areas were broken into two domains. The homework skills domain included questions 4, 5, and 9. The organizational skills domain included questions 1, 2, 3, 6, 7, and 8.

CHADD questionnaire. Another measure of academic success, The CHADD Questionnaire, was completed by study participants' language arts teachers as a pre- and post-test measure to determine if student participation in the Skills for Academic Success Curriculum resulted in improvement in organization, and homework skills. The questionnaire assesses a student's strengths and areas of concern in the classroom related to academic performance, more specifically homework and organizational skills. There were 8 questions in this area, and the responses ranged from never to very often. These assessment areas were broken into two domains. The homework skills domain included questions 2, 3, 4, and 8. The organizational skills domain included questions 1, 5, 7, and 11. Questions 6, 9, and 10 of the questionnaire were not included in the analyses, as they were not related to homework or organizational skills.

As described in the previous chapter, there are no published reports of the psychometric properties of these instruments. However, as reported, there are no existing instruments addressing these issues related to adolescents with ADHD that have been subject to psychometric evaluation.

Procedures

  Study permission procedures. Permission to conduct this study was obtained from the Institutional Review Boards of both Duke Medical Center and North Carolina State University, as the program director was an employee at Duke Medical Center and a graduate student at North Carolina State University. The program director met with both parents and adolescents to review study participation. The parents and adolescents individually consented to be part of the study with the understanding that they could withdraw their participation at any time, and withdrawal would not affect their participation in the academic summer treatment program.

  Screening procedures. Families who expressed interest in the program participated in telephone screening to determine whether or not the program was appropriate for a student. Based on the phone screening, if it seemed that the program was appropriate, a screening visit was scheduled. A two-hour screening visit was conducted with each participating parent and adolescent. Parents were asked to bring in copies of the following documents to the screening visit: documentation of ADHD diagnosis, most current school report card, past evaluations, and IEPs / 504 plans.

  The program director conducted an interview with each participating family to obtain information on accommodations, school testing and services, retained grades, and academic/behavioral concerns. Information was also obtained on peer relationships, home relationships, and school functioning. The program director met with each adolescent individually to review why he was attending the program, establish goals and expectations for the summer, review classroom rules, and generate weekly reward possibilities.

Orientation meeting. A one-hour orientation meeting was conducted by the staff of the summer program for both parents and students one week before the program started. The orientation meeting was conducted in two parts. The first part was a general meeting for both students and parents that provided the following information:

- introductions of staff and their roles in the program

- a review of expectations of the program (be on time, complete homework, attend all meetings)

- reminder for students to bring book bag with program notebook each day

- a review of check-in and pick up procedures (complete sign in and sign out sheets each day)

- a review of daily structure for students

- a review of the program behavior management system (a handout was given for students and parents to review together)

- general questions were answered

The second part of the orientation meeting consisted of parent and student breakout sessions. The program psychologist met with the parents and facilitated the following information:

- family introductions

- carpool coordination

- emergency contact information

- reviewed the material to be covered in the parent workshops

- question and answer time about parents would like to get out of the workshops

The program director and counselors met with the students and facilitated introductions by playing the "All About Me" Game. This game required students to interview one another to find out their favorite movie, things they like to do outside of school, etc. Once the interviews were completed, the pairs reported about each other's interests. Also, questions about the behavior management system were answered, and a reward list for Friday activities was generated.

Program implementation. Students attended the program for three hours each day for four weeks. Instructional activities as outlined in Chapter three. Outlines of each Skills for Academic Success Curriculum session can be found in Appendix B-I.

Data Analysis Procedures

The purpose of this research was to evaluate the Skills for Academic Success Curriculum. Raw data consisted of pre-test and post-test scores of the Conners' Rating Scales. The rating scale factors were converted to t-scores. All of these data were entered by the researcher in the Statistical Analysis Software (SAS) program version 3.0 and analyzed using paired t-tests to test the significance of the difference between the pre-test and post-test means. Effect sizes were calculated using pre-test and post-test mean scores, and the effect sizes for the Skills for Academic Success Self-Report and the CHADD Questionniare were also tested for differences using chi square analyses. These measures were used to answer program evaluation questions one and two.

Program Evaluation Question 1: Following student participation in the Skills for Academic Success Curriculum, do their parents report improved behavioral functioning of their children at home as measured by the Conners' Parent Rating Scale?

Program Evaluation Question 2: Following student participation the Skills for Academic Success Curriculum, do their teachers report improved behavioral functioning of their students at school as measured by the Conners' Teacher Rating Scale?

Pre-test and post-test scores from the Skills for Academic Success Self-Report and the CHADD Questionnaire provided information on student and teacher perceptions of self-awareness/advocacy, homework, and organization skills. These measures were used to answer program evaluation questions 3-7.

Program Evaluation Question 3: As measured by the Skills for Academic Success Self-Report, do students report improvement in self-awareness/advocacy skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 4: As measured by the Skills for Academic Success Self-Report, do students report improvement in homework skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 5: As measured by the CHADD Questionnaire, do students' teachers report improvement in homework skills following student participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 6: As measured by the Skills for Academic Success Self-Report, do students report improvement in organizational skills following their participation in the Skills for Academic Success Curriculum?

Program Evaluation Question 7: As measured by the CHADD Questionnaire, do students' teachers report improvement in organizational skills following student participation in the Skills for Academic Success Curriculum?

A case study participant was selected to provide additional qualitative information about student response to the Skills for Academic Success Curriculum. For example, parent interviews, teacher reports of academic functioning, and observations of the student allowed for a better understanding not only of the curriculum content, but also how a particular student responded and used skills learned in the curriculum.

Summary of Methodology

Five students and their families participated in this study. Pre-test and post-test academic and behavioral ratings from participants' parents and teachers were collected and analyzed to evaluate the effectiveness of the Skills for Academic Success

Curriculum. In addition, one case study participant was selected for more in-depth

analysis. The results of are presented in the next chapter.

CHAPTER FIVE

Results

The purpose of this study was to evaluate the effectiveness of the Skills for Academic Success Curriculum, one component of the academic summer treatment program. Five students, their families, and the students' language arts teachers participated in this study. One student was also selected for case study research. The pre-test data were collected during the screening phase of the study. The post-test data were collected at the Booster Session that families and students attended after the first 9-week grading period of the 2003-2004 academic school year. Group data analysis procedures and results, as well as case study data analysis procedures and results, are presented in this chapter.

Group Analysis of Behavioral Functioning (Home)

Data are reported for the pre-test and post-test ratings of the Conners' Parent Rating Scale using t-tests to examine program evaluation question one. Following student participation in the Skills for Academic Success Curriculum, do their parents report improved behavioral functioning of their children at home as measured by the Conners' Parent Rating Scale?

Means of pre-test and post-test ratings were compared for all 15 factors of the Conners' Parent Rating Scale and are presented in Table 4. The post-test ratings for the group were lower than the pre-test ratings, with the exception of the Oppositional,

Perfectionism, and Conners' Global Index: Emotional Lability factors, indicating more normal behavior. The total n for t-test analysis was 5. Considering the small number of participants and the exploratory nature of this study, the alpha level was set at .05. Although most changes were in the predicted direction, there were no statistically significant differences.

Table 4

Students' Mean T-scores and Standard Deviations for Conners' Parent Rating Scale – Revised: Long Version

Factor	Pre-Test M (SD)	Post-Test M (SD)	Difference	t-ratio	p
Oppositional	54.00 (7.45)	55.40 (12.60)	-1.40	-0.313	0.770
Cognitive Problems/Inattention	65.00 (7.38)	60.40 (5.59)	4.60	1.25	0.278
Hyperactivity	67.40 (7.80)	61.80 (5.76)	5.60	1.08	0.339
Anxious/Shy	56.00 (8.63)	52.80 (4.09)	3.20	0.851	0.443
Perfectionism	42.00 (1.41)	45.60 (4.62)	-3.60	-1.74	0.156
Social Problems	57.40 (4.72)	53.60 (6.77)	3.80	1.04	0.355
Psychosomatic	57.00 (8.34)	54.40 (11.00)	2.60	0.717	0.513
Conners' ADHD Index	66.00 (7.71)	61.60 (3.78)	4.40	1.13	0.320
Conners' Global Index: Restless-Impulsive	62.60 (3.51)	60.60 (3.65)	2.00	0.767	0.486
Conners' Global Index: Emotional Lability	52.80 (11.20)	53.60 (10.60)	-0.80	-0.310	0.772
Conners' Global Index: Total	61.00 (4.80)	59.20 (5.26)	1.80	0.704	0.520
DSM-IV: Inattentive	67.60 (6.62)	61.80 (7.33)	5.80	1.93	0.126
DSM-IV: Hyperactive-Impulsive	65.60 (5.32)	62.00 (7.38)	3.60	0.708	0.518
DSM-IV: Total	65.80 (6.61)	63.00 (6.28)	2.80	0.563	0.604

In order to further examine program evaluation question one, effect sizes were calculated for each of the Conners' Parent Rating Scale factors to determine the difference between the pre-test and post-test ratings. Effect size correlations were

calculated using the means and standard deviations and provided a standardized index of how much impact treatment actually had. Effect sizes measure change as a fraction of a standard deviation, so an effect size of .30 means that the change is about a third of a standard deviation (30% of the SD). The generally accepted interpretations are as follows: .1 is considered a small effect, .3 a medium effect, and .5 a large effect (Cohen, 1988).

All but three of the factors had positive effect sizes indicating improvement in behavior at home reported by students' parents following participation in the Skills for Academic Success Curriculum. The following factors had medium, positive effect sizes: Cognitive Problems-Inattention, Hyperactivity, Social Problems, Conners' ADHD Index, and DSM-IV: Inattentive. The following factors had small, positive effect sizes: Anxious/Shy, Psychosomatic, Conners' Global Index: Restless-Impulsive, Conners' Global Index: Total, DSM-IV: Hyperactive-Impulsive, and DSM-IV: Total. The Perfectionism factor had a medium negative effect size. No effects were found for the Oppositional and Conners' Global Index: Emotional Lability factors.

Table 5

Summary of Effect Sizes for Conners' Parent Rating Scale – Revised: Long Version

Factor	Effect Size
Oppositional	-.07
Cognitive Problems/Inattention	.33
Hyperactivity	.38
Anxious/Shy	.23
Perfectionism	-.47
Social Problems	.31
Psychosomatic	.13
Conners' ADHD Index	.34
Conners' Global Index: Restless-Impulsive	.27
Conners' Global Index: Emotional Lability	-.04
Conners' Global Index: Total	.18
DSM-IV: Inattentive	.38
DSM-IV: Hyperactive-Impulsive	.27
DSM-IV: Total	.21

Case Study Analysis of Behavioral Functioning (Home)

Prior to participating in the academic summer treatment program, Brian's T-scores from the following factors of the Conners' Parent Rating Scale indicated clinically significant problems: Oppositional, Psychosomatic, and Conners' Global Index: Emotional Lability. At the post assessment report, none of Brian's T-scores on the Conners' Parent Rating Scale showed a decrease in ADHD-related behaviors, as reported by his parent. In addition, nine of the factors indicated clinically significant problems at the post-test assessment (see Table 6).

Table 6

Brian's Pre-test and Post-test T-scores for Conners' Parent
Rating Scale – Revised: Long Version

Factor	Pre-Test	Post-Test	Difference
Oppositional	66	70	-4
Cognitive Problems/Inattention	56	57	-1
Hyperactivity	60	67	-7
Anxious-Shy	44	54	-10
Perfectionism	43	48	-5
Social Problems	53	57	-4
Psychosomatic	61	65	-4
Conners' ADHD Index	56	62	-6
Conners' Global Index: Restless-Impulsive	58	63	-5
Conners' Global Index: Emotional Lability	61	61	0
Conners' Global Index: Total	60	63	-3
DSM-IV: Inattentive	57	57	0
DSM-IV: Hyperactive-Impulsive	59	68	-9
DSM-IV: Total	58	62	-4

Group Analysis of Behavioral Functioning (School)

The adolescents' language arts teachers from the 2002-2003 academic school year completed the Conners' Teacher Rating Scale prior to the students' participation in the program. After the first 9-weeks of the 2003-2004 academic school year, the new language arts teachers of participating students also completed the Conners' Teacher Rating Scale.

Analyses were conducted for the pre-test and post-test ratings of the Conners' Teacher Rating Scale using t-tests to examine program evaluation question two. Following student participation the Skills for Academic Success Curriculum, do their teachers report improved behavioral functioning of their students at school as measured by the Conners' Teacher Rating Scale?

Means of pre-test and post-test ratings were compared for all 14 factors (see Table 7). The post-test ratings for the group were lower than the pre-test ratings on all factors. The total number of participants for t-test analysis was 5. Again, because of the small number of participants and the exploratory nature of this study, the alpha level was set at .05. Although all changes were in the predicted direction and the Oppositional factor indicated a statistically significant difference, there were no statistically significant differences on the other factors. Decreases in oppositional behavior may have been due to the students' learning advocacy skills in the Skills for Academic Success Curriculum, or the behavior management component of the program.

Table 7

Students' Mean T-scores and Standard Deviations for Conners' Teacher Rating Scale –
Revised: Long Version

Factor	Pre-Test M (SD)	Post-Test M (SD)	Difference	t-ratio	p
Oppositional	56.00 (6.16)	48.00 (3.00)	8.00	3.24	0.032
Cognitive Problems/Inattention	56.00 (8.34)	53.80 (11.50)	2.20	0.571	0.598
Hyperactivity	61.80 (16.10)	56.00 (16.70)	5.80	1.43	0.226
Anxious/Shy	60.40 (15.40)	55.60 (9.89)	4.80	1.50	0.208
Perfectionism	56.40 (16.90)	46.20 (7.36)	10.20	1.20	0.297
Social Problems	55.20 (14.20)	50.00 (9.59)	5.20	1.40	0.233
Conners' ADHD Index	65.80 (14.20)	60.60 (10.90)	5.20	1.16	0.312
Conners' Global Index: Restless-Impulsive	64.20 (13.40)	61.80 (12.10)	2.40	.0559	0.606
Conners' Global Index: Emotional Lability	54.40 (12.00)	49.80 (5.02)	4.60	0.924	0.408
Conners' Global Index: Total	61.80 (12.50)	58.40 (9.21)	3.40	0.754	0.493
DSM-IV: Inattentive	62.20 (14.00)	58.60 (12.50)	3.60	0.788	0.475
DSM-IV: Hyperactive-Impulsive	63.00 (16.90)	56.80 (15.80)	6.20	1.21	0.293
DSM-IV: Total	64.00 (13.80)	58.60 (11.60)	5.40	1.05	0.354

In order to further examine program evaluation question two, effect sizes were
calculated for each of the Conners' Teacher Rating Scale factors to determine the
difference between the pre-test and post-test ratings (see Table 8). Effect size correlations
were calculated using the means and standard deviations and provided a standardized
index of how much impact treatment actually had. Effect sizes measure change as a

fraction of a standard deviation, so an effect size of .30 means that the change is about a third of a standard deviation (30% of the SD). The generally accepted interpretations are as follows: .1 is considered a small effect, .3 a medium effect, and .5 a large effect (Cohen, 1988).

All but one of the factors had positive effect sizes indicating improvement in school behavior reported by students' teachers following participation in the Skills for Academic Success Curriculum. The Oppositional factor had a large, positive effect size. The Perfectionism factor had a medium, positive effect size. The following factors had small, positive effect sizes: Cognitive Problems/Inattention, Hyperactivity, Anxious/Shy. Social Problems, Conners' ADHD Index, Conners' Global Index: Emotional Lability, Conners' Global Index: Total, DSM-IV: Inattention, DSM-IV: Hyperactive-Impulsive and DSM-IV: Total. No effect was found for the Conners' Global Index: Restless Impulsive factor.

Table 8

Summary of Effect Sizes for Conners' Teacher Rating Scale – Revised: Long Version

Factor	Effect Size
Oppositional	.64
Cognitive Problems/Inattention	.11
Hyperactivity	.17
Anxious-Shy	.18
Perfectionism	.36
Social Problems	.21
Conners' ADHD Index	.20
Conners' Global Index: Restless-Impulsive	.09
Conners' Global Index: Emotional Lability	.24
Conners' Global Index: Total	.15
DSM-IV: Inattentive	.13
DSM-IV: Hyperactive-Impulsive	.19
DSM-IV: Total	.21

Case Study Analysis of Behavioral Functioning (School)

Prior to participating in the academic summer treatment program, the following factors on the Conners' Teacher Rating Scales indicated clinically significant problems, based on teacher report: Hyperactivity, Conners' ADHD Index, Conners' Global Index: Restless-Impulsive, Conners' Global Index: Total, DSM-IV: Inattentive, DSM-IV: Hyperactive-Impulsive, and DSM IV: Total. At the post-assessment report, the same factors were rated by his new teacher as still causing impairment for Brian (see Table 9).

Table 9

Brian's Pre-test and Post-test T-scores for Conners' Teacher Rating Scale – Revised: Long Version

Factor	Pre-Test	Post-Test	Difference
Oppositional	51	51	0
Cognitive Problems/Inattention	59	53	6
Hyperactivity	83	85	-2
Anxious/Shy	51	51	0
Perfectionism	42	42	0
Social Problems	45	45	0
Conners' ADHD Index	80	78	2
Conners' Global Index: Restless-Impulsive	80	83	-3
Conners' Global Index: Emotional Lability	57	51	6
Conners' Global Index: Total	74	74	0
DSM-IV: Inattentive	68	64	4
DSM-IV: Hyperactive-Impulsive	81	83	-2
DSM-IV: Total	76	75	1

Group Analysis of Self-Awareness/Advocacy Skills

Data are reported for the pre-test and post-test ratings of the Skills for Academic Success Self-Report to examine program evaluation question three. As measured by the Skills for Academic Success Self-Report, do students report improvement in self-awareness/advocacy skills following their participation in the Skills for Academic Success Curriculum?

The self-report was designed to assess whether or not students were using self-awareness/advocacy skills that were taught in the Skills for Academic Success curriculum. There were 11 questions in this area, and the responses ranged from strongly disagree to strongly agree for questions 1-9. The responses ranged from never to very often for questions 10-11.

Means of pre-test and post-test ratings for the Self-Advocacy/Awareness Domain are presented in Table 10. The post-test ratings for the group were higher than the pre-test ratings, indicating improvement, with the exception of question 3 (I can do many things well) and question 7 (Setting goals help motivate me), for which there was no difference. In addition, the post-test ratings for question 6 (I have set some goals for myself related to doing better in school) were lower for the group. Chi square analyses were also conducted but did not result in significant findings. Visual inspection of the data showed 1-2 ratings that were very different from the others.

Table 10

Students' Mean Scores on the Skills for Academic Success Self-Report Measure: Self-Awareness/Advocacy Skills Domain

Self-Awareness/Advocacy Domain	Pre-Test	Post-Test	Difference
1. I know what it means to have ADHD.	3.40	4.60	1.20
2. I understand how ADHD affects me in the classroom.	4.00	4.60	.60
3. I can do many different things well.	3.80	3.80	0
4. I know what it is that I do that gets in the way of me being successful in school.	3.00	3.80	.80
5. I know how I learn best.	4.20	4.40	.20
6. I have set some goals for myself related to doing better in school.	4.60	3.80	-.80
7. Setting goals helps motivate me.	4.20	4.20	0
8. I keep working on my goals even when problems come up, or I don't do well.	3.20	4.40	1.20
9. I feel comfortable talking to my teachers about the help I need in order to be successful in school.	3.20	4.20	1.20
10. In the last school grading period, how often did you talk to a teacher about how your ADHD affects you in school?	1.80	2.20	.40
11. In the last school-grading period, how often did you talk to a teacher about specific help you need in order to succeed in school?	2.20	3.60	1.40

Case Study Analysis of Self-Awareness/Advocacy Skills

　　　　The case study participant's pre-test and post-test ratings were compared for the Self-Advocacy/Awareness Domain (see Table 11). Brian reported the following area as changing somewhat after participating in the Skills for Academic Success Curriculum - how his ADHD affects him in the classroom, he can do many things well, and how to talk to a teacher for help.

Table 11

Brian's Scores on the Skills for Academic Success Self-Report Measure:
Self-Awareness/Advocacy Domain

Self-Awareness/Advocacy Domain	Pre-Test	Post-Test	Difference
1. I know what it means to have ADHD.	5	5	0
2. I understand how ADHD affects me in the classroom.	4	5	1
3. I can do many different things well.	4	5	1
4. I know what it is that I do that gets in the way of me being successful in school.	3	3	0
5. I know how I learn best.	5	5	0
6. I have set some goals for myself related to doing better in school.	5	3	-2
7. Setting goals helps motivate me.	4	3	-1
8. I keep working on my goals even when problems come up, or I don't do well.	3	3	0
9. I feel comfortable talking to my teachers about the help I need in order to be successful in school.	4	3	-1
10. In the last school grading period, how often did you talk to a teacher about how your ADHD affects you in school?	2	1	-1
11. In the last school-grading period, how often did you talk to teacher about specific help you need in order to succeed in school?	2	3	1

Group Analysis of Homework Skills

Data are reported for the pre-test and post-test ratings of the Skills for Academic

Success Self-Report to examine program evaluation question four. As measured by the

Skills for Academic Success Self-Report, do students report improvement in homework

skills following their participation in the Skills for Academic Success Curriculum?

The self-report was designed to assess whether or not students were using

homework skills that were taught in the Skills for Academic Success curriculum. There

were three questions in this area, and the responses ranged from never (1) to very often (5).

Means of pre-test and post-test ratings were compared for the homework skills domain (see Table 12). The post-test ratings for the group were higher than the pre-test ratings for all questions. Chi square analyses were also conducted but did not result in significant findings. Visual inspection of the data showed 1-2 ratings that were very different from the others.

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Table 12

Students' Mean Scores on the Skills for Academic Success Self-Report Measure: Homework Skills Domain

Homework Skills Domain	Pre-Test	Post-Test	Difference
4. I do my homework at regular time each day.	2.60	3.40	.80
5. I write my homework assignments down every day in the same place.	4.00	4.80	.80
9. I follow a written agreement with my parents about doing homework.	1.80	3.00	1.20

Homework skills were also assessed using the CHADD questionnaire. Data are reported for the pre-test and post-test teacher ratings of the CHADD Questionnaire to examine program evaluation questions five. As measured by the CHADD Questionnaire, do students' teachers report improvement in homework skills following student participation in the Skills for Academic Success Curriculum?

The questionnaire assessed the student's strengths and areas of concern in the classroom related to academic performance. The five point Likert-scale teacher-report

contained four questions related to homework skills, and the responses ranged from never

(1) to always (5).

Means of pre-test and post-test ratings were compared for the group (see Table

13). The post-test ratings for the group were higher than the pre-test ratings on all the

homework skill questions. Chi square analyses did not result in significant findings.

Visual inspection of the data showed 1-2 ratings that were very different from the others.

Table 13

Students' Mean Scores for Homework-Related Questions on the CHADD Questionnaire

Homework-related questions	Pre-Test	Post-Test	Difference
2. Completes homework on time	3.20	3.80	.60
3. Records assignments consistently	3.20	4.10	.90
4. Turns in completed work	3.00	4.20	1.20
8. Performs satisfactorily on tests	3.40	4.00	.60

Case Study Analysis of Homework Skills

The case study participant's pre-test and post-test ratings were compared for the

Homework Skills Domain of the Skills for Academic Success Self-Report Measure (see

Table 14). Brian reported that writing homework assignments down in the same place as

changing substantially after participating in the Skills for Academic Success Curriculum.

He reported that following a written plan with his parents as changing somewhat.

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Table 14

Brian's Scores on the Skills for Academic Success Self-Report Measure:
Homework Skills Domain

Homework Skills Domain	Pre-Test	Post-Test	Difference
4. I do my homework at regular time each day.	3	3	0
5. I write my homework assignments down every day in the same place.	3	5	2
9. I follow a written agreement with my parents about doing homework.	1	2	1

The case study participant's pre-test and post-test ratings were compared for the

homework skills domain of CHADD Questionnaire (see Table 15). Brian's new teacher

reported that he usually wrote down assignments unlike his former teacher who reported

that he sometimes wrote down assignments. His new teacher also gave him higher ratings

on turning in completed work.

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Table 15

Brian's Scores for Homework-Related Questions on the CHADD Questionnaire

Homework-related questions	Pre-Test	Post-Test	Difference
2. Completes homework on time	4	4	0
3. Records assignments consistently	3	4	1
4. Turns in completed work	3	4	1
8. Performs satisfactorily on tests	4	4	0

Group Analysis of Organizational Skills

Data are reported for the pre-test and post-test ratings of the Skills for Academic

Success Self-Report to examine program evaluation question six. As measured by the

Skills for Academic Success Self-Report, do students report improvement in

organizational skills following their participation in the Skills for Academic Success

Curriculum?

The self-report was designed to assess whether or not students were using

organizational skills that were taught in the Skills for Academic Success curriculum.

There were six questions in this area, and the responses ranged from never (1) to very

often (5).

Means of pre-test and post-test ratings were compared for the organizational skills

domain (see Table 16). The post-test ratings for the group were higher than the pre-test

ratings, with the exception of item one (I use good strategies to keep my school

notebook(s) and backpack organized), for which there was no difference. In addition, the

post-test ratings for item two (When I have a lot to do, I organize my time so that I do the

most important things first) were lower for the group. Chi square analyses were also

conducted but did not result in significant findings. Visual inspection of the data showed

1-2 ratings that were very different from the others.

Table 16

Students' Mean Scores on the Skills for Academic Success Self-Report Measure: Organizational Skills Domain

Organizational Skills Domain	Pre-Test	Post-Test	Difference
1. I use good strategies to keep my school notebook(s) and backpack organized.	3.20	3.20	0
2. When I have a lot to do, I organize my time so that I do the most important things first.	3.80	3.60	-.20
3. My study are where I complete homework is organized.	3.00	3.60	.60
6. I plan ahead for long-term assignments and work on them a little bit at a time.	3.40	4.40	1.00
7. At school, I check to make sure I have all my books and materials needed for my	3.60	4.00	.40

homework assignments before I leave.			
8. At home, I make sure I have packed my completed homework assignments in my book bag.	3.80	4.20	.40

Organizational skills were also assessed using the CHADD questionnaire. Data are reported for the pre-test and post-test teacher ratings of the CHADD Questionnaire to examine program evaluation questions seven. As measured by the CHADD Questionnaire, do students' teachers report improvement in organizational skills following student participation in the Skills for Academic Success Curriculum?

The questionnaire assesses a student's strengths and areas of concern in the classroom related to academic performance. The five point Likert-scale teacher-report contains four items related to organizational skills, and the responses ranged from never (1) to always (5).

Means of pre-test and post-test ratings were compared for the group (see Table 17). The post-test ratings for the group were higher than the pre-test ratings on all the organizational skills questions. Chi square analyses did not result in significant differences. Visual inspection of the data showed 1-2 ratings that were very different from the others.

Table 17

Students' Mean Scores for Organization-Related Questions on the CHADD Questionnaire

Organization-related questions	Pre-Test	Post-Test	Difference
1. Brings materials to class	3.40	3.60	.20
5. Completes long-term assignments	2.90	4.20	1.30
7. Takes notes in class to study	2.80	3.80	1.00
11. Arrives to class on time	4.20	5.00	.80

Case Study Analysis of Organizational Skills

The case study participant's pre-test and post-test ratings were compared for the

Organizational Skills Domain of the Skills for Academic Success Self-Report Measure

(see Table 18). Brian did not report any changes related to organizational skills, with the

exception of decreases in items two and eight.

Table 18

Brian's Scores for Skills for Academic Success Self-Report Measure: Organizational Skills Domain

Organizational Skills Domain	Pre-Test	Post-Test	Difference
1. I use good strategies to keep my school notebook(s) and backpack organized.	4	4	0
2. When I have a lot to do, I organize my time so that I do the most important things first.	4	3	-1
3. My study are where I complete homework is organized.	3	3	0
6. I plan ahead for long-term assignments and work on them a little bit at a time.	3	3	0
7. At school, I check to make sure I have all my books and materials needed for my homework assignments before I leave.	3	3	0
8. At home, I make sure I have packed my completed homework assignments in my book bag.	4	3	-1

The case study participant's pre-test and post-test ratings were compared for the organizational skills domain of CHADD Questionnaire (see Table 19). Brian's new teacher reported that he took notes in class more frequently than did his previous teacher. In addition, the teachers' ratings did not differ in the following areas: bringing materials to class, completing long-term assignments, and arriving to class on time.

Table 19

Brian's Scores for Organization-Related Questions on the CHADD Questionnaire

Organization-related questions	Pre-Test	Post-Test	Difference
1. Brings materials to class	4	4	0
5. Completes long-term assignments	4	4	0
7. Takes notes in class to study	3	5	2
11. Arrives to class on time	5	5	0

Case Study Participant's Response to the Program

As stated in Chapter three, there were four components to the academic summer treatment program: a comprehensive behavior management system, the Skills for Academic Success Curriculum, learning strategy instruction, and cooperative group work. Following is a summary of the case study participant's response to the different components of the program. The case study participant was also used in this evaluation to document the fidelity of treatment implementation.

Behavior management system. Brian demonstrated accuracy with self-monitoring of classroom rules during week one of the program. He correctly recorded his adherence to the classroom rules on his self-monitoring checklist 17 out of the 20 days of the

program. During the program, Brian returned all behavior charts signed by his parents with the exception of once during week one and another time during week three.

Skills for academic success curriculum. The following data were collected from the case study participant related to the Skills for Academic Success Curriculum: field notes regarding curriculum content, homework assignments, homework contract, and goals set during the program. These data provided guidance about curriculum content and one student and his family's response to the curriculum.

The program director collected comments from the case study participant regarding the content of the Skills for Academic Success Curriculum during the academic summer treatment program. Following is a summary of Brian's comments regarding the curriculum content.

Session one: During the group discussion, Brian volunteered that he did not like how his ADHD medicine made him feel. When prompted to explain more, he reported tearfully that it makes him not want to eat, feel fuzzy-headed, and angry. We discussed the importance of sharing these feelings with his parents and doctor. For the areas of difficulty, Brian wrote that the main ways ADHD affects him are that he studies for exams at the last minute, always loses or misplaces assignments, and that he taps his foot, pencil, or fingers all the time. Brian reported in the homework assignment that school has been hard for him because of his ADHD. The positive aspect of having ADHD for him is that it has been really easy to make friends.

Session two: On the learning strategy activity, Brian circled that he needed to work mostly on using an assignment book everyday and handing in homework on time. When asked what he had been doing in the program to work on these areas of

improvement, he reported that liked using the daily homework checklist (especially when he could write that he did not have any homework) and that the homework to do/done folders - having different places for uncompleted and completed homework really helped him. For the homework assignment, Brian reported that he would review the chapters to figure out what was most important to learn. He would study after school in his room, and he would repeat and memorize important information as his way of studying.

Session three: During the discussion about problems students have experienced in the past that made it hard to be successful with homework, Brian reported that he often did not do his homework. He went on to say that he would write his assignments in his agenda book in pencil, get his teacher's signature approving what he had written down and then erase the assignments so that it appeared that his teacher initialed that he had no homework for the day. We discussed how this might seem like a good short-term solution to getting out of doing homework, but what about the long-term consequences? Brian reported that one of the long-term consequences was getting a zero on the assignment, which would mean that he would not get a good grade in the class. His goals for homework included bringing materials home, completing homework, and getting his teacher to sign his planner. Three steps for how to reach each goal were also included.

Session four: Brian's morning to do list included the following items: 8:00am – wake-up, 8:00-8:30 – get ready for school, 8:30-9:00 – on the road to Duke, 9:00 – arrive at Duke on time.

During the Study Space Activity, Brian and his partner found lots of problems with the disorganized study areas. They generated the following solutions: have folders

for loose papers, use a pencil cup to hold pens and pencils, and move notebooks to top section of desk so that there is enough space to work.

Session five: During the discussion of how students could use the ABC priority list during camp, Brian reported that cooperative group work would be a B priority unless it was Thursday. When asked to elaborate, he reported that since cooperative group projects were due on Friday, that on Thursday the cooperative group assignment would need to move to an A priority. When planing his afternoon schedule, Brian was careful to note that on days he has soccer practice he would have to do homework at a later time. This might mean that on these days he would not have time to go online or play video games (these were C priorities).

Session six: During the group discussion on why students should and should not do homework, Brian reminded us of his strategy for not doing homework (erasing assignments after teacher initials were obtained) and although this seemed like a good idea at the time, the long-term consequence was a lot of zeros. Brian completed the assignment tracking form (completed and returned homework, recorded behavior salary earned each day) daily during the program. Brian did not return the July calendar homework for this session.

Session seven: During his interview, Brian reported to his "teacher" that he has difficulty with writing and requested to use a computer to word process his assignments. Using the computer enabled him to complete assignments more quickly and with better spelling. Brian completed the homework assignment by successfully role-playing Talking to a Teacher About Help Needed with his mother.

Session eight: Brian's goal for the next school year was to make the A/B Honor

Roll. He planned on working on this goal by doing his homework, studying for tests, being more organized, and doing well in school. He identified his parents and teachers as people who can help him work on this goal. If he was not successful in reaching his goal, he reported that he will be mad at himself. He planned to evaluate his progress on this goal every thirty days.

Homework assignments. During the program, Brian recorded his nightly homework on the Homework Assignment sheet every Monday-Thursday. In addition, he returned completed homework assignments for 14 out of the 15 days that homework was assigned.

Homework contract. Brian created a homework contract with his parents as part of participation in the academic summer treatment program. Following is a transcript of his contract.

Goal One: Bring home assignments and materials

A. My teacher will write the assignments on the board every day.

B. I will write it in my planner in ink.

C. I will write "worksheet" if that is the assignment.

D. I will place homework in to-do folder.

E. I will list needed materials and bring them home.

F. I will bring home any homework completed at school for my parents to review.

G. My parents will ask the teacher if it is possible to publish the homework on a website.

Goal Two: Understanding the assignment

A. I will write down the instructions from the teacher in my planner.

B. I will ask questions if I do not understand the assignment.

C. My teacher will recommend or allow me to choose a study buddy.

D. My parents will allow me to call my study buddy before 7pm any school night.

Goal Three: Completing homework

A. I will begin my homework each afternoon after a 15-minute break for a snack.

B. I will prioritize my homework before starting.

C. I will complete my homework in the kitchen after I have gathered all the needed materials.

D. I will spend at least 15 minutes on each core subject each night. Ten-minute breaks between subjects are allowed. Extra time can be used for making index cards, extra reading, or review.

E. My parents will make sure there are no distractions and that I have the materials I need in the house.

F. My parents will check my assignments when they are done. We both will rate my homework using the following guidelines: poor, good, or excellent. Homework must be rated good or excellent to be considered completed.

Goal Four: Turning in assignments

A. My parents will remind me nicely each morning to turn in my assignments.

B. I will look in my done folder at the beginning of each class to remind myself to turn in the homework assignment.

C. My teacher will notify my parents once a week if I am missing any assignments.

Goal Five: Long-term projects and test preparation

A. I will write down a project plan with deadlines within two days of a project being assigned.

B. My teacher will review my plan and initial it.

C. I will spend at least 15 minutes on any project each day.

D. I will write down tests/quizzes coming up in ink in my planner.

E. I will spend at least 15 minutes studying for any test the four nights before the test. (This time can come out of extra homework time if there is no other homework for that subject).

Rewards:

A. Each night I complete my homework without arguing, I will earn 30 minutes of scooter, phone, computer, or TV time before 9pm. My parents will use the "three strikes and you are out" system to warn me about arguing.

B. When I complete my homework four out of five days in a row without arguing, I will earn unlimited scooter time on Saturdays.

C. When I complete my homework five out of five days in a row without arguing, I will earn unlimited scooter time on Saturday, plus my parents will buy me a gallon of gas and oil for my scooter.

D. When I achieve A/B Honor Roll all four quarters of the school year, my parents will take me and 2-3 of my friends to the beach for a weekend.

Both Brian and his parents signed this contract with the agreement that they would try the contract for one month. They planned to revisit the contract and make any needed changes, if necessary, at the beginning of each month.

Goal setting. Brian and his mother met with the staff from the academic summer treatment program after the first 9-week grading to talk about the goals he set during the summer program, and the progress he made towards these goals. Following is a summary of the feedback provided by Brian and his mother.

The goal Brian set for the first 9-week grading period was to make the A/B Honor Roll. His grades for the 2002-2003 and 2003-2004 academic school years are presented in Table 20.

Table 20

Brian's Report Card Grades

Content Area	Pre-Test	Post-Test
Language Arts	D	A
Math	B	B
Science	A	B
Social Studies	B	A

Brian met his goal of A/B Honor Roll. He reported that doing his homework at a set time each day helped him earn better grades. Brian also shared that the social studies grade listed on his report card was incorrect. During the teacher-student conference about report card grades, Brian was told that he earned an A in the course. When his report card came home, the grade listed for social studies was a B. Brian discussed appropriate ways he could talk to his social studies teacher about this discrepancy. The program director

followed up with Brian's mother, and she indicated that the discrepancy was resolved in an appropriate way, and Brian did actually earn an A for the course.

When Brian's mother met with the program psychologist after the first 9-week grading period, she wanted to discuss school supports that she had requested for Brian during the first grading period. She reported the following new accommodations that have been helpful for Brian during the first grading period: attending study hall to work on homework assignments, having homework assignments posted online, being allowed to word process written assignments, and using textbooks on Compact Disc.

Brian's mother shared that his teachers have been very amenable to the organizational system he learned in the program. One teacher even held up Brian's notebook as an example of how to be organized. The only problem Brian's mother has observed was that the organizational system he uses was not consistent across teachers. She has found that communication with teachers in the middle school grades works best via email. She has started asking teachers for project checkpoints on how Brian is progressing instead of waiting until the night before it is due and arguing with him about why he waited until the last minute to complete the project.

Brian's mother also reported that he has more self-awareness related to his ADHD. He now understands better what he does that causes him difficulties, and why he takes medication. She also shared that Brian offered to come to next year's orientation meeting as a guest speaker to talk about his experiences in the program.

Learning strategies instruction. Brian participated in and completed all learning strategy instruction activities. His main area of difficulty related to writing was using correct punctuation. He averaged nine errors per writing assignment during week one,

four errors per writing assignment during week two, two errors per writing assignment

during week three, and two errors per writing assignment during week four. Most of his

punctuation errors involved comma usage.

Cooperartive group work. Brian and his cooperative group partner created the

following rap to address how ADHD affects relationships with teachers. Below is a

transcript of the rap, which was performed to the group.

Welcome to the ADHD Rap… We are here to represent my "peeps" with ADHD

ADHD is not a deadly disease.
You cannot catch it through a sneeze.
It only runs in your family genes.
Part of your brain is permanently freezed.

When someone makes fun of your ADHD.
Tell him it's not your fault, it's your family genes.
You're just a normal child with a disability.

When your teacher is just plain mean
Come to Duke to learn about ADD
They will fix you up and send you out
Strong and proud with no doubt.

ADHD is not a deadly disease.
You cannot catch it through a sneeze.
It only runs in your family genes.
Part of your brain is permanently freezed.

Toxic teachers are not friendly to you
Who knows, maybe they have ADHD too
You can tell the principal if they continue.

When we don't take our medicine, we get into a fight
Because of that, we hit them with all our might
And maybe we will hit them with our right

ADHD is not a deadly disease.
You cannot catch it through a sneeze.
It only runs in your family genes.
Part of your brain is permanently freezed.

In summary, the results of this study revealed improvements in some areas of behavioral functioning, as reported by both parents and teachers. However, only one area was statistically significant. Student and teacher post-test reports indicated that students were using homework and organizational strategies learned in the Skills for Academic Success Curriculum. In addition, students reported more self-awareness/advocacy skills after participating in the Skills for Academic Success Curriculum Implications of these findings as well as suggestions for future research are discussed in the next chapter.

CHAPTER SIX

Discussion

There were two goals for this project, the first being to develop an academic supports skills curriculum. The researcher, along with colleagues at the Duke Child and Family Study Center, reviewed the literature on academic support skills in search of research-validated materials to teach adolescents with ADHD. When no such materials could be located, the researcher then used her own clinical and teaching experiences along with the recommendations of leading clinicians and researchers in the field of ADHD research to create a set of curriculum materials to teach adolescents with ADHD academic support skills – The Skills for Academic Success Curriculum. The second goal was to evaluate the Skills for Academic Success Curriculum. The curriculum offered students direct instruction in academic support skills. More specifically, students learned strategies in the areas of self-awareness/advocacy, homework, and organizational skills. A program evaluation was conducted to determine whether participation in the Skills for Academic Success Curriculum improved self-awareness/advocacy, homework, and organizational skills. Additionally, behavioral functioning was assessed to determine if differences in ratings occurred at home and school following student participation in the Skills for Academic Success Curriculum.

Summary of Findings

Using a pre-test /post-test design with no control group, seven program evaluation questions were proposed for investigation resulting in the following findings. Program Evaluation Question 1: Following student participation in the Skills for Academic Success Curriculum, do their parents report improved behavioral functioning of their children at home as measured by the Conners' Parent Rating Scale? There were decreases in all but three of the factors assessed on the Conners' Parent Rating Scale between pre-test and post-test assessments for the group; however, these results were not statistically significant at the alpha level .05. No decreases were shown with the following factors: Oppositional, Perfectionism, and Conners' Global Index: Emotional Lability. Effect sizes were calculated to further investigate the mean difference between pre-test and post-test scores. Five factors had medium, positive effect sizes. Six factors had small, positive effect sizes. One factor had a medium, negative effect size. No effects were found for two of the factors. No decreases were found between pre-test and post-test assessment for the case study participant. Decreases in scores suggest positive changes in behavior. These results suggest a trend in the desired direction but offer limited support of program evaluation question one.

Program Evaluation Question 2: Following student participation the Skills for Academic Success Curriculum, do their teachers report improved behavioral functioning of their students at school as measured by the Conners' Teacher Rating Scale? There were decreases in all of the factors assessed on the Conners' Teacher Rating Scale between pre-test and post-test assessments for the group; however, only one of the factors

(Oppositional) resulted in a statistically significant difference. Effect sizes were calculated to further investigate the mean difference between pre-test and post-test scores. One factor had a large, positive effect size. One factor had a medium, positive effect size. Ten factors had small, positive effect sizes. No effect was found for one of the factors. Decreases were found between pre-test and post-test assessment for five of the factors for Brian. Decreases in scores suggest positive changes in behavior. As with the parent behavioral data, these results suggest a trend in the desired direction but offer limited support of program evaluation question two.

Program Evaluation Question 3: As measured by the Skills for Academic Success Self-Report, do students report changes in self-awareness/advocacy skills following their participation in the Skills for Academic Success Curriculum? The post-test ratings for the group were somewhat higher, but not statistically significantly so, than the pre-test ratings, with the exception of two questions, for which there was no difference. In addition, the post-test ratings for one question were lower for the group. The post-test ratings for Brian were higher for three of the self-awareness/advocacy questions. No differences were reported for four of the questions. Four post-test ratings for Brian were lower. Increases in scores suggest positive differences in ratings of self-awareness/advocacy skills.

Program Evaluation Question 4: As measured by the Skills for Academic Success Self-Report, do students report improvement in homework skills following their participation in the Skills for Academic Success Curriculum? The post-test ratings for the group were higher, though not statistically significantly so, than the pre-test ratings for all questions. The post-test ratings for Brian were higher for two of the homework-related

questions, and no difference was reported for one of the questions. Increases in scores suggest positive differences in ratings of homework skills.

Program Evaluation Question 5: As measured by the CHADD Questionnaire, do students' teachers report improvement in homework skills following student participation in the Skills for Academic Success Curriculum? The post-test ratings for the group were higher than the pre-test ratings for all questions. The post-test ratings for Brian were higher for two areas, and no differences were reported for two of the questions. Increases in scores suggest positive differences in ratings of homework skills.

Program Evaluation Question 6: As measured by the Skills for Academic Success Self-Report, do students report improvement in organizational skills following their participation in the Skills for Academic Success Curriculum? The post-test ratings for the group were higher than the pre-test ratings for all but two of the questions. Again, the differences were in the predicted direction but did not reach statistical significance. The post-test ratings for Brian were lower for two of the organization-related questions, and no differences were reported for four of the questions. Increases in scores suggest positive differences in ratings of organizational skills.

Program Evaluation Question 7: As measured by the CHADD Questionnaire, do students' teachers report improvement in organizational skills following student participation in the Skills for Academic Success Curriculum? The post-testing ratings for the group were higher for all questions, though not statistically significant. The post-test ratings of Brian were somewhat higher for one area, and no differences were reported for three of the questions. Increases in scores suggest positive differences in ratings of organizational skills.

These results suggest that as a group, students rated themselves overall as having slightly better self-awareness/advocacy, homework, and organizational skills after participating in the Skills for Academic Success Curriculum, though not statistically significant. The results for Brian did not offer as much support for program evaluation questions 3-7.

Interpretation

Despite the somewhat disappointing lack of differences between pre-test and post-test ratings for both the group and the case study participant after participation in the Skills for Academic Success Curriculum, it should not be concluded that the curriculum cannot be an effective method of teaching adolescents with ADHD academic support skills. Most of the group measures did suggest positive differences in ratings of behavioral functioning, self-awareness/advocacy, homework, and organizational skills. A consistent, positive trend in behavior was reported by parents, teachers, and the students themselves. Even with the lack of statistical support, there appeared to be encouraging trends, because the differences in the raw data pretty consistently ran in the direction of supporting the efficacy of the program.

There are number of possible explanations as to why there were not significant decreases in ADHD-related behaviors as reported by parents and teachers. The program was only four weeks in length, a short amount of time to expect significant behavioral changes to occur. Additionally, the post-assessment ratings were collected nine weeks after the start of the 2003-2004 school year. This allowed time for the positive effects of the program to diminish before the follow-up booster session. Would there have been

significant behavioral changes reported by both parents and teachers immediately following the summer program? An immediate post assessment of skills and behaviors would have provided some answers to this question. Although, teachers would not have been available to assess behavior, as school was not in session during the summer months. This would mean that the staff of the summer program would have to provide the immediate post assessment ratings. These ratings might not be comparable to more traditional classroom settings considering the high level of structure provided in the program, as well as the small teacher to student ratio.

Regarding program evaluation questions 3-7, it should be noted that the pre-test ratings for the Skills for Academic Success Self-Report were relatively high, indicating little reported impairment in areas assessed. Students seemed unwilling to rate their behavior in the never or rarely levels. This finding did not seem accurate to the researcher. Teachers and parents reported impairments in these areas. In addition, the researcher observed impairments in these areas assessed on the Skills for Academic Success Self-Report during the program. Students at this age are just starting to become aware of their strengths and weaknesses, and the Skills for Academic Success Curriculum provides instruction in self-awareness. Perhaps this initial lack of awareness contributed to the higher pre-test ratings. The initially higher ratings may have restricted the range of responses, limiting the possibilities for statistically significant improvements (i.e., little room for improvement). In addition, self-reports are always suspect in that individuals may report what they believe the researcher wants to hear or possibly what they believe about themselves. Without investigation of the psychometric properties of this instrument, interpretations of student responses must be made with caution.

Students reported some differences in their understanding of ADHD and advocacy skills following participation in the Skills for Academic Success Curriculum. Differences were reported in all areas (e.g., knowing what it means to have ADHD, feeling comfortable talking to teachers about ADHD, and asking for help needed in the classroom) assessed using the Skills for Academic Success Self-Report, with the exception of two questions related to goal setting. These questions assessed whether or not students set goals related to doing better in school and whether or not setting goals motivated them to do well in school. Perhaps these questions were rated the same or lower by the group at post-assessment because students had not yet been able to see how setting goals could help them do better in school. Goal setting is a long-term process, and the full effects of setting goals takes time for students to make the connection between setting goals and doing better in school. Or, were students overly optimistic in reporting their use of strategies prior to participating in the program and more realistic following participation? Additionally, it may also be that setting relatively long-term goals is one of the most difficult academic support skills, and students need more practice and support, especially in real world situations. Lastly, were students setting goals, just not academic ones as worded in the self-report question? Based on the goals the case study participant set during the program and his resulting report card grade, he did set goals related to academics.

There was also no change reported by the group for the Skills for Academic Success Self-Report question – I can do many things well. In reviewing these data, the researcher questions the relevance of this question related to the Skills for Academic

Success Curriculum. Doing things well was not a specific area targeted in the intervention and there is no reason to expect change on this item.

As a group, students reported some differences related to homework skills following participation in the Skills for Academic Success Curriculum. These findings, though not statistically significant, were promising to the researcher, as a great deal of time was devoted to teaching strategies for these areas related to homework skills, and students reported using these strategies in both the home and school settings.

Brian's post assessment responses related to writing down homework assignments and following a written agreement with parents regarding homework were also promising. Prior to participation in the program, Brian reported that he frequently would not write down homework assignments. Additionally, he had never developed and followed a written agreement with his parents related to homework completion. Brian reported to the program director at the booster session that writing down homework assignments and doing homework at set time each day helped him with homework completion. We can see that better grades suggest that this was the case as well.

Promising, though not statistically significant, results were also found with the CHADD questionnaire group assessment of homework skills. The new teachers gave slightly higher ratings in all areas targeted on this questionnaire compared to the assessments by the previous year's teachers. These areas included: completing homework on time, recording assignments consistently, turning in completed work, and performing satisfactorily on tests. These teacher reports suggested that students may have used strategies learned by participating in the Skills for Academic Success Curriculum in the classroom setting. Brian's new teacher reported that he wrote down assignments more

frequently and turned in completed work more often than did his 6th grade teacher. Although the researcher cannot say with assurance that these differences in ratings were a direct result of his participation in the curriculum, and could be due to the subjective nature of the teacher ratings, one might expect that the teacher in the higher grade would have higher expectations related to homework skills.

As a group, students tended to rate themselves higher related to organizational skills, such as planning ahead for long-term assignments, having an organized study area, and checking for needed materials before leaving school, following participation in the Skills for Academic Success Curriculum. Skills related to organizing their notebook and book bag, students showed no change. Additionally, post assessment ratings related to organizing time were lower for the group. These findings were disappointing to the researcher, as a great deal of time was devoted to teaching strategies for these areas related to organizational skills. A review of the curriculum content area needs to be conducted to address possible ways to strengthen this aspect of the program curriculum. Additionally, an interview with a participating student might provide additional information about this area of the curriculum.

The new teachers also reported differences in organizational skill areas targeted on the CHADD questionnaire. Unfortunately, Brian's new teacher gave Brian lower ratings than did his 6th grade teacher in the areas of organization. Perhaps the lower findings related to organization skills reflect the fact that the teachers had different expectations related to organizational skills.

Another way to interpret results of this evaluation is in terms of a "skill vs. will" issue that many consider to be an inherent conflict for adolescents with ADHD (Barkley,

1998). Did the participants know how to perform the academic support skills they needed to demonstrate in order to be successful in school? Could they operationalize these skills in the context of the new environment and practice the skills appropriately? In order to address this issue, future research will need to test hypotheses about where acquisition and use of skills must be demonstrated for learning to be said to occur. Analysis of skill vs. will was not addressed directly in this project. However, the issue was raised by results of the project where initial acquisition seems to have taken place based on staff evaluation of products such as notebooks, behavior charts, and class work. The question of where breakdowns occur between acquisition and performance of skills remains a critical issue for the development and evaluation of intervention materials.

In summary, the research data on how to teach academic support skills is minimal. The data from this study are somewhat disappointing because they give qualified support; however, the data are still useful as they point the way for future intervention research and do suggest specific questions to be addressed in future work. These implications are discussed next.

Implications

The overarching question with this research appears to be figuring out where the breakdown in performance of skills occurs. Students practiced specific academic support skills and demonstrated mastery of these skills in the context of the program. Skill mastery assessments were based on staff evaluation of products such as notebooks, behavior charts, and class work.

However, based on the ratings of different teachers, parents, and students' self-

reports, performance of some gains in targeted skills did not appear to maintain or generalize to the next school year. Is it learning the skill or is it an issue of maintenance and/or generalization? To ensure students are learning the skills, better data collection measures need to be devised. These data would provide information on classroom functioning, permanent products completed by the student, and Curriculum-Based Measurements of progress related to behavioral self-awareness/advocacy, homework, and organizational skills. These data would address the question of whether students demonstrate differences in behaviors in these targeted areas while participating in the program. If so, then the argument can be made that they learned the skills in the program. If not, program staff could re-teach and re-assess skills and provide additional supervised and independent practice. Such a procedure could identify the types of modifications that need to be made to the program curriculum to ensure that students exit the program with the specified skills.

Next comes the issue of maintenance and generalization of skills learned. Do students use the skills learned in the academic summer treatment program in their school environment – the point of performance? The research data on effectively teaching maintenance and generalization skills is disappointing. Only one of the five studies reviewed for this project related to self-awareness/advocacy skills included maintenance and generalization phases (Durlak & Rose, 1994). One of the organization studies included a maintenance phase (Flores & Schloss, 1995). Four of the homework studies included a maintenance phase (Habboushe, et al., 2001; Kahle & Kelley, 1994; Toney et al., 2003; Trammel, et al., 1995), and one study included a 6-week maintenance and generalization phase (Hughes, et al., 2002). In almost every study reviewed for this

research, statements about the importance of assessing maintenance and generalization skills were made, and yet data were not collected for these crucial phases of intervention research. The studies that did include maintenance and generalization phases did report positive findings. There is no question that students can demonstrate new skills and appropriate behavior in a controlled setting, but the more important question is how to maintain these changes over time and across settings. Perhaps a booster session at the beginning of the school year following participation in the program would allow the students to individualize strategies learned in the summer program to their specific academic demands. For example, students could bring in their school notebooks and related materials to organize and devise a plan for time management using their after-school schedules. In addition, having another booster session at the middle and at the end of the grading period could provide another review of the strategies learned in the summer program.

These booster sessions would provide opportunities for more frequent feedback and instruction, in addition to data collection. However, from a research perspective, the problem that would arise with adding more booster sessions could be confounding treatment. In other words, if more permanent products such as contracts, work schedules, and other benchmarks for completing long-term projects were collected, the very act of collecting the information could prompt student use of appropriate strategies. Adding treatment/data collection sessions would make it difficult, if not impossible, to determine whether ongoing monitoring of students' strategy use is necessary for successful treatment.

From an intervention perspective, perhaps the real issue is whether or not to have

more booster sessions. Because it is so difficult to conduct research that includes

appropriate maintenance and generalization phases, it would seem better to conduct the

research in the school setting, the place where students need to use academic supports

skills. Currently, in many North Carolina schools, middle school students with ADHD

have the opportunity to take a course called Curriculum Assistance to help assist them

with academic difficulties they are experiencing in the classroom. This course currently

does not have a set curriculum. It seems to be a perfect place to offer the Skills for

Academic Success Curriculum, as the students participating in this course are the very

ones in need of instruction in academic support skills. The students could be taught the

curriculum content in the Curriculum Assistance classes and have supports throughout

the school year in their content area classes. This solution would address the difficulties

of knowing if skills were learned – the skills are learned in the Curriculum Assistance

courses – and if students used the skills over time and across settings – the skills were

monitored and assessed in the general education classrooms.

Limitations

Next, the limitations for this study are discussed. Limitations are organized by

issues related to internal and external validity, as well as with measurement tools.

Internal validity. The absence of a control group in this study limits the

researcher's ability to determine whether the potential changes could be a result of

participation in the Skills for Academic Success Curriculum or other variables.

Additionally, the Skills for Academic Success Curriculum was only one component of

the academic summer treatment program. Were ratings influenced by other aspects of the

treatment program (e.g., behavior management system, parent education workshops)? Developmental growth (i.e., maturity) of the participants may have also affected whether or not they used the skills learned in the program. Experiences in previous grades may have provided motivation to use academic support skills necessary for school success.

It is also important to remember that different teachers completed the pre-test and post-test ratings in this study. The pre-test ratings were completed by teachers who had taught the participating students for 8-9 months, while the post-test ratings were completed by teachers who had taught participating students for only 1-2 months. Other experiences in these time frames might have affected how the ratings were completed. For example, expectations of teachers who had been teaching the same students for 8-9 months might be different from those of a teacher who had been teaching those students for only 1-2 months. The issue of different teacher ratings for pre and post-assessment intervention research is an ongoing problem that cannot be addressed. Students complete grades and move up in the educational system. In traditional public schools, it is unrealistic to expect a student to have the same teacher for more than one year, even though this continuity would provide a more accurate assessment of intervention research.

External validity. The study is limited in its generalizability to the larger

population of adolescents with ADHD. First, the sample used for this evaluation was very

small, and one participant's ratings could skew results for the group. Second, the small

number of participants only included males. Although more males are diagnosed with

ADHD when compared to females, with an average ratio of 6:1 in clinic-referred samples

of children (Barkley, 1998), the researcher would have liked to have had female

participants to include in the analyses. In addition, the students were participating in a fee

for service program, making it unavailable to individuals without the financial resources

to access such a program. These atypical sample characteristics severely limited the

likelihood of finding statistically significant changes. Because no random sampling

procedures were employed, the researcher is limited in her ability to draw conclusions

about the target population of adolescents with ADHD. Conclusions about the effects of

the Skills for Academic Success Curriculum should be generalized with caution.

Measurement issues. The measures used to assess skills learned in the Skills for

Academic Success Curriculum (The Skills for Academic Success Self-Report and

CHADD Questionnaire) currently have no supporting psychometric data. The researcher

created the Skills for Academic Success Self-Report, and it contained questions that

targeted the specific skills taught in the curriculum. The CHADD Questionnaire was

included as an assessment tool, as it was designed to target specific areas of difficulty for

students with ADHD. Since the data for this evaluation were collected, the researcher

was informed that a norm-referenced assessment of academic skills has become

available. The Academic Competence Evaluation Scale (ACES) (DiPerna & Elliott,

2002) has an academic enablers subscale that contains similar questions to the ones on

the Skills for Academic Skills Self-Report. This measure will be added to the post

assessment measures for future programs.

Recommendations and Future Directions

Based on this evaluation of the Skills for Academic Success Curriculum, I

have three major recommendations. First, it appears necessary to prompt and assess skills

learned in summer programs more frequently during the school year. More booster

sessions should be added to the program package, in an effort to adjust the skills and

strategies taught in the program, so that they will be most beneficial to students in the

school setting. Booster sessions would allow not only a continued assessment of skills

learned in the program, but also provide an opportunity for continued instruction and

feedback. In addition, continued feedback and support could also be implemented over

the long-term, possibly with telephone conferences or internet-based support. Using

technology to provide ongoing feedback and support to students would address the

commonly cited barrier, lack of time, to participate in long-term interventions.

Second, the intervention should be conducted and evaluated in the school setting. One

avenue to be explored for implementing the Skills for Academic Success Curriculum to

adolescents with ADHD in the public school setting is the Curriculum Assistance elective

offered to students in middle school. There is no set curriculum for this elective, and the

students who elect to take Curriculum Assistance are the very students who would benefit

from the skills and strategies covered in the Skills for Academic Success Curriculum. By

implementing the program in the school environment, students would be able to learn and

practice the skills in the setting they need to use them (i.e., the point of performance).

Third, additional data collection measures need to be added to assess whether or not students exit the program with the skills taught in the program and maintain these skills across time and settings. It should be noted again here that the very action of data collection, including collection of products or conducting interviews or self-reports, may prompt more skill use. This data collection would complicate the research and evaluation questions. However, it would provide some help in addressing the question of where problems occur along a continuum from initial acquisition to independent practice, allowing further investigation of what events or conditions mediate skill use.

In summary, while the findings from this study are not conclusive, this program evaluation provided the opportunity for the researcher to develop and evaluate an academic support skills curriculum, and identify critical questions for future program development and evaluation. To date, no academic support skills curriculum for adolescents with ADHD exists. There is still much to be learned about the effects of support skills intervention. This study provided useful information to extend and better evaluate future treatment programs.

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Appendix A

Self-monitoring Checklist

Name: _____   Date: _____

Directions: Each time you violate one of the classroom rules, put a hash mark in the appropriate column. If you do not violate a rule during an interval, put a star in that column.

Classroom Rules	9:00-9:30	9:30-10:00	10:00-10:30	10:30-11:00	11:00-11:30	11:30-12:00
1. I will be respectful of others						
2. I will raise my hand to speak						
3. I will work quietly						
4. I will follow directions						
5. I will participate and complete my work						
6. I will work on my individual goal _____						
Beginning of day: $200 # of rule violations _____ (-$10 each) Bonus points: _____ (+$5 each) DAILY SALARY = _____						

Student Signature   _____

Teacher/Counselor Signature   _____

Parent Signature   _____

** Remember to keep all rule charts in your notebook **

Appendix B

Skills for Academic Success Session One:
Understanding ADHD

Goal: Students will understand how ADHD affects them.

Materials: ADHD in Adolescents Video
                            How ADHD Affects You Handout
                            Famous People with ADHD see link-
                            (http://www.oneaddplace.com/famous.htm)
                            Homework Handout

Introduction:
Leader explains to students that the purpose of today's session is to help them understand
how ADHD affects them at home and school.

Brainstorming activity:
Divide students into teams and pick one student on each team to be the leader and write
things down. Give them 3 minutes to write down as many different things as they can
about ADHD (e.g., what it is, what it means to them, anything else that comes to mind).
Leader reminds students that this is a brainstorming activity, and students should be
allowed to share thoughts without any evaluation or negative commentary from their
peers.

The teams then share what they came up with, and the leader writes the shared comments
on the board as they are discussed. During this group discussion, the leader should check
with other teams to see if they had a similar response or whether they felt differently.
Leader should try to reinforce any shared concerns and respond in an accepting manner to
their responses as long as they are clearly genuine. At the same time, the leader should
identify any misconceptions students may have for later discussion.

ADHD in adolescents video:
Watch ADHD in Adolescents, by Howard Schubiner. Leader asks students for their
comments and questions, whether any of this is new information for them, and how well
it fits with what they have been told or read before.

Review brainstorming list:
Leader asks students to look at the list on the board and identify any of the things that
they would add or delete now that they've seen the video. Leaders should be sensitive to
distorted beliefs about what ADHD means, (i.e., that they are dumb, abnormal, etc.). It is
important for the leader to listen to students and take their opinions seriously, because
their ideas may have been discounted by other adults in the past.

If questions or comments do not come up spontaneously about medication, leader asks students what they think about taking medication for ADHD, reminding them before they respond that they do not need to share whether they take medication or not. The point of asking is to assess students' concerns and clarify any misconceptions that arise.

How ADHD affects you - areas of difficulty:
Pass out handout and have students complete individually with counselors circulating to assist as needed.

Then, the leader reviews each item out loud and asks students to raise their hands (or some other nonverbal signal like thumbs up) to indicate if they checked each item. If students appear to feel uncomfortable sharing, the leader can ask students to put their heads down and raise their hands anonymously. The leader tallies the number of students who identified each item, and then points out which ones seem to be the most common for the group. Note: The point of this activity is to normalize ADHD-related difficulties within the group.

Strength identification activity:
Ask students to identify some things they are good at, positive affects of having ADHD, or coping skills they have learned. Alternative presentation strategy - describe a person with positive characteristics associated with ADHD and a person without them and ask students if they think the person has ADHD or not.

Suggested strengths:
- Using energy and enthusiasm in positive ways to run, play sports, or dance. You may be a good athlete.
- Using creativity, curiosity, and imagination to do things in ways that other people cannot (recall famous people). You may be an artist.
- Using good sense of humor to make others laugh.
- Using sensitivity and caring to be aware of others' feelings and be a good friend.
- Being better able to cope with problems because you may have had to deal with difficult things from a young age.

Pass out list of famous people with ADHD or Learning Problems -
Beethoven, Robin Williams, Dwight D. Eisenhower, Prince Charles, Alexander Graham Bell, Walt Disney, Tom Cruise, Leonardo da Vinci, Wright Brothers, Mozart, Albert Einstein. This is simply for students' information. Leader suggests that students share this handout with their parents.

Collage poster activity:
Students create a poster depicting strengths they identify in themselves and others who may have ADHD. Leader provides magazines for students to cut-out of as well as having them write down one or two of their own strengths on strips of paper and paste around the outside of the poster. The goal of this activity is to enhance positive self-identity, incorporating ADHD awareness.

Homework:
Students should take home their completed How ADHD Affects You Handout. The assignment is to write one thing that has been difficult for them because of ADHD. Then write one positive way ADHD has affected them, or how they have overcome a difficulty.

Leader Information
(not to be distributed or used directly with students)

Leader should review this information before the group so appropriate responses can be made to any questions or misconceptions that arise using language students will understand.

ADHD is a disability involving paying attention, acting before thinking, and feeling restless.

Extreme of normal behavior:
Everyone has trouble listening to teachers, getting work done, and sitting patiently through lectures at times. With ADHD, these things probably happen a lot more, have usually been around for a long time, and happen in lots of different situations.

Impairment:
These things may really get in the way of being successful in school as well as in getting along with family members and friends. They may also affect how you do in sports or how you feel about yourself.

Prevalence:
About 1 out of every 20 kids, 5% of all kids everywhere, or over one million in the United States, have ADHD. Both boys and girls can have it, although more boys are identified than girls. Some kids just have an attention deficit without hyperactivity (although both are considered subtypes of ADHD).

Course:
ADHD usually lasts a lifetime but changes as you get older and mature. In particular, as you become a teenager the restlessness might change from being in your body to being a feeling you have. However, inattention and impulsivity often continue.

Cause:
Most kids get ADHD just like they get other characteristics like the color of their eyes or how tall they are - it is inherited. Researchers are doing studies to try to identify which genes might be involved. This means that it is possible that your parents or other family members have ADHD, even if they don't know it. It also means that if you have kids one day, they might have ADHD too.

ADHD does not mean you're bad, crazy, lazy, don't care about things, or aren't as smart as anyone else. ADHD is not your fault, your parent's fault, or your teacher's fault. At the same time, ADHD is not an excuse, it's a challenge. You are still responsible for your actions, even though you may have to work harder to control them.

Medication-related questions:
Describe how chemicals in the brain (neurotransmitters) don't operate efficiently in the brains of people with ADHD. This is like not having enough brake fluid in your car -

when you press the brakes you can't stop. When an idea pops into the mind of a person with ADHD, he doesn't stop to think about whether it's good or bad before he does it, because the stop and think chemicals in the brain don't work well.

Although a variety of behavioral and educational interventions have been found to be helpful in treating ADHD-related difficulties, medication has the greatest support as the single most effective treatment for about 75% of children and adolescents with ADHD. Medication can help you feel more focused and less fidgety. It can help you slow down and make it easier to think before you act. The purpose of medication is for adolescents to be more in control of themselves, not so others can control them.

Most people with ADHD take stimulant medications like Ritalin (Concerta, Metadate) or Adderall. Many of these only have to be taken once a day in the morning so no one at school will have to know if you don't want them to know. Doctors can't tell for sure which medication will work best for you or cause any side effects. Sometimes you have to try different medications at different doses. Just because one medication (or dose) doesn't work well for you doesn't mean that another one won't.

Use the glasses metaphor for how medication may help - some people don't see well; they're born with genes for poor vision and their problems generally continue through their lives. Someone who can't see clearly gets glasses to help them cope. They may need new prescriptions as they get older because their eyes change as they get older. People are also born with genes for ADHD and have trouble paying attention and controlling impulses that often last a lifetime, just like a visual impairment. When people put on glasses, they see clearly. When many people with ADHD take medication, they can focus and control themselves better. Learning coping skills and having a good educational plan at school can also help, especially when medication isn't helping or isn't in your body at the moment. There isn't a stigma about wearing glasses and there shouldn't be about taking medication for ADHD.

HOW ADHD AFFECTS YOU

Name _____   Date _____

Directions: Check each item that describes you.

Trouble paying attention/focusing on one thing
___ Daydream in class
___ Procrastinate on homework and chores
___ Come to class unprepared
___ Turn in assignments late
___ Don't write down assignments
___ Locker is a mess
___ Room is a mess
___ Have the best intention to do something, but get distracted along the way
___ Don't get class work done because you're thinking about what you are going to do
     after school or talking to your neighbor
___ Study for exams at the last minute
___ Tell your mom you'll do something "in a minute" and then completely forget about
     it
___ Start to organize your notebook or desk but can't decide what to do first
___ Read the same paragraph over and over again because you can't remember what it
     said
___ Start a hobby or project but quit half-way through
___ Always late for things
___ Make comments in a conversation with friends that were related to something they
     talked about several minutes ago
___ Always losing or misplacing assignments, notes, keys, etc.

Trouble thinking before doing (impulsivity)
___ Do whatever pops into your mind before thinking about the consequences
___ Blurt things out
___ Rush through your schoolwork
___ Make careless mistakes
___ Get frustrated easily
___ Have trouble waiting for things
___ Feel bored a lot, seek out new and exciting experiences

Restlessness
___ Can't stand sitting through long lectures or being in a desk for a long time
___ Feel restless
___ Fidget with things
___ Tap foot, pencil, or fingers all the time
___ Talk nonstop
___ On the go all the time

HOMEWORK HANDOUT

Name _____   Date _____

Reread your completed handout – How ADHD Affects You – and answer the following questions.

1. Write one thing that has been difficult for you because of ADHD. Consider school, family, friends, or your feelings about yourself.

2. Write one positive way ADHD has affected you, or how you have overcome a difficulty.

Appendix C

Skills for Academic Success Session Two:
Learning Strategies

Goal:　　　　Students will identify their learning strengths and weaknesses.

Materials:　　Learning Strategy Strengths
　　　　　　 Learning Strategy Needs
　　　　　　 Homework Handout

Introduction:
Leader explains to students that the purpose of today's session is for them to begin to identify their learning strengths and weaknesses (how they learn best, and things they do that get in the way of their learning).

Group discussion:
Leader should create a grid on the board to list best and worst classes and why. Either a counselor or a student volunteer can fill this in during the discussion. Emphasize common factors that seem to help or hinder their academic success.

Ask students what their best classes were during the last school year. What helped them do well in those classes? Some examples to help facilitate the discussion are listed below:
- working in groups
- doing homework
- listening to the teacher
- liking the subject
- having a good memory
- being motivated to get a good grade
- having friends help
- the way the teacher presented information

Ask students what their worst classes were during the last school year. What got in the way of them doing well in those classes? Some examples to help facilitate the discussion are listed below:
- not being able to paying attention
- not reading the textbook or other assigned readings
- not being able to stay in seat
- having friends that were distracting
- having to remember lots of new information
- having to do a lot of writing
- not doing homework

Interview activity:
In pairs, students complete the Learning Strategy Strengths Interview. The pairs can conduct the interviews in a quiet place in the classroom. Leader and counselors circulate and monitor pairs, reinforcing appropriate on-task and cooperative behavior.

Learning strategy strengths discussion:
Leader explains that their responses to the interview questions show their learning style strengths. Students volunteer to share strengths with the group. Leader should not common strengths identified.

Learning strategy needs checklist completion:
Leader introduces the Learning Strategy Needs checklist to students as a tool for them to learn more about things that are getting in the way of them being more successful in school. Remind students that in order for this checklist to be useful, they need to be honest with themselves. Provide 5-10 minutes of quiet work time for students to complete the first page of the checklist, with counselors circulating to provide individual assistance.

Homework:
Leader passed out homework sheet, reviews directions, and reminds students to complete and return tomorrow.

LEARNING STRATEGY STRENGTHS

Name _____   Interviewer _____

1. When you are studying, do you need it to be really quiet or do you like some
    background music or other noise?
    ___ quiet
    ___ music/noise

2. Do you like to do projects alone or work with others?
    ___ alone
    ___ with others

3. How would you best study for a social studies test?
    ___ alone
    ___ with a friend
    ___ in a small group
    ___ with a parent or teacher

4. If your teacher assigned a big project, which of the following would you prefer to do?
    ___ make an oral presentation
    ___ tape-record something
    ___ act it out
    ___ build something
    ___ draw something
    ___ write or type something/have someone else type it

5. Are you good at building things?   Y   N

6. Are you good at taking things apart and putting them back together?   Y   N

7. Are you good at doing things with your hands like fixing your bike or needlepoint?
    Y   N

8. Do you like listening to stories?   Y   N

9. Are you good at learning words to songs?   Y   N

10. Which of the following do you like to do?
     ___ read
     ___ write
     ___ do math
     ___ do art projects
     ___ sing
     ___ dance
     ___ play sports

11. Is it easier for you to learn
    ___ when someone explains something or
    ___ when someone shows you?

12. If you have to give directions to somewhere or explain something to someone, is it easier for you to
    ___ explain and tell them or
    ___ draw a map / write it down?

13. What do you remember better?
    ___ things you read
    ___ things you talk about in class

14. Which of the following help you learn (check all that apply)?
    ___ reading out loud
    ___ saying words silently inside your head while reading
    ___ using your finger as a pointer or a piece of paper or covering up part of the page
    ___ writing things down
    ___ drawing pictures or diagrams of things
    ___ making flash cards
    ___ visualizing things in your head (i.e., seeing the word to help spell it)
    ___ watching the teacher's mouth while he/she talks
    ___ using songs or music to remember things
    ___ walking around the room or otherwise moving

LEARNING STRATEGY NEEDS

Place a check by each of the items you think you NEED IMPROVEMENT.

Homework
_____ Using an assignment book every day
_____ Doing homework in a non-distracting, quiet place
_____ Prioritizing what homework assignments should be done first
_____ Handing in homework on time
_____ Spending enough time on homework
_____ Using a calendar to plan for long-term assignments

Organization
_____ Keeping my notebooks, papers, study area organized and accessible
_____ Using a calendar or planner to keep track of appointments
_____ Keeping track of grades I earn by writing them down in one place
_____ Bringing home materials needed for homework
_____ Keeping backpack organized

Test Preparation and Studying
_____ Spending enough time studying
_____ Starting to study early enough to prepare for a test
_____ Studying in ways I learn best (i.e., in groups, at a good time of day)
_____ Using specific strategies to memorize information (silly sentences, visualization, word association, etc.)
_____ Memorizing important information

Reading
_____ Identifying main ideas and details in what I read
_____ Understanding what I read
_____ Paying attention while I read

Completing Work
_____ Making sure I understand the directions before starting
_____ Doing my work carefully
_____ Using neat handwriting
_____ Checking for mistakes when I'm done
_____ Staying focused on my work instead of other things
_____ Finishing in the time I'm supposed to

Teachers
_____ Asking teachers if I don't understand something
_____ Asking teachers if I need extra help or time
_____ Talking to teachers appropriately if I disagree with them

HOMEWORK

Name _____   Date _____

If you were promised a trip to Hawaii with your family and $10,000 of spending money if you got an A on a very difficult test (like a social studies test covering the last four chapters with lots of information and stuff to memorize and learn)…

1. How you would make sure you knew what was most important to learn?

2.   When and where would you study?

3. How would you study?   (Hint: Include your most effective learning strategies).

Appendix D

Skills for Academic Success Session Three:
Homework

Goals: Students will learn to problem-solve homework-related problems.
                Students will generate steps they can take to achieve homework-related
                goals related to the parent homework contract.

Materials: Homework Problems Group Activity Worksheet
                Homework Contract – Student Worksheet

Homework strategies:
Leader asks students to identify some problems they may have experienced in the past
that have made it hard to be successful with homework.
Some examples to help facilitate the discussion are listed below:
- not remembering to bring home books
- forgetting assignments
- getting distracted while working
- rushing through things
- not putting homework away in the correct place
- not asking for help if they don't understand the assignment
- asking for too much help
- procrastinating
- doing homework at a bad time
- not having a homework routine

When a student volunteers a problem, the leader asks other students who have had this
problem also to raise their hands. The leader lists each problem on the wipe board, and
writes next to it the initials of each student who acknowledges as a problem. Leader asks
students of the consequences of doing/not doing each of these things.

Homework problem-solving:
Divide students into pairs or small groups. A note-taker and a spokesperson should be
identified. Have students work together to come up with solutions to the following
common homework problems. Leader passes out a Homework Problems Form (one per
group) and instructs students that their solutions should be as specific as possible and
should be different for each solution. Provide two minutes per problem, with one group
member to writing down the group's solutions. The leader then asks each spokesperson
to state their best solution. The leader should add any good strategies that have been
overlooked.

Homework contract:
Leader reviews the following information with students. So far, parents have identified homework-related goals through a discussion with the students. Parents have identified the things they plan to ask teachers and the school to do in the fall to help them be more successful. During the parent meeting this week, parents will be listing ways in which they can help support homework at home. Next week, students will attend the parent workshop to complete their homework contract with their parents. Today, they will be writing down things they can do to work on their homework-related goals.

Homework-related goals:
Leader asks students about the benefits of setting homework-related goals for next year. Some examples to help facilitate the discussion are listed below:
• motivates you to do your best
• gives you something specific to work towards
• reminds you to think about the future
• helps you to be more successful in school

If students are having difficulty seeing the benefits of setting homework-related goals, and see the goals as things their parents and teachers want them to do, the leader can remind that that they will earn some kinds of rewards at home for achieving goals.

NOTE: Students should be familiar with the concept of goals from working on individual goals during the program. The leader may want to briefly review the idea of needing steps to help achieve goals. Steps help plan out exactly what needs to be done so that goals will be reached. Steps refer to what students are doing in the short-term in order to meet their goals in the long-term.

Example activity:
The leader presents example of a Homework Contract – Student Worksheet with goals listed but no student steps completed. The leader asks students for suggestions of specific steps, with parent and teacher support, to achieve these goals. Counselor fills these in on the poster or overhead transparency. Suggestions (for reference only) are as follows:

Goal: Bringing home assignments and materials

Steps: Write down assignments from the board every day before leaving class
              Write them down in assignment book that I will keep in my notebook
              Place any assignments to be done in "To Do" folder
              Make a list of all the materials I need to bring home

Goal: Understanding homework.

Steps: Read over what I have written to make sure I understand it
              Ask the teacher about anything that doesn't make sense to me
              Call a designated study buddy in my class if I don't understand something
              Ask my teacher the next day for some time to help me with my questions

Goal: Completing homework

Steps: Do my homework at the big desk in the den
      Start after a 30-minute snack break when I get home from school
      If I start to get distracted, I will take a short break
      I will start homework without an attitude when reminded
      I will place completed homework in my "Done" folder

Completion of homework contract – student worksheet:
The leader passes out each student's draft copy of the homework contract their parents are completing in the parent workshop. Students then copy the goals listed on their homework contract onto their worksheets. Students generate ideas for specific things they can do (or steps they can take) now in the summer program and at school this fall to help them achieve their goals. Not all spaces have to be completed. Additional lines can also be added as needed. Students should refer to their Learning Strategy Needs checklist for specific ideas of things they might need to include.

Homework:
Homework is to review the Homework Contract - Student Worksheet with parents and get their signature.

HOMEWORK PROBLEMS
Group Activity Worksheet

1. Problem: When I get home from school, I can't remember which homework I am supposed to do.

   Solution:

2. Problem: When I get home from school, I have forgotten the books I need to do the assignment.

   Solution:

3. Problem: I don't always understand the work, so I can't do the homework.

   Solution:

4. Problem: Sometimes it seems like there's too much to do, and I feel overwhelmed and can't get it all done.

   Solution:

5. Problem: I work too slowly or get distracted, so I don't always finish.

   Solution:

6. Problem: After I get to school, I can't find my work even though I've done it.

   Solution:

HOMEWORK CONTRACT
STUDENT WORKSHEET

Name: _____   Date: _____

Goal #1: _____

    Steps:

      _____

      _____

      _____

Goal #2: _____

    Steps:

      _____

      _____

      _____

Goal #3: _____

    Steps:

      _____

      _____

      _____

Goal #4: _____

    Steps:

      _____

      _____

      _____

_____   _____   _____
Student Signature   Counselor Signature   Parent Signature

Appendix E

Skills for Academic Success Session Four:
Organization

Goals:　　　　Students will identify and problem-solve common organization problems
　　　　　　　(especially with notebook and backpack organization)
　　　　　　　Students will identify characteristics of organized study areas
　　　　　　　Students will practice making a list of things to do to get ready for school

Materials:　　Homework To-Do List

Role-play:

Leader introduces the importance of organization through a counselor role- play. The role-play can be ad-libbed and expanded on, but a sample skit is below:

One counselor (who has been out of the room), arrives in a very disorganized state (shoes untied, shirt untucked), acting like a student late for class. The leader (acting like teacher) asks why he was late, and he explains he set his alarm but hit the snooze button, then couldn't find his shoes or gym clothes. The teacher asks him if he at least brought his social studies report. The student opens his book bag stuffed with papers and other unnecessary things and goes through everything looking for it. While he's looking, he comments that he knows it is in there because he put it in there this morning at 2 am when he finally finished. When teacher asks why it didn't get done until the last minute, he says that he kept thinking about it, but didn't realize how much time it would take. When he finally finds it, it is crumpled and when the teacher looks at it notices that it does not include a list of references. Teacher then says that since he's late he's missed the test and will have to stay after school to do it. Student says "Oh no, I forgot about the test!"

Discussion:
Following the skit, the leader ask students what problems they noticed with the role-play student's organization and what solutions they might suggest. These problems and solutions are listed on the board in two columns and should include specific examples in these areas:
 * backpack organization - clean out at least weekly
 * notebook organization (the leader asks for a volunteer to review the notebook organizational system used in the summer program)
 * planning ahead for projects/time management - start early and do a bit at a time, get things ready the night before school
 * organizing clothes at home – have a set place for shirts, pants, shoes
 * using assignment book to write down directions for assignments and dates of tests

The leader then asks the following questions to facilitate a group discussion on organization:

What does it mean to be organized?
- Having a system for keeping things
- Using strategies to remember things

What are the benefits of being organized?
- Knowing where things are
- Not losing things
- Not wasting time looking for things
- Being on time and not getting in trouble

The leader asks how many students checked one of the organization skills on the Learning Strategy Needs Handout during session two as an area that need improvement. Students are asked to share what organizational skill areas they need to improve.

The leader stresses this important point - some students are naturally organized, other students need to learn and practice organizational skills. Being organized is one of the most important things you can do to be a successful student.

Group discussion:

The leader asks students to summarize the characteristics of a well-organized study area. Some examples to help facilitate the discussion are listed below:

- contains the needed materials (pens, pencils, dictionary, thesaurus, calculator)

- has no extra materials (magazines, pets, TV, radio)

- has a comfortable but straight-backed chair and flat working surface

List-Making:

Leader reminds students of how late the counselor in the role-play was to school and asks students how being late can cause problems (might miss important information, might forget something, may feel stressed).

Leader suggests that one way to be better organized in order to get somewhere on time with everything you need is to make a list and put it somewhere handy where you can see it every day.

Leader shares a previously prepared written list of what she does to get to the summer program on time every day. This example should have everything that needs to be done, as well as the time it should be done by.

Homework:
Students should make a list of all the things they need to do to get ready in the morning for the summer program.

HOMEWORK
TO-DO LIST

Name _____   Date _____

Directions: Write down all the things you need to do to get to the summer program on time in the morning, starting with the time you need to wake up. List everything in order until the time you arrive. You may have more or less than 10 things to do.

What I Need to Do

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

Appendix F

Skills for Academic Success Session Five:
Time Management

Goals: Students will learn to estimate time accurately.
              Students will learn a strategy to prioritize tasks.
              Students will develop a weekly schedule to optimize homework time.

Materials: ABC Priority Handout
              After School Activity Planning Sheet
              Weekly Schedule Sheet

Introduction:

The leader introduces time management as an example of an organizational skill (i.e., it is a way to organize your time). Review poor time management examples from counselor role-play (e.g., procrastinated on social studies project, then didn't know how long it would take, got to school late).

Leader asks students if these kinds of things ever happen to them – have them raise hands to indicate yes. Suggest that the first thing they need learn in order to manage time better is to be able to estimate how long something will take to complete.

NOTE: Because several activities during this session involve estimating time, the leader may want to have students remove their watches.

Time estimation activity:
The leader tells students that they are going to estimate how long a minute lasts. Students put their heads down on the tables, and then raise their hand when they think a minute of time has passed. A counselor records the real time each student indicates. The results are shared with the group.

Prioritizing:
Leader reviews the following information with students. When talking about organizing your time, it is important to talk about prioritizing. What does it mean to prioritize? (do important things first, helps you to pick which things should be done first, lets you do a few things at a time)
Introduce the following model:

- A = Must do today or I'm dead meat

- B = Important, but don't touch it until A's are done

- C = Will probably put off unless I'm having a great day

ABC prioritizing activity:

Leader reads out loud the following scenario to students: You get home at 4:30 on Monday afternoon. You need to feed the cat, finish your math homework, read a few pages for your book report due next month, study for a Spanish test on Tuesday, make plans to go to the movie Saturday afternoon, look for your friend's sweatshirt in your room, call your grandmother and wish her a happy birthday, have your parents sign a permission slip to go to the planetarium, and empty the dishwasher.

Leader asks students to prioritize the activities. An A, B, and a C list are generated as a group activity.

Weekly scheduling:
Leader reads the following to students. To help you schedule your time wisely outside of school, it is also important to set priorities. Let's look at this weekly schedule sheet and talk about strategies for scheduling your time, making sure that homework and study time are prioritized. Leader passes out After School Activity Planning Sheet. Students make a list of everything they will need to do after school during the school year. They should also add when each activity must be completed by, and the length of time each thing will take to complete. To help students with this exercise, the leader asks the following questions as students make their lists:

- What time do they get home from school?
- What other activities (sports, clubs) do they do and when?
- Based upon these limitations, when is the best time for homework?
(Emphasize that earlier in the evening is better than later and that homework time could be scheduled in parts to allow for breaks. Also consider a time when there are likely to be the fewest distractions to studying).
- How long does homework usually take?
(Middle school students should schedule one-hour minimum. If they do not have accommodations it could take more but should be no more than 2 hours. Note that this time does not include breaks – they may want to schedule two half-hours rather than one hour).
- Are there any other chores or things they have to do around the house?
- When does their family usually eat dinner?
- What time do they start getting ready for bed?
- When will they have free time to hang out, watch TV, call their friends?
(Emphasize that it is better to schedule some free time than to have it come up and take the place of other important things.)

Students then write an A, B, or C by each item indicating the priority of each item.

Weekly scheduling:
Now students complete the Weekly Schedule Sheet using their ABC priority information from the After School Activity Sheet. Counselors provide markers during this activity, so that students can color code activities by priority (i.e., A's in red, B's in blue, C's in green). Some students may also want to include picture cues rather than print only.

The leader reminds students that they have a second blank schedule sheet, so that they can modify/create a new schedule in the fall based upon specifics they may not know now. The leader asks students how using a schedule could help them during the fall. Where can they keep it so they will be sure to use it?

Leader emphasizes that the purpose of this activity is to help students better manage their time outside of school, making sure that homework and study time are prioritized.

Homework:
Students should review the After School Activity and Weekly Schedule Sheets with a parent and get them signed.

ABC Prioritizing

You get home at 4:30 on Monday afternoon. You need to feed the cat, finish your math homework, read a few pages for your book report due next month, study for a Spanish test on Tuesday, make plans to go to the movie Saturday afternoon, look for your friend's sweatshirt in your room, call your grandmother and wish her a happy birthday, have your parents sign a permission slip to go to the planetarium, and empty the dishwasher.

Prioritize these tasks using the ABC model:

A = Must do today or I'm dead meat

B = Important, but don't touch it until A's are done

C = Will probably put off unless I'm having a great day

After School Activity
Planning Sheet

Priority	Task To Do	Estimated Time It Takes	Time It Must Be Done By

Parent signature _____

WEEKLY SCHEDULE SHEET

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
4:00-4:30							
4:30-5:00							
5:00-5:30							
5:30-6:00							
6:00-6:30							
6:30-7:00							
7:00-7:30							
7:30-8:00							
8:00-8:30							
8:30-9:00							
9:00-9:30							
9:30-10:00							
Available time / time used for study							

Parent Signature _____

Appendix G

Skills for Academic Success Session Six:
Tracking Grades and Assignments

Goals: Students will understand the importance of completing homework and
                tracking their grades.
                Students will learn to plan ahead for important due dates and projects
                using a calendar and work schedule.

Materials: Grade Chart
                Making a Work Schedule Handout
                July Calendars

Introduction:
The leader should introduce this topic by stating that they could come up with a number
of reasons not to do homework (seems like busy work, better things to do, might be
hard). Then, the leader asks students why they think they should do homework.
Try to elicit responses including:
- helps you practice new skills
- allows you to check that you understand the information
- builds a habit or working independently
- necessary to make good grades

The leader should emphasize that there is a difference between understanding something
in class and being able to do it on your own at home – this is the difference between
quick comprehension and long-term memory.

The leader asks students to recall a homework assignment from last year that helped them
learn something important. Volunteers share responses with the group.

Importance of tracking grades:
Note to leader: Students with ADHD are unlikely to realize the impact of homework on
their grades in middle school and are probably unaware of what their teachers base their
grades upon. Report card grades are likely to come as a surprise for many students with
ADHD. In addition, many students with prefer getting a zero on a paper they didn't hand
in than a low grade on a partially completed or low quality assignment. While this
doesn't make numerical sense, it makes psychological sense to them in that getting a
paper back with a 60 on it is a bad grade but when they hand in nothing, they do not get a
grade back. So, it is like the zero is a non-existing grade to them.

Grade calculation activity:
The leader asks students to first guess what numerical grade the student would earn in the following example. To make this activity more game-like, have each student write their answer down on a slip of paper and whoever is the closest can earn bonus bucks.

If in your math class, homework counts for 40% of your grade, tests count for 40%, and class participation counts for 20%, what would your grade point average be if you earned these grades:
Tests: 90, 75, 82, 85
Participation: 17/20 possible points
Homework: 0, 0, 50, 0, 75, 0, 0, 25
ANSWER= 69 (F)

Note: If this example is too difficulty, the leader should modify as needed.

Point to stress to students: Even though this student did well on tests and participated in class, he/she did not turn in 5 assignments and the ones he/she did do were incomplete or not very accurate.

Grade-tracking form:
Leader asks how well they were able to predict what grades they made in their classes last year. Were any grades a surprise? If not, how were they able to keep track of their grades?

Leader reads the following information: Keeping track of your grades is an excellent way to be prepared for the end of the grading period. When you keep track of your grades, you can figure out what grade you need to make at the end of the grading period in order to make your target overall grade. One way to do this is to use a grade-tracking sheet. This tracking form allows you to keep track of your homework, class work, quiz, and test grades. The leader passes out Grade Charts for students to use during the next school year.

Planning for projects / Making a work schedule activity:
Leader reads the following information to students: In order to maintain a good homework grade, it is also necessary for middle and high school students to plan ahead for completing long-term projects. This allows the work to be broken down into manageable parts that are done a little at a time.

Leader asks students to raise their hands if they have ever failed to turn in a project or book report on time. Ask a volunteer or two to suggest how they could have gotten it done and turned in on time. Responses will likely indicate something about planning ahead or doing a bit at a time.

Leader passes out Making a Work Schedule handout and reviews directions. The task involves breaking down an assignment to complete a report on the presidents over a one-

week period. Give students 5 minutes to complete independently, then review briefly as a group.

Leader asks how many of them have a large calendar at their house that they use to write down important due dates for school. If they do have one, have them describe the type of calendar and where it is in their house.

Calendar homework:
Leader passes out copies of a blank calendar for July. Their homework is to write in important dates (and times) of any scheduled activities, vacations, or appointments. There should be a line for parent signature, which must be completed to get bonus bucks tomorrow. (Although this will not reflect school events, it will still be good practice).

Making a Work Schedule

Your friend has a big report to do. She has asked you to help her figure out what she should do each day of this week, so she will be done in time. Today is Saturday, and the report is due next Friday. She has one week to get everything done.
Here is her homework assignment. Next to each day, write what your friend should do.

Read pages 42-60 in the book about the presidents. Write one page about the president that you found most interesting. Write one page on the president about whom you learned many new things. Make a cover for your report. Be sure to write a rough draft and a final copy.

Work schedule for your friend

Saturday_____

Sunday_____

Monday_____

Tuesday_____

Wednesday_____

Thursday _____

Remember: The more you spread things out and do a little at a time, the easier a big job will feel.

Grade Chart

Course	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Report card grade

Appendix H

Skills for Academic Success Session Seven:
Self-Advocacy

Goal: Students will prepare for and practice self-advocacy skills.

Materials: Accommodation List
                  Talking to Teachers Handout

Preparing for self-advocacy:
In preparation for this session, the leader should review screening information for
information on which students have 504 plans or Individualized Education Plans (IEP),
and the types of accommodations and modifications currently being used in the
classroom.

Discussion:
Leader asks students how many of them have a 504 plan or an IEP. A volunteer is asked
to explain these plans. It is not critical to go into the details of the difference between
these plans; however, the leader should emphasize that they are both written plans that
specify certain kinds of accommodations they need to help learn in school.

Leader asks students what an <u>accommodation</u> is, and tries to elicit responses like the
following:
• something your school or teacher does to make it easier for you to learn
• adjusting what you're learning or how they are teaching.

Leader asks students if any of them know what kinds of accommodations they may have
in their plans. Leader shares common examples:
• extended time on tests
• preferential seating
• help with note-taking
• decreased homework assignments

If students are concerned that they do not have an IEP or 504 plan, tell them that their
parents have been learning about these plans accommodations in the parent workshops,
and that they may want to try to get a plan next year if they do not have one already.

Accommodation list:
Leader asks students what kinds of accommodations would help them next year in
school. These accommodations could include things they already receive as part of a 504
or IEP, or other things that they think would help them.

Leader passes out Accommodation List and explains that this list shows some common things that help middle and high school students with ADHD. Other accommodations can always be provided as needed for each of them. Have students read over and check the accommodations that they think would be most helpful to them during the next school year.

Self-advocacy skills:
Leader asks students if any of them have attended a 504 or IEP meeting (or a parent-teacher conference). What was it like for them? Reinforce any indication that students actively participated or used good communication skills. Leader asks students to describe effective ways of approaching and talking to teachers. List these on the board. This list should include the following:
- Find a good time when the teacher is not busy. Ask when a good time to talk is and make sure you don't forget it
- If you have a lot to talk about or think you will forget what you want to say, write it down and bring it with you to talk to the teacher
- Make eye contact – it shows you're paying attention and is respectful
- Even if you don't get what you want, be pleasant and positive. Maybe a compromise can be worked out

Tell students that they are old enough now to start advocating for themselves (telling teachers what extra help they might need and why).

Role-play:
Leader and a counselor role-play Talking to Teacher about Help Needed, using the outline provided.

Talking to Teachers Activity:
Students complete the Talking to Teachers Handout individually, with counselors circulating to provide assistance. After students complete this form, they should divide into pairs and practice this speech, taking turns as teacher and student. Direct students playing "teachers" to respond positively. Counselors circulate to give feedback on content of presentation as well as appropriate communication skills. If student has not given an effective presentation, they should repeat after being given feedback.

Optional activity:
If time permits, some students may wish to volunteer to do this in front of the whole group with a counselor and/or to be videotaped. This role-play could then be shared with parents at the parent workshop.

Homework:
Students practice the Talking to Teachers Handout with a parent and get a signature to indicate that they have done so.

ACCOMMODATION LIST

Paying Attention and Taking Notes in Class
_____ seat near front, away from distractions
_____ teacher gives nonverbal signal to get back on task
_____ photocopy of teacher's lecture provided
_____ allow use of tape recorder
_____ actively involve in lesson by asking frequent questions, writing on board

Completing Assignments
_____ teacher completes weekly home-school note with any missing assignments
_____ teacher gives immediate feedback on work turned in
_____ written contract with teacher
_____ study hall or study skills class
_____ "study buddy" assigned in each class
_____ homework load modified
_____ break assignments down into smaller parts with specific deadlines for each

Organization
_____ extra set of books to keep at home
_____ assignment book checked by teacher or study buddy
_____ mini deadlines provided for long-term assignments
_____ notebook organized weekly with school staff member

Test-Taking
_____ extra time or multiple sessions
_____ testing in distraction-free area
_____ breaks allowed on long tests

Writing
_____ allow printing instead of cursive
_____ allow copying of another student's or teacher's notes
_____ reduce length of assignments
_____ provide for word-processing of most assignments
_____ allow alternate forms of assignments – oral reports, poster, etc.

Other
_____ If restless, allow to stand while working or do errands frequently
_____ "coach" or case manager assigned to check at beginning and end of week
_____ study skills class
_____ schedule classes with harder academics in the morning, with supportive teachers

TALKING TO TEACHERS ABOUT HELP NEEDED

HI MR/MRS X. I WANTED TO TALK TO YOU ABOUT SOMETHING IMPORTANT. IS THIS A GOOD TIME?

 I HAVE BEEN DIAGNOSED WITH ADHD AND I HAVE DIFFICULTY WITH……..

LAST SUMMER I WORKED A LOT ON LEARNING THINGS I CAN DO TO DO MY BEST IN SCHOOL LIKE……

BUT I MAY NEED SOME EXTRA HELP OR ACCOMMODATIONS SUCH AS…….

(IF RELEVANT: I HAVE A 504/IEP PLAN THAT LISTS SOME OF THESE THINGS).

THESE ACCOMMODATIONS WILL HELP ME BY ……….

I WANTED TO MAKE SURE THAT IT WOULDN'T BE A PROBLEM IF I HAVE TO USE THESE ACCOMMODATIONS IN YOUR CLASS.

DO YOU HAVE ANY OTHER SUGGESTIONS ON HOW I CAN DO WELL IN YOUR CLASS THIS YEAR?

WHAT IS A GOOD TIME TO TALK TO YOU IF I HAVE QUESTIONS ABOUT WHAT WE'RE DOING IN CLASS OR NEED EXTRA HELP?

THANK YOU FOR YOUR TIME.

<u>Homework</u>

<u>Name</u> _____ <u>Date</u> _____

I have successfully role-played Talking to a Teacher about Help Needed with a parent.

_____   _____
              Student Signature   Parent Signature

Appendix I

Skills for Academic Success Session Eight:
Goal Setting and Review

Goals: Students will review key points learned in the SAS curriculum.
                Students will set academic goals for the next school year.

Materials: Set a Goal for Yourself Handout
                Review Questions Handout

Goal-setting:
Leader reviews the following information with students: They have practiced setting goals throughout the summer program and have some homework-related goals they will be working on in a contract with their parents. It is also important to think about long-term goals they want to accomplish during the next school year. This could include specific academic goals such as earning certain grades or making honor roll. It could be more generally related to school success such as being more organized, listening in class, taking better notes, cooperating with peers/ teachers. The goal they choose should be related to something they have learned in the summer program and that they need to improve.

Activity:
Students complete Set a Goal for Yourself Handout worksheet individually, with counselors providing assistance as needed.

Personal review:
Leader reads the following information to students: Now that the summer program is almost over, we wanted to review some of the really important things we hope you've learned about ADHD (how it affects you, how you learn, and what kind of help you may need to be successful during this next school year).

Interviewing activity:
Students choose a partner to interview using the Personal Interview Questions as a guide. They do not need to write down these responses, but should be listening carefully and not interrupting At the end of the interview, they should summarize what their partner said, then ask their partner if they were accurate and if they left out anything important. Students then switch roles.

Review game:
Divide students into teams (3-4 students each). If possible, each team should have a bell or something to hit or ring to indicate their response. The leader plays the role of game show host (hamming it up as much as possible). Leader asks questions about Skills for Academic Success content (potential questions below). The first team to respond and correctly answer gets a point. Winning team can earn bonus bucks. Bonus bucks could

also be taken away for poor sportsmanship (e.g., complaining, interrupting, or otherwise not following the rules).

SET A GOAL FOR YOURSELF

My goal for the next school year is _____

_____

What exactly am I going to do to achieve this goal? (STEPS):

_____

_____

_____

_____

I will work on my goal for this long: _____

These people can help me reach my goal: _____

_____

I will evaluate my progress on this goal (how often): _____

If I am not successful in reaching my goal, I will: _____

_____

When I achieve my goal, I will reward myself by: _____

_____

Put this paper up in your room to remind yourself what you are working towards.
Good Luck!

SKILLS FOR ACADEMIC SUCCESS
REVIEW QUESTIONS

What causes ADHD?

What are 3 common difficulties that middle school students with ADHD experience at school?

What is something positive that can come from having ADHD?

Describe two different ways students might study well (i.e., alone/discussion group, quiet/background music, reading out loud/writing things down/walking around).

Name two reasons it's important to keep school-materials organized.

Describe a good system for keeping your school notebook organized.

Describe a well-organized study area.

Describe one way to organize your time and decide what is a priority to be done first, second, and third.

What is one way you can keep up with due dates for long-term assignments?

What can you do so you are able to predict what grades you're going to be getting at the end of the grading period?

Name two specific problems that contribute to homework not getting done or turned in on time.

What is one thing you can do to make sure you know what your assignments are?

What is one thing you can do to make sure you don't lose any homework assignments?

Name one accommodation that could be helpful to a middle school student with ADHD.

Describe a good way to ask a teacher for help or accommodations.

Personal Interview Questions

1. How has ADHD affected your school performance in the past?

2. What are some specific things you already do that help you to be successful in school?

3. What are some specific things you can do to improve your school performance next year?

4. How do you study and learn best?

5. What are some tricks you can use to remember information? How will this help you?

6. What are your goals for the next school year? How do you plan to meet them?

Appendix J

Cooperative Group Work

When I am in a group, I work with group members to complete a project.

Before getting started, I ask myself….

1) Do I understand the directions and goal of the group activity?

If I do not understand, I ask the group members. If they do not know, then I ask the teacher to explain again.

2) Every few minutes, I ask myself…

AM I LISTENING TO THE GROUP MEMBERS?

AM I HELPING IN SOME WAY TO COMPLETE THE GROUP ACTIVITY?

3) At the end of the activity, I complete this sentence…

"I LEARNED THAT…. _____."

Appendix K

How Am I Doing?

Directions: Thinking about the past week, please rate how you have been doing with the behaviors listed below. **Never = 1** **Rarely = 2** **Sometimes = 3** **Most of the time = 4** **Always = 5**

1. I give effective directions by:

a) **making eye contact first**	1	2	3	4	5
b) **giving only one direction at a time**	1	2	3	4	5
c) **being very specific**	1	2	3	4	5

2. I state directions in a positive manner (i.e., give students something to do vs. not to do).

1 2 3 4 5

3. I consistently give Bonus Bucks when a student follows a classroom rule.

1 2 3 4 5

4. I consistently take away Bonus Bucks when a student does not follow a classroom rule.

1 2 3 4 5

5. I wait at least five seconds after giving a direction for the student to comply.

1 2 3 4 5

6. I do not repeat directions more than once before taking away Bonus Bucks.

1 2 3 4 5

7. I appear calm and use a neutral voice when giving a student negative feedback (i.e., taking away Bonus Bucks for a rule violation).

1 2 3 4 5

8. I provide positive reinforcement by:

a) **praising the specific behavior demonstrated**	1	2	3	4	5
b) **being genuine and enthusiastic**	1	2	3	4	5
c) **praising often**	1	2	3	4	5
d) **varying praise statements**	1	2	3	4	5

9. I consistently ignore behaviors that are appropriate to ignore (e.g., pencil tapping, fidgeting, etc).

1 2 3 4 5

10. I frequently provide social reinforcement (i.e., verbal, nonverbal) for a student's appropriate behavior.

1 2 3 4 5

11. I consistently provide specific praise when delivering Bonus Bucks (e.g., "Good job participating and completing your work. You earn $10 Bonus Bucks").

1 2 3 4 5

12. I quickly follow-up with praise for the next positive behavior demonstrated by a student following a reprimand or consequence.

1 2 3 4 5

13. I implement chill out for appropriate behaviors (e.g., aggression, repeated non-compliance).

1 2 3 4 5 or N/A

Appendix L

STP Screening
Part 1: Phone Screen (Program Director)

Date of Contact: _____   Referral Source _____

<u>Contact Info</u>
Child's Name _____   Gender ____ Age ____ DOB _____
Parent Name(s) _____   Relationship_____
Address _____   Phone (h) _____
_____   (w) _____
e-mail _____
School _____   Grade ____ Teacher _____
Phone _____   Fax _____   e-mail _____

May we have your permission to contact your child's school to obtain further information
about how he or she has been doing and any accommodations or interventions the school
is providing?   Y   N
Note: Obtain written release of information at intake appointment.

<u>ADHD Diagnosis</u>
Has your child been diagnosed with ADHD?   Y   N
What subtype (if known)?   _____
Describe major symptoms/concerns:
_____
_____
_____
Who diagnosed your child? (indicate profession as well as name if possible):
_____   When? _____
Is documentation (a report) available?   Y   N
If yes, request copy for parent to bring to intake appointment.

Does your child currently take medication for ADHD?   Y   N
If yes, name(s) and dose: _____
_____
Will he/she be taking this medication during the STP?   Y   N
Note: We encourage children to be medicated during the STP and that there not be

significant changes in their medication regimen during the study if possible.

Comments:

Are there any other significant medical conditions or treatments of which we should be aware?   Y   N
If yes, describe:

PROGRAM DIRECTOR SCHEDULES SCREEN VISIT- PURPOSE IS TO DETERMINE IF THE PROGRAM IS APPROPRIATE AND WILL BE BENEFICIAL.

Academic History

Has your child ever been tested by the school (IQ and achievement)?   Y   N
If yes, request copy.
Has he/she been diagnosed as having a specific learning disability?   Y   N
In what area(s)? _____

Does your child have any learning difficulties (parent opinion, whether or not receives services)?   Y   N
Indicate which area and describe as appropriate:
____ Math computation   ____ Reading Comprehension
____ Math concepts/comprehension   ____ Writing
____ Reading – identifying words, vocabulary   ____ Speech or language
____ Other:

Note: Complete Written Language Checklist at this point. Request 2-3 writing samples and report card when family comes for intake appointment.

Has your child ever been retained?   Y   N   Which grade? _____

Does your child have an IEP or a 504 plan? Y   N   *(Request copy)*
Specify which one and for what:

Do your child's teachers provide any accommodations or academic/behavioral interventions in the classroom? Y   N

Does your child receive any other services from the school (i.e., study skills help, tutoring, etc.)?

Other Parent Comments about school:

Teacher Phone Interview

Note: Written release of information from parent must be obtained prior to contacting teacher. For students with more than one teacher, contact case manager (if possible), or language arts teacher who will be asked to complete questionnaires.

Confirm and request copies of IEPs, 504 plans, report cards, etc. as necessary.

What are the school's greatest concerns about this student?

What accommodations or interventions has the school found to be most helpful with this student?

STP Screening
Part II: Parent Intake (Parent Workshop Leader)

STP STUDENT _____   DATE _____

Note: Parent Workshop Leader should obtain and review Part 1 Screening prior to

completing this interview with the parent.

Current Functioning

How do you feel your child's ADHD affects his/her performance at school? (Inquire about grades, work completion, behavior, etc.)

How does his/her ADHD affect him/her at home/with family members? (Inquire about homework time, family relations, chores, following rules and meeting expectations, etc.)

How does his/her ADHD affect him/her with peers? (Inquire about number of friends, nature of relationships, extra-curricular activities).

How does his/her ADHD affect him/her personally (i.e., self-esteem and mood)?

Note: If parents feel that they may need more information about ADHD in adolescents, offer written material or Barkley video

Comorbidity

Do you have any other concerns about your child besides ADHD? Describe:

If no, has anyone else expressed any specific concerns or has your child received any other diagnosis besides ADHD?

Indicate whether any of the following are frequent problems:
____ Arguing, losing temper, oppositional behavior
____ Fighting, cruelty to others, destroying things, lying
____ Social anxiety/awkwardness/lack of skills
____ Generalized anxiety (frequent worries about a number of things)
____ Depression

Comments:

Clinician Impression of primary and secondary areas of impairment:

Treatment History

Has your child or family ever received counseling, social skills training, or other psychological services? (Inquire about nature of services and perceived benefit).

Does your child take any medications?
(If yes) What and for what purpose?

How well do you feel that your child's current medication(s) are working?
Note: Review services child is receiving from school with parent.

How helpful have these services/accommodations been for your child?

What, if any, difficulties have you encountered in the implementation of these services?

What other services/accommodations do you feel your child may need at school?

If child is not identified to receive any formal services such as an IEP or a 504 plan, what is the parent's familiarity with the nature of these services and how to pursue them? (Note: Provide additional written information as needed).

What is the parent's familiarity with behavioral contracts in general and homework contracts in particular?

STP Screening
Part III: Child Intake (SAS Leader)

STP STUDENT _____ DATE _____

Note: Parent Workshop Leader should obtain and review Part 1 Screening prior to completing this interview with the child.

Tell me 3 things you would like for me to know about you (i.e., hobbies, etc.). What do you enjoy doing in your spare time?

Why do you think you are coming to Duke? (Explain this to them if they do not know).

What have you and your parents discussed about this program?

How were your grades last year? Was this how you wanted to do or what you expected? What subjects are easy for you? Which ones are harder? What do you teachers think you need to work on?

How is homework time for you? How do you do with completing chores?

How do you get along with your parents, brothers, and sisters? What kinds of things do your parents get on you about?

Tell me about some of your friends. What do you like to do together?

Tell me about ADHD and what it means to you.

Other Comments/Impressions

Appendix M

Skills for Academic Success Self-Report Measure

Name:_____   Date:_____

Self-Awareness/Self-Advocacy

   1. I know what it means to have ADHD.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   2. I understand how ADHD affects me in the classroom.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   3. I can do many different things well.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   4. I know what it is that I do that gets in the way of my being successful in school.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   5. I know how I learn best. (i.e., where, with whom, how)

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   6. I have set some goals for myself related to doing better in school.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

   7. Setting goals helps motivate me.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

8. I keep working on my goals even when problems come up or I don't do well.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

9. I feel comfortable talking to my teachers about the help I need in order to be successful in school.

1   2   3   4   5

Strongly Disagree   Disagree   Neither Agree or Disagree   Agree   Strongly Agree

10. In the last school grading period, how often did you talk to a teacher about how

your ADHD affects you in school?

1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

11. In the last school-grading period, how often did you talk to a teacher about specific help you need in order to succeed in school?
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

Homework/Organizational Skills

1. I use good strategies to keep my school notebook(s) and backpack organized.
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

2. When I have a lot to do, I organize my time so that I do the most important things first.
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

3. My study area where I complete homework is organized.
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

4. I do my homework at a regular time each day.
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

5. I write my homework assignments down every day in the same place.
1   2   3   4   5
Never   Rarely   Sometimes Often   Very Often

6. I plan ahead for long-term assignments and work on them a little bit at a time.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

7. At school, I check to make sure I have all my books and materials needed for my homework assignments before I leave.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

8. At home, I make sure I have packed my completed homework assignments in my book bag.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

9. I follow a written agreement with my parents about doing homework.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

Appendix N

<u>CHADD Questionnaire</u>

Teacher Name _____

Student Name _____

Please complete the following ratings to help us identify the student's strengths and areas of concern in the classroom and collect data about the student's academic performance, participation, and behavior.

	Always		Sometimes		Never
1. Brings all necessary materials to class	5	4	3	2	1
2. Completes homework on time	5	4	3	2	1
3. Records assignments consistently	5	4	3	2	1
4. Turns in completed work	5	4	3	2	1
5. Completes long-term assignments	5	4	3	2	1
6. Cooperates/participates in class	5	4	3	2	1
7. Takes notes in class to study	5	4	3	2	1
8. Performs satisfactorily on tests	5	4	3	2	1
9. Relates positively to teachers	5	4	3	2	1
10. Demonstrates a respect for property	5	4	3	2	1
11. Arrives to class on time	5	4	3	2	1

Please add any additional skills, behaviors, or concerns that you feel have an impact on this student's classroom performance and achievement.

Note: From <u>Children and Adults with Attention Deficit Disorder</u> (1996). Adapted with permission.

Appendix O

What is ADHD?
A multiple-choice game

Names: _____ and _____

1) What does ADHD stand for?

   a. Attention Deficit Hyperactivity Disorder
   b. Attending Deficient Home Decorator
   c. Attention Deficit Hydrogen Disaster

2) People with ADHD are usually:

   a. extremely talented
   b. creative
   c. have lots of energy
   d. will try new things
   e. all of the above

3) You can get ADHD by:

   a. eating too much sugar
   b. you catch it like a cold
   c. it runs in families (genes)
   d. your teacher gives you ADHD by being too strict

4) What causes ADHD?

   a. food
   b. where you live
   c. how your brain works

5) How many kids have ADHD?

   a. about one kid in the whole school
   b. about one kid in every class (5%)
   c. about half the kids in your class

Appendix P

Study Space Activity

Look carefully at your pictures of study spaces. Describe at least 3 ways that this space could be better organized. In the columns below, describe what is wrong with the space and how it should be improved.

What is wrong with the space?	What is the solution?

Appendix Q

Assignment Tracking Form

Week # 1	Homework completed and returned	Behavior salary total
Monday	Yes or No	
Tuesday	Yes or No	
Wednesday	Yes or No	
Thursday	Yes or No	
Friday	N/A	

Week # 2	Homework completed and returned	Behavior salary total
Monday	Yes or No	
Tuesday	Yes or No	
Wednesday	Yes or No	
Thursday	Yes or No	
Friday	N/A	

Week # 3	Homework completed and returned	Behavior salary total
Monday	Yes or No	
Tuesday	Yes or No	
Wednesday	Yes or No	
Thursday	Yes or No	
Friday	N/A	

Week # 4	Homework completed and returned	Behavior salary total
Monday	Yes or No	
Tuesday	Yes or No	
Wednesday	Yes or No	
Thursday	Yes or No	
Friday	N/A	