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PERCEPTIONS OF "REASONABLE" ACCOMMODATIONS IN GENERAL EDUCATION FOR SECONDARY SCHOOL STUDENTS WITH ADHD: TREATMENT ACCEPTABILITY RATINGS OF TEACHERS

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Marilyn Mae Higgins

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Harvey F Clarizio
Major professor

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PERCEPTIONS OF "REASONABLE" ACCOMMODATIONS IN GENERAL EDUCATION FOR SECONDARY SCHOOL STUDENTS WITH ADHD: TREATMENT ACCEPTABILITY RATINGS OF TEACHERS

By

Marilyn Mae Higgins

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ABSTRACT

PERCEPTIONS OF "REASONABLE" ACCOMMODATIONS IN GENERAL EDUCATION FOR SECONDARY SCHOOL STUDENTS WITH ADHD: TREATMENT ACCEPTABILITY RATINGS OF TEACHERS

By

Marilyn Mae Higgins

The implementation and success of classroom intervention plans for students with ADHD may be dependent on teachers' acceptance of a plan as reasonable, fair and appropriate to the situation. This study assesses acceptability to teachers of three school-based intervention plans: School-home Notes, student Self-monitoring, and Contingency Contracting. Participants were high school and middle school teachers (grades six through twelve). Teachers reviewed two clinical vignettes of students with ADHD, one with mild behavior problems and one severe. Each vignette was followed by descriptions of three intervention plans. Each intervention plan was followed by a modification of the TEI-SF rating scale (Treatment Evaluation Inventory-Short Form), an instrument designed to rate the acceptability of the intervention plan as a way of dealing with the student's classroom learning and behavior problems. Teachers rated the three intervention plans acceptable and gave significantly higher ratings for School-home Notes than for Self-monitoring. School-home Notes were rated

higher than Contingency Contracting but this difference was not significant. Teachers recognized the difference in severity of problem behaviors described in the student vignettes. The interaction between severity and order of students was significant. Type of teacher, i.e., general education versus special education, had a significant affect on acceptability ratings. Special education teachers report using Contingency Contracting more than others and they evaluate it higher. The order in which teachers received student vignettes had an effect on acceptability ratings. It is clear that general education and special education teachers agreed that assistance would be needed to develop and implement some interventions for students with ADHD in general education. The acceptability of an intervention was affected by the context in which the intervention was presented.

DEDICATION

This work is dedicated to my friends and family who never quit believing
that I could accomplish my goals
and never once asked me, "Why?"
To Mike, Laura, and Tim
with Love from Mom.

ACKNOWLEDGMENTS

I would like to thank the many people who have supported my efforts to return to graduate school and to obtain a doctorate. Their time, energy, resources, and encouragement were the constant support that allowed me to accomplish this task.

I would like to express appreciation to the members of my committee: Dr. Harvey Clarizio, teacher and advisor, who was a part of my graduate training and career development from the beginning; Dr. Walter Hapkewicz, whose calm and friendly manner reminded me that the "storm and stress" I may have been feeling was all a part of the process; Dr. Thomas Koepke who continually helped me refocus my attention on the basic demands of an experimental design; and Dr. Judith Brady whose guidance and patience through numerous weekly meetings brought me from the chaos of my own thinking and attention deficit to help me with the organization and focus for the completion of this work.

Special thanks goes to Dave Buck whose combined knowledge of psychology and statistical analysis and communication skills made him an invaluable resource. Additionally, I want to thank the people whose technical skills kept me on track. I feel blessed to have such highly competent friends and family who served as research assistants, helping me with keyboarding, graphic design, data entry and other shared

computer skills necessary to complete this project. I list them here in alphabetical order as they are all of great importance to me and there is no way to value one above the other. Thank you to Ruth Barton, Rosie Bickert, Laura Higgins, Michael Higgins, Timothy Higgins, Matthew Kolar, Amy Pobst and Mark Reeves.

There is a kind of support that is difficult to name. It came to me through many professional women who went before, paved the path, and helped me to see what was possible for me. To Dr. Rebecca Tift-Barcy, Dr. Judith Brady, Dr. Evelyn Oka, Darlene Robel, and Dr. Martha Whipple. I thank you for your mentoring. It helped sustain me through the difficult times when I was ready to give up. A similar kind of support was there for me in what may seem a very unusual form. I want to thank Master Instructor D. S. Shinn and the students of the TaeKwonDo Academy with whom I found a source of strength, discipline, commitment and nurturing as well as an escape from the mental stress of a doctoral program.

Most of all, I want to thank my parents who helped me believe in myself form an early age and who continued to express their pride in a daughter's accomplishments even when those accomplishments took me down a path not expected of a women of my generation.

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CHAPTER 1

INTRODUCTION

Educators continuously seek better ways to meet the educational needs of students. Teachers in both general and special education, school psychologists and other support personnel frequently work together to intervene in students' lives. They treat problems encountered in the school setting and plan for the individual educational needs of students at risk of school failure (Flugum & Reschly, 1994).

To intervene means to impose a change or introduce something new, a new strategy, approach, or activity, in an already ongoing relationship such as that of teacher and student. The intent of the intervention is to change a relationship, behavior, or internal state of the client or student to achieve a positive outcome (Sandoval, 1993). A common hurdle in the planning and implementation of classroom intervention techniques is a difference of opinion as to what constitutes a reasonable accommodation for an individual student in the general education classroom.

The term reasonable can be defined as answering one or more of the following questions: (a) Can the proposed accommodation be done by the people involved? (b) Does the teacher like the idea? (c) Does it

meet the need of the student? and (d) Does the teacher expect the student to have a positive response to the proposed intervention? Teacher opinion is very important as the implementation of an intervention plan is almost invariably the responsibility of the classroom teacher (Bahr, 1994).

Kazdin (1980) studied the concept of "reasonable" within the larger context of treatment acceptability. He defined treatment acceptability as an overall evaluation of the treatment procedures using judgements by lay persons of whether treatment procedures were viewed as appropriate, fair and reasonable for the problem or client. Kazdin (1980) stated several reasons for evaluating the acceptability of treatment including the fact that for any client, there may be several treatment techniques or combination of techniques that could effectively treat the presenting problem. He developed the Treatment Evaluation Inventory as an instrument that could be administered before the selection and initiation of treatment. The basic assumption being that "treatments viewed by the public as more acceptable than others are more likely to be sought by potential consumers, initiated, and adhered to once they are initiated." (p. 260)

Elliott, Witt, Galvin & Peterson (1984) extended Kazdin's research to apply to teachers' ratings of acceptability of behavioral interventions in schools and varying the type of intervention proposed. Witt & Elliott

(1985) found that consultants such as school psychologists frequently give recommendations for procedures that teachers find unacceptable or at least not very practical due to lack of resources, time demands, or basic philosophical differences with the assumptions and theoretical orientation of the intervention plan. Recent literature continues to support the practice of assessing treatment acceptability during the consultation and treatment design process (Bahr, 1994; DuPaul & Stoner, 1994). Gajria & Salend (1996) refer to treatment acceptability as "a critical dimension for overcoming teacher resistance to implementing adaptations for mainstreamed students." (p. 91).

Purpose of the Study

The study presented here extends previous research by examining secondary school teachers perceptions of the reasonableness of several classroom-based interventions for a select subgroup of adolescents with learning difficulties namely, those with Attention-Deficit/Hyperactive Disorder (ADHD). Teachers read two student vignettes, one describing an adolescent with mild symptoms of ADHD and one who presents as more severe. Three intervention plans and a modified Treatment Evaluation Inventory- Short Form (TEI-SF) for each intervention plan followed each student vignette. The order of presentation of the student

vignettes and the descriptions of interventions was counterbalanced as each had an equal chance of being presented first or second within the larger survey instrument. The goal is to determine which of three school-based interventions is most likely to be accepted by teachers and if teachers' choices change given differing conditions.

Preview of Chapters to Follow

The second chapter addresses the relevance of the concept of treatment acceptability and social validity in recent research. To develop the topic of treatment acceptability, a specific problem in need of treatment, ADHD, is identified and discussed. Research on treatments found effective in ameliorating the effects of ADHD is reviewed with a focus on a specific population effected by the problem, i.e., students in grades 6 – 12. The chapter concludes with a review of research findings on factors that influence treatment acceptability in general and more specifically teacher acceptance of school-based interventions to address the needs of students with ADHD in the middle school and high school years.

The third chapter presents the research methodology. It includes a general description of participant demographics and response rates. There is a discussion of participant selection procedures and safeguards

for confidentiality. The procedures and data collection materials are described and hypotheses stated. An overview of the data analysis plan leads into the fourth chapter and a presentation of the details of the results of the study.

The fifth chapter concludes the work with a discussion of the practical contributions this study makes to the field as well as limitations of the study and suggestions for future research.

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CHAPTER 2

Review of the Literature

Which Treatment, For Which Student, Under What Conditions, Is Most Likely To Be Accepted By Teachers?

There is a growing need for interventions in the school setting that address both the educational and mental health needs of students (Pfiffner & O'Leary, 1993; DuPaul & Stoner, 1994; Hoff & DuPaul, 1998; Nastasi, B., Varjas, K., Bernstein, R., & Pluymert D, 1998). However, similar or nearly equal treatments might not be perceived as equally acceptable to the consumer, i.e., teacher, parent and/or student. School psychologists are often asked to assess students' learning and social behaviors and to recommend intervention plans to address the students' needs. The success of an intervention plan is in a large part dependent on implementation of that plan by the teacher and/or parents. The plan might fail not because it is ineffective but because it is not carried out. The link between assessment of student needs and the intervention planned to meet those needs must be viewed as effective and acceptable by the practitioner who is to implement the intervention if that practitioner usage and adherence to procedures are to be achieved (Mehrens & Clarizio, 1993). Researchers have consistently pointed out that it is not enough for procedures to be effective. Treatment procedures also need to be accepted by the individuals necessary to

implement them (Wolf, 1978; Kazdin, 1977; Witt & Elliott, 1985; Miltenberger, 1990; Power, Hess & Bennett, 1995; and Ervin, DuPaul, Kern & Friman, 1998).

The first section of this chapter focuses on the question: "Which treatment is most likely to be accepted by teachers?" The concept of treatment acceptability is reviewed in general along with the analog methodology that is most often used to assess treatment acceptability. To develop the topic of treatment acceptability, a specific problem in need of treatment (ADHD) is identified and discussed in terms of the negative impact ADHD has on academic performance, social-skills, and intrapersonal functioning. The prevalence of the disorder is presented followed by information on the long-term side effects of ADHD and a justification for providing treatment in the school setting. This first section concludes with a review of the research on treatments found effective in ameliorating the effects of ADHD. Three specific treatment types of school – based interventions are reviewed in depth. These three treatments are Contingency Contracting, School-Home Notes and Self-monitoring.

The second section of this chapter focuses on student characteristics and the question: "Which treatment for which student?" The majority of previous research deals with treatment for ADHD in early and middle childhood. Far fewer studies have focused on treatment for adolescents with ADHD. The present study focuses on adolescence. It addresses normal adolescent developmental issues of middle school and high school students. Predicted learning and mental health outcomes of youth who successfully negotiate issues of adolescence is presented along with the identification of support students

typically need and factors that might interfere with a student successfully negotiating this developmental stage. The topic of ADHD is revisited as a disorder that might interfere with successfully negotiating developmental issues of adolescence with emphasis on functioning in the school setting.

The final section emphasizes the topic of specific conditions that have been found to influence ratings of acceptability. This includes the severity of student behaviors and/or learning problems and characteristics of the one rating the plan as acceptable or not acceptable. The chapter ends with a justification of the variables selected for this study.

Acceptability

Treatment does not exist in a vacuum. Choice or acceptability of a treatment, personal meaningfulness and social significance/validity are important factors in applied research as they connect research results to a social context in which decisions can be made regarding the expected effects, the importance or treatment procedures (Kazdin, 1977; Wolf, 1978; Kazdin, 1980; Robin & Foster, practical value of the expected treatment effects, and the appropriateness of the 1989; Kelley, 1990; Storey & Horner, 1991; Waas & Anderson, 1991; and DuPaul & Stoner, 1994). In 1978, Wolf wrote, "If the participants don't like the treatment then they may avoid it, or run away, or complain loudly. And thus, society will be less likely to use our technology, no matter how potentially effective and efficient it might be." (p. 206). Calvert and Johnston (1990) reviewed the rationale for treatment acceptability research and concluded that it

is a construct in need of further evaluation. They suggested that researchers need to expand the scope of treatment acceptability application to take into consideration nontreatment factors such as the presentation of the treatment information, the type of problem presented that is in need of treatment, the characteristics of the environment and characteristics of the person implementing the treatment.

Kazdin (1980) defined treatment acceptability as, "Judgements about treatment procedures by ...potential consumers of treatment. Judgements of acceptability are likely to embrace evaluation of whether treatment is fair, reasonable, and intrusive, and whether treatment meets with conventional notions about what treatment should be." (p. 259). He developed the Treatment Evaluation Inventory as an instrument for assessing treatment acceptability using an analog methodology which assigns a numeric value to participant responses so that the survey data can be transformed into numeric values for data analysis. The typical treatment acceptability research design requires participants to read a written case description of a client or student who is described as demonstrating a particular set of behavior problems (case vignette). Participants then read a written description of one or more intervention plans that could be applied to the problem described in the vignette. Participants rate the treatment as applied to the problem using a treatment acceptability rating scale. By varying the participants selected, the case vignettes and intervention plans; researchers can evaluate various factors that may influence treatment acceptability. Use of analog methodology to study treatment acceptability

continues to be a viable source of information in recent clinical (Bennett, Power, Rostain, & Carr, 1996; Bihm, Sigelman, & Westbrook, 1997; and Miltenberger & Lumley, 1997), medical (Miller, Manne & Palevsky, 1998; Sinnott et al. 1998), and educational studies (Gajria & Salend, 1996; Nastasi, 1998; Sheridan, 1995).

Clinical and medical studies. Bennett et al. (1996) assessed parents' acceptability of medical treatment for children (ages 5 to 13) with ADHD in connection to counseling feasibility and counseling acceptability. Ratings of treatment acceptability failed to predict client adherence to counseling and medication at follow-up. The researchers suggested a need to assess treatment acceptability at multiple points during the assessment and treatment processes of clinical treatment. Bihm et al. (1997) asked university students to assess treatment acceptability in their study of perceptions of behavioral programs to treat self-injurious behavior in a hypothetical 17-year-old boy with mental retardation. They found a preference for positive reinforcement strategies over all other programs described despite the fact that the treatment outcome information given the raters was identical for all treatments described. Miltenberger and Lumley (1997) also studied acceptability of possible treatments described asking 132 direct care staff (aged 18 – 57) from community agencies to rate acceptability of a time-out procedure and a guided compliance treatment for the aggressive behavior of a 23-year-old man with severe mental retardation. Time-out was significantly more acceptable even though it is a general treatment for many possible problems rather than one designed to functionally address the patient's aggressive behaviors.

Miller et al. (1998) studied treatment acceptability of behavioral interventions recommended for children with cancer. Participants were parents of children on active medical treatment for cancer, pediatric oncology nurses, and parents of healthy children. Participants read a vignette describing a hypothetical child's compliance/noncompliance to medical treatment and five behavioral interventions recommended. They then rated the acceptability of each intervention. Parents of children with cancer rated the punitive strategies as significantly lower in acceptability.

Educational studies. Sheridan (1995) studied school psychologists' acceptance of a consultation style involving student, parents and teachers called conjoint behavioral consultation using treatment acceptability ratings. Gajria and Salend (1996) reviewed the literature on treatment acceptability and found acceptability a critical aspect of overcoming teacher resistance to implementing classroom adaptations in general education. The Power, Hess, and Bennett (1995) study asked elementary and middle school teachers to read vignettes describing five possible school-based interventions for treatment of ADHD. Teachers then rated the acceptability of each treatment type. The researchers found that the daily report was more acceptable than response cost. Behavioral treatments were viewed as more acceptable than the medication treatment alone by elementary teachers although a fairly high number of middle school teachers rated the response cost procedure as least acceptable.

Each of these studies, whether in the medical, clinical or educational setting, assists professionals working with children to make better judgements

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when planning interventions. They help in guiding treatment selection given the unique conditions that may exist for a specific situation whether in the home or at school.

Attention Deficit Hyperactive Disorder: A Problem in Need of Treatment

The focus of this study is on the behaviors of the students described to fit the criteria for ADHD according to the DSM-IV (American Psychiatric Association, 1994). Some of the behaviors described may be similar to presenting behaviors of other mental health diagnoses such as Impulse-Control Disorder: Not Elsewhere Classified, Depression, or Dementia due to General Medical Condition. It is beyond the scope of this study to discuss differential diagnosis. The presenting behaviors describing the two hypothetical students in the study are taken directly from the DSM-IV criteria for ADHD. The intent of the study is to assess teacher acceptability of school-based interventions designed to ameliorate the problems associated with the behaviors described.

Prevalence of ADHD. The estimated prevalence of ADHD is 3 to 5 percent of school-aged children (Rief, 1993) with at least 2 million children in the United States diagnosed with Hyperactivity. Each child may have a different cluster of characteristics that combine to fit the diagnosis of ADHD (American Psychiatric Association, 1994), from the more mild problem behaviors of ADHD: Predominantly Inattentive Type with 6 or more symptoms of inattention such as careless mistakes, easily distracted, often forgetful, loses things and avoiding

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tasks that require sustained mental effort. The more severe behavior problems of ADHD include Hyperactivity and Impulsivity and often include a combination of other factors including Learning Disabilities, Depression, and/or Oppositional Defiant Disorder (American Psychiatric Association, 1994; Richters, Arnold, Jensen, & Abikoff 1996). Not all symptoms apply to each child. Behaviors characteristic of ADHD such as jumping from one activity to another, losing things, not listening to directions, being very active, or somewhat shy and withdrawn may be accepted as normal in early childhood, but as the student grows older these behaviors become much more problematic. Barkley (1995) reports that approximately 35% of the ADHD children have repeated at least one grade in school before reaching high school and more than 40% receive special education programming for learning or behavior problems. Special education eligibility or labeling is not the focus of this study. The focus here is on the learning and social behaviors of ADHD that may interfere with academic success and teacher's acceptance of three specific interventions that have been used to assist students in overcoming the negative effects of ADHD.

Severity of ADHD. Severity is defined as the relationship of the subtype of ADHD to predicted outcomes. The two subtypes presented in the student vignettes in this study are ADHD: Primarily Inattentive Type which has far fewer comorbid psychiatric conditions and ADHD: Combined Type (Barkley, 1997). Students with ADHD that includes impulsivity and hyperactivity combined with inattention are more likely to have anxiety disorders and other mood disorders

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and often are more likely to present aggressive, defiant and oppositional characteristics. Barkley (1997) stated, "Findings from follow-up studies have shown that early hyperactive-impulsive behavior is associated with a greater risk for adolescent delinquency, early substance use and abuse, and school suspensions and expulsions...." (p. 27). It is hypothesized that teachers will give higher acceptability ratings to all treatments when the student described presents the more severe problems of ADHD including hyperactivity and impulsivity in addition to inattention.

The long term side effects of ADHD. If left untreated, the effects of ADHD include a progressive decline in academic achievement, higher incidence of school drop-out, disturbances in peer relationships, low self-esteem, and lower expectations or confidence of success in the future (DuPaul & Stoner, 1994). Hansen, Weiss, and Last (1999) published a 10-year prospective study of 18 young adult men (18 – 26 years of age) who had been diagnosed with ADHD in childhood. They compared these young men with 18 males of similar age who had never been diagnosed with psychiatric difficulties. The young adults with ADHD were significantly more likely than the control group to report additional psychological problems and to have dropped out of high school. The ADHD males also tended to have a greater history of trouble with the law. Babinski, Hartsough, and Lambert (1999) reported similar findings in their 15-year study of 230 males and 75 females. The results show that both hyperactivity-impulsivity and early conduct problems predict a greater likelihood of having an arrest

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record for males but not for females. Children with attention problems only were not at greater risk for criminal involvement. As the body of research grows to document the long term effects of ADHD in adolescence and young adulthood, more studies are needed to find interventions that can be implemented early on that will be effective in helping the student s' social/emotional development and academic achievement.

Justification for Providing Treatment in the School Setting.

ADHD is a mental health diagnosis that by definition ((American Psychiatric Association, 1994) must present clear evidence of clinically significant impairment in social, academic, or occupational functioning. The symptoms of ADHD are frequently observed as lack of consistency in attention to instruction, limited attention for multi-step tasks, moving from one task to another without completion of any one project, talking at inappropriate times, more than average movement about the room such as leaving their seat at the table or their desk at school, not working independently, and carelessness and/or inaccuracy in the work that is done (Barkley, 1995; DuPaul & Stoner, 1994). This disorder negatively impacts a student's ability to meet the performance demands they encounter daily in the school setting as well as routine demands of the real-world for goal directed behavior. DuPaul and Stoner suggest that the lower confidence and expectations for success of the ADHD adolescent compound the general academic decline. It makes sense that interventions for treatment of the negative effects of ADHD would be classroom

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based to be near in place and time to where so many performance demands are made and desired behaviors are expected. Possible treatments include classroom modification and behavior interventions to help the student develop the necessary organization skills, self-regulation, and response inhibition. In the early stages of learning a new skill or stopping an old habit, the consequences must occur as quickly and frequently as possible following the response. Thus, if the identified problem behaviors occur during the school day, it is highly recommend interventions take place within the school setting (Goldstein & Ingersoll, 1993). Barkley (1997) refers to this as the "point of performance" and states that "...the most useful treatments will be those that are in place in natural settings at the point of performance where the desired behavior is to occur." (p. 338).

Gresham, Elliott and Black (1987) surveyed teacher rating of social skills important for success in the classroom using the Social Skills Rating Scale (SSRS) of Clark, Gresham, and Elliott (1985). The teachers rated the following among the top ten most important social skills for students (a) completes classroom assignments in required time, (b) asks for help, (c) follows instructions, (d) uses time productively, and (e) produces correct academic work. Students also valued improved academics. When the researchers asked students if they would rather be (a) a star athlete, (b) a straight-A student, or (c) the most popular student, both boys and girls in sixth through eighth grades said they would rather be a "straight-A student". Thus it would seem that interventions that target improving student time-on task and academic

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functioning, i.e., assignments completed, on time and accurate, would be valued by most classroom teachers.

Homework completion in general is often a major problem for families of children and youth with ADHD. Homework completion and accuracy are more than just a source of irritation for students, teachers, and parents. Homework has been shown to contribute to improved student achievement across ability levels (Keith, 1982; Keith & Page, 1985). Recent studies using homework as the dependent variable have looked at the effects of specific interventions such as School-Home Notes, response cost and/or Contingency Contracting, self-instruction training, parent training programs, goal-setting, and combinations of the above (Harris, 1986; Maag, Reid, & DiGangi, 1993; Miller & Kelley, 1992, 1994; Ollendick, 1982; Olympia, Sheridan, Jenson, & Andrews, 1994). The Miller and Kelley (1994) study involved four parent-child dyads with fourth through sixth grade students using a combination of multiple baseline and reversal designs. Parents rated the quality and accuracy of their students' homework; observers rated "on-task" behavior. A parent-training component included use of goal-setting and performance feedback for the students' homework behavior. Total time spent on homework did not change but time on task increased by 11 to 28% and work improved from between 64-71% correct before treatment to 90 - 92% accuracy during treatment. However, in three of the four students, accuracy rates returned to the lower baseline level when treatment was withdrawn.

Olympia et al. (1994) studied homework completion and accuracy with a

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group of sixth grade students having difficulty with mathematics. This study used a combination of self-management, two treatment conditions of either self-selected goals or teacher-selected performance goals, and group contingencies giving the students more control over their homework behavior than in the Miller and Kelley (1994) study. The self-management program consisted of four components: Self-monitoring, self-instruction, self-evaluation, and self-reinforcement. All students showed improved homework completion and accuracy rates during the treatment phase. Students who self-selected performance goals performed better than the students using teacher-selected goals. Student performance in math improved and, concurrently, disruptive behavior decreased. Once the treatment ended, 12 of the 16 students had homework completion rates that dropped to pre-treatment levels but only four of the 16 showed decreased accuracy according to data collected in the post-treatment phase.

A comparison of these studies suggests that the more a student is involved in the treatment plan, the greater the likelihood of positive treatment effects. Thus, it seems that students with ADHD might demonstrate improved classroom performance if they were included in problem identification, goal setting, and self-evaluation.

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School-Based Interventions Used to Assist Students with ADHD

Theory and Practice

The three intervention strategies presented in this study's treatment acceptability survey are Self-monitoring, Contingency Contracting and School-Home Notes. Each of these intervention techniques requires an understanding of the individual student with ADHD in addition to an understanding of the "normal" processes of cognitive, affective, and social development. The principles of behaviorism, cognitive development, cognitive-behavior modification and social-learning theory combine to contribute to the understanding of the intervention techniques as something more than a single theoretical orientation forming the basis of each of the three intervention strategies.

Sandoval (1993) described school-based interventions as basically belonging to one of three types: (a) changing instructional techniques, curriculum modifications and attempts to modify the students classroom behavior; (b) attempts to improve a student's self-perception and self-understanding; and/or (c) modifying the environment of the school and/or family system in which the student must function. The three intervention plans included in the present study all have the goal or desired outcome of changing the student's behavior in the classroom to improve learning behaviors. Across the three interventions, there is a varying degree of emphasis on changing the student's self-understanding. While enhanced self-understanding might be achieved during implementation of

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any of the three interventions, Contingency Contracting places the least emphasis on self-understanding. Both Contingency Contracting and School-Home Notes do help identify expected behaviors and give the student comments as to achievement of desired goals. The Self-monitoring plan is specifically designed to enhance student self-understanding and is built on the assumption that "reactivity", a change in behavior as a result of improved self-understanding, will occur and that the student will choose to improve classroom and learning behaviors (Mace & Kratochwill, 1986). None of the interventions described is directed at changing the environment or system in which the student must function. However, it could be argued that any direct involvement of the teacher or parent in changing the student's behavior could affect relationships and thus in some way affect the environment in which the student functions.

All three interventions described are presented as primarily positive (non-aversive) treatments that focus on solving a problem related to the student learning behaviors although the possible response cost procedure of Contingency Contracting and School-Home Notes could be seen as somewhat aversive. No change in instruction, curriculum, basic materials or course work is required. Each could be implemented independently by the classroom teacher or in consultation with school support staff. Each intervention described should take less then two hours of teacher time to (a) consult with students, parents, and/or other staff, (b) develop the plan, and (c) create the individualized forms.

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Students (and parents in the case of School-Home Notes) are provided with increased information on teacher expectations, student goals, and performance criteria. The essential difference between the three intervention types is the locus of responsibility for delivering the consequences or responding to the student's problem behaviors. In the Contingency Contracting model, the teacher maintains control of delivering the consequences for student behaviors. In School-Home Notes, the parents are responsible for providing consequences. In Self-monitoring it is the student who is expected to develop an awareness of the effects his/her behavior has on others and to react by changing the behavior to obtain more positive results.

Early studies reporting on implementing interventions for students with ADHD within the school setting focused on determining if treatment in the school setting could be effective. Kirby and Shields (1972) found when one seventh grade male student was provided with an academic program that improved his response rate in mathematics, the student's disruptive behaviors decreased. Building on that idea, Keith and Page (1985) found that homework completion among high school students contributed significantly to improvement in school performance in general and across ability levels. Studies that are more recent have focused on treatment goals of improving student self-control and on-task behavior. Dobson (1988) presented a review of cognitive problem-solving therapies to address maladaptive behaviors and dysfunctional ways of thinking.

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Pfiffner and O'Leary (1993) reviewed both home and school based strategies to address hyperactivity levels in elementary school age children. Whalen and Henker (1998) reviewed therapies for hyperactive children at the elementary and middle school level often directed at the goal of increasing compliance, decreasing restlessness, aggressive behaviors and social withdrawal in addition to improving academic achievement. However, none of the studies cited above included assessment of treatment acceptability.

University of California-Irvine Child Development Center

Prior to the most recent Federal reauthorization bill, the Individuals with Disabilities Education Act of 1997, about 45 to 50% of elementary school aged children diagnosed with Attention-Deficit/Hyperactivity Disorder were not found to be educationally impaired to the degree that would require special education services (Swanson, 1992). However, many adults working with ADHD students found that the students' learning and behavior problems were manifested continuously throughout the day and required classroom interventions in place throughout the school day. A group of educators, psychologists, and physicians at the University of California-Irvine Child Development Center developed three school-based intervention models for working with elementary school students with Attention Deficit Disorder (Swanson, 1992). The three models are the Parallel Teaching model, the Paraprofessional model, and the Multicomponent

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model. The differing models were designed for students with differing degrees of educational impairment based on school evaluation and professional judgement of appropriate educational placement and programming to meet the individual student's needs.

The Parallel Teaching model was developed by the group at the University of California -Irvine lead by Linda Pfiffner (Swanson, 1992). This model involves training teachers to do two things in parallel. They first have to provide regular academic instruction to the entire class while scanning the room to monitor the behaviors of the identified students. Additionally, in the Parallel Teaching model, teachers are trained to implement appropriate reinforcement and response cost strategies toward the goal of increasing the frequency of teacher-student interactions and avoiding the escalation of disruptive behaviors.

About 35% to 40% of students diagnosed ADHD are found to have significant learning and behavior problems requiring special education support in the regular education classroom (Swanson, 1992). The staffs of the University of California-Irvine Child Development Center and the Irvine Unified School District worked together to develop the Paraprofessional Model for delivery of supplementary services to ADHD students in the general education classroom. This model recommends the addition of teachers' aides (i.e., paraprofessionals) to the general education classroom. Teachers' aides are trained to facilitate the parallel teaching model described above and to expand on that to include a daily

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report card component and a skill remediation component to provide social skills training and cognitive behavior modification programs. The paraprofessional services could be provided individually or in small groups either within the classroom setting or in a "pull-out" program where children from one or more classes meet with the paraprofessional outside the classroom for short term instruction sometime during the school day.

About 10% to 15% of students diagnosed ADHD were found to require placement in special education classroom and received a more intensive multicomponent program of 10 to 15 students team taught by a teacher and a behavioral specialist. This third level model included assessment of pharmacological treatments, parent involvement groups and individual meetings. The behavior modification programs are extended to the home setting. Contingency Contracting, skills training, Self-monitoring and self-evaluation may be used to teach for generalization across settings and to help maintain behaviors and teach the concepts of responsibility and privilege while fading out the continuous use of tokens for Contingency Contracting.

Self-management

Shapiro and Cole (1994) developed a multicomponent program to be used in the general education setting. The goal of this program is to put the student in charge using self-management interventions in the classroom to teach

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responsibility for managing academic skill and social behaviors across multiple settings. This cognitive-behavior modification approach teaches students to focus on their own behavior and antecedent events or environmental triggers for appropriate behaviors as well as the inappropriate. This strategy moves the locus of intervention toward student self-management. The program begins with external cues for the student to stop, pay attention to what he or she is doing and to record on-task and off-task behavior. The student is taught to evaluate individual performance against set criteria, to determine if the criteria are met and if so to select from a menu of possible reinforcers. The external cueing and reinforcement is faded out over time as the student is taught to transfer skills learned in one specific time period to other times and other classes.

Three Intervention Strategies Presented in This Study

Self-monitoring. The Self-monitoring strategy teaches students to (a) Identify goals or "target" behaviors, (b) identify steps required to achieve those goals, and (c) state awareness of natural reinforcers or consequences for actions taken (or not taken). The need for some individualization of the intervention strategies is in line with the basic assumptions of cognitive-behavioral psychology (Hughes & Hall, 1989). Individuals are expected to be active participants in their own learning. This perspective builds on Bandura's (1977) social learning theory, research on observational learning, and the potential for

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an individual to be an observer of their own behavior. This thinking merges with Meichenbaum's (1977) work in self-instruction training which was based, in part, on the cognitive and developmental psychology of Vygotsky (1962).

The Self-monitoring strategy can be a good match for the developmental level of most middle school and high school students who are the potential recipients of the treatments discussed in this study. Adolescents tend to view the environment from the perspective of the individual. Teaching students how to understand, recognize and change environmental contingencies by analyzing their own situation and systematically making a change for their benefit focuses on the individual in the here and now. This gives the adolescent a basis for understanding his/her own behavior while providing instruction, practice and support. Furthermore, it allows students to look at their own behavior and situation, involves them in determining what is problematic and allows them to generate ways to change their own behavior.

Gardner and Cole (1988) reported that Self-monitoring procedures could be used with one or more individuals within a group and with whole groups or classroom settings. They suggest that Self-monitoring procedures can be used with children and adolescents presenting a variety of individual differences such as students in general education, special education, or residential settings. They report on Self-monitoring procedures being used with students having diagnoses of mental retardation, learning disabilities, behavior disorders, hyperactivity,

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psychiatric impairment, and general education students from preschool through high school with no identified impairment at all. Gardner and Cole (1988) concluded that, "Although the type, number, and complexity of behaviors that could be self-monitored vary among children and adolescents differing in characteristics such as age, cognitive level, and emotional status, it is evident that the procedure may have utility with the entire range of children served within school settings." (p. 209)

Shapiro and Cole (1994) reported on numerous studies that have demonstrated effectiveness of Self-monitoring on increasing attention and on-task behaviors. In the Hallahan, D. P., Marshall, K. J., & Lloyd, J. W., (1981) study, three 10-year-old students were taught to self-monitor their on-task behaviors. The result showed increase in on-task behavior for all three students from 20-30% time-on-task to 50-80% time-on-task. Hughes and Hendrickson (1987) replicated the Hallahan et al. (1981) study with 12 fourth, fifth, and sixth grade students in a regular education classroom and achieved similar results as did the 1991 study by Prater, Joy, Chilman, Temple, and Miller who taught five adolescents (twelve to seventeen years of age) with learning disabilities to use the Self-monitoring technique in math, social studies and in study hall.

Glomb and West (1990) used a Self-monitoring technique they called WATCH to improve creative writing skills for two high school students identified as having behavior disorders. The results of the study showed significant

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improvement in the percentage of words completed on writing assignments from initial levels of near zero words written to between 70% and 100% of the words correct on weekly writing assignments.

In a recent study of the effectiveness of interventions using Self-monitoring and other self-regulatory techniques, Febbaro and Clum (1998) used meta-analysis to assess the effect size of Self-monitoring alone and Self-monitoring in combination with other self-regulatory techniques. All combinations of techniques were more effective than no treatment. Self-monitoring plus any other self-regulatory techniques was more effective than Self-monitoring alone. Self-monitoring is a component of Shapiro and Cole's (1994) self-management program.

Contingency Contracting. This behavior management technique involves the negotiation of a contract between student and teacher. The contract describes the reinforcement for desired levels of academic and social behaviors and/or a description of the response cost (i.e., loss of privileges, points, or tokens) if the student engages in behaviors that are not acceptable. This blend of reward and response cost in Contingency Contracting has been shown to increase the levels of on-task behavior, 1994). Rapport, Murphy & Bailey (1982) reported the amount of classroom improvement found with Contingency Contracting as the only form of treatment equaled the amount of improvement obtained by students receiving stimulant medication for ADHD.

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An important variable to consider when developing a contract is the length of the time delay between the behavior and the consequence. Optimal timing for delivering the consequence is at the end of the class period or that school day. This intervention loses effectiveness as the time increases between the student's behavior and the delivery of the consequence.

The choice of behaviors targeted for change and the development of the contract are both important variables that can affect the success of the contract. With older students it is advisable to negotiate directly with the student to be sure there is mutual understanding of behaviors that need to change. All students, regardless of age, should be involved in developing a menu of possible reinforcers. Reinforcers are very individual and situation specific. If the student has trouble identifying preferred activities that could be used as reinforcers, the teacher could suggest some of the "off-task" behaviors that the student typically engages in when they are expected to be attentive in class (for example, talking to a classmate, drawing, wanting to get something from their locker, etc.).

Students can loose points they have been working for to acquire a desired reinforcer. This is a response cost procedure similar to punishment in that it is intended to decrease the likelihood of the students continuing to do whatever it is that causes them to lose points The teacher needs to be sure that the number of positive consequences outweigh the number of negative consequences and that on most days the child acquires more points than they can loose. A student's

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point total should never fall below zero or the response cost procedure loses its power and the student could continue to be disruptive or off-task and the consequences would be non-existent as one can not lose what they do not have.

Robin (1998) recommended behavioral contracts and point systems for parents of adolescents with ADHD using allowance and household chores or a point system for younger adolescents (age 11 – 13). He outlined a multistep procedure for designing a point system basing the suggestions on years of clinical experience of his own and others (Barkley 1996).

Hoff and DuPaul (1998) designed a three-phase treatment study of disruptive behaviors such as hitting, kicking, and being verbally aggressive. The treatment included a token system and took place across three classroom settings of reading, math and recess for three 9-year-old students with ADHD. Phase one of the treatment was a baseline count of disruptive behaviors. Classroom rules and appropriate reinforcers were discussed with the students and a rating scale was developed to rate compliance with classroom rules setting 5=excellent, followed all the rules; 3=average, followed rules about 80% of the time; and 0=totally unacceptable. The researchers recorded individual data on the three students in each of three classroom settings. Disruptive behaviors for the three students decreased from 30-32-33% to 9-10 and 12% respectively. Treatment acceptability ratings were obtained. Teachers rated the treatment as "strongly agree" that the treatment was beneficial. The children rated the

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treatments as "strongly agree" that they liked the intervention and thought it would help them do better in school.

School-Home Notes. The School-Home Note strategy is similar to using a daily report card. It is a form of communication that allows parents and school staff to work together to clarify expectations both at home and at school that will help develop a students learning and/or social behaviors and promote school success. When both parents and teachers are willing to work together, the School-Home Note can be an effective tool that focuses teacher attention on specific relevant behaviors. This keeps the parents informed of the students' progress, and provides a structure for delivering consequences at home thus reinforcing the home-school connection.

Mary Lou Kelley's (1990) book, *School-Home Notes: Promoting Children's Classroom Success*, presents the primary advantages of School-Home Notes: (a) focusing on collaborative problem solving between parents and teachers as they work together to define the problem behaviors, decide what behaviors need to change, set goals, decide on treatment methods, and work together to implement the plan; (b) provides parents and students with frequent feedback that focuses on how the student is improving and what the student does well, increases the likelihood of parental praise and enhances the student's sense of self-esteem and control over their situation; (c) requires a minimal amount of teacher time as it is not necessary to significantly alter the daily classroom routine; and (d) does not produce a perception of inequity of giving special

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rewards to only a few students in the classroom as the reinforcement system is based at home where parents usually have a wide range of reinforcement options that are more meaningful to the student. Three important variables in the use of the School-Home Note include (a) the teachers emphasis on the student's positive rather than negative behaviors (for example, "__behaved cooperatively before and during class"), (b) reliance on the student to get the notes back and forth between school and home (although this could be done by fax or e-mail), and (c) the parents following through with appropriate consequences at home.

Early studies of effectiveness found the School-Home Note strategy to be effective in increasing academic performance and decreasing classroom disruption with adolescents (Wolf et al., 1976). Ginsburg (1990) found that children prefer reinforcers available at home to those available at school. Kelley (1990) elaborated on the School-Home Note procedure in her book by the same title. Kelley presents case illustrations of students for whom this treatment was implemented and found effective. One student, Jim, a 13-year-old student in the seventh grade was described as disorganized, inattentive, frequently losing homework papers and talking during class. He was assessed as having an average range of cognitive functioning but not working up to his potential. A School-Home Note system was selected to keep Jim and his parents informed of daily assignments. The behaviors recorded on the home note were "prepared for class, used class time well, participated in class, and handed in homework. Within two months Jim's classroom behaviors improved to a satisfactory level

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Conditions That May Influence Treatment Acceptability

Characteristics of the Person Receiving the Treatment

Age of the client or student. As stated earlier, not all symptoms apply to each child. Behaviors characteristic of ADHD such as jumping from one activity to another, losing things, not listening to directions, being very active or somewhat shy and withdrawn may be accepted as normal in early childhood, but as the student grows older these behaviors become much more problematic. Just when there is an increase in the demands for good problem-solving ability, self-control, study habits, and organizational skills, the ADHD adolescent often experiences academic performance deficits, social-skills deficits, low self-esteem, and an increase in conduct problems, depressive symptoms, and family conflict (Brown & Borden, 1986; Robin & Foster, 1989).

From a stage theory model of development, there is a basic assumption of a relatively standard progression of identifiable patterns of changes through which all people progress as they move toward independence. Children internalize the behaviors they have practiced by reconstructing and transforming the activities and experiences as they move through the stages of earlier development (Vygotsky, 1962). Between the ages of 9 and 15 children begin to

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develop the skills necessary for working with another person to solve conflicts and meet mutual goals, the building blocks of collaboration and social competence (Yates & Selman, 1989). Most adolescents are able to think about possibilities. They can think about abstract concepts and ideas, they can systematically test hypotheses, they can think about their own thoughts and those of others, and they can consider the psychological viewpoints of others (Hoffman, Paris, & Hall, 1994). This developing cognitive, social and behavioral style is not always possible for the adolescent with ADHD (Barkley, 1997).

The primary task of adolescence, according to Robin & Foster (1989), is growth towards independence. In order to achieve that growth, youth need an opportunity to interact with someone with whom there is a trusting or intimate type of relationship to develop a sense of belongingness and self-esteem. They need to be engaged in the constructive solution of the problems they are presented with and the problems they present. Most middle school students are better decision-makers than younger children are but they are relatively unskilled. With the help of adults and more competent peers, children solve problems they could not solve by themselves. At each step in the developmental process, children gain more and more control over their behavior (Takanishi, 1993). Providing a supportive social structure that allows the adolescent to develop self-control helps build a sense of control and competence. Students able to build a sense of control, competence, commitment and caring in one

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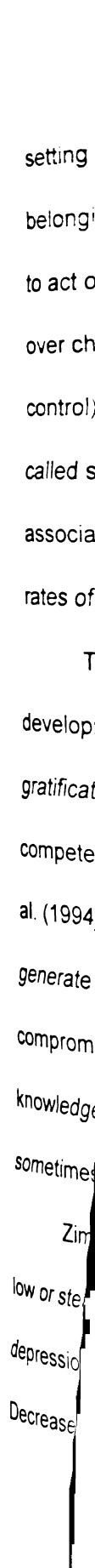

setting usually generalizes to other settings and supports a general sense of belongingness and self-esteem. Adolescents must be willing to make a decision, to act on the decision, and need to believe that he or she has a degree of control over choices, behavior, and the potential outcomes (i.e., an internal locus of control). Zimmerman, Copeland, Shope, and Dielman (1997) found what they called self-esteem trajectories for adolescents. A high level of self-esteem was associated with better grades in school, lower rates of delinquency and lower rates of illegal substance use.

The ability to delay gratification is an essential element in the development of self-control and social maturity. Children who are able to delay gratification are more competent later in life at handling daily problems, making competent decisions, setting goals and making plans for the future. Hoffman et al. (1994) refer to this as "practical intelligence" which involves the ability to generate options, consider consequences, anticipate obstacles, and make compromises. This is also a sign of the development of metacognitive knowledge, as students begin to regulate and control their own learning activities sometimes referred to as self-regulated learning (Zimmerman, 1990).

Zimmerman et al. (1997) found that adolescence is frequently a time of low or steadily decreasing self-esteem, which is often associated with depression, suicide, delinquency, substance use, and poor academic outcomes. Decreased parent involvement typical during the secondary school years may

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also negatively influence optimal developmental outcomes. Although adolescents typically want greater autonomy, they still need to know that their parents support their goals. To have a positive impact on the developmental trajectory, there needs to be an intentional organizational effort to alter the availability of supportive relationships and resources for adolescents particularly for adolescents with health or learning problems such as those associated with ADHD. To neglect the individual needs of the student leads to poor school achievement and increased rates of school dropout (Price, Gioci, Penner, & Trautlein, 1993).

Severity of the problem behavior. Problem severity has been and continues to be among the most common variable included in studies of treatment acceptability. Many of the studies reviewed reported the more severe the problem behavior, the higher the acceptability rating except in the school setting where there is often an interaction effect of time involvement. Interventions requiring less time are less acceptable for the severe problem behaviors (Calvert & Johnston, 1990; Gajria & Salend, 1996; Kutsick, 1991; Miltenberger, 1990; Reimers et al. 1992b).

TheType, Description, and Design of the Intervention

Treatment acceptability research in the past 10 years has investigated variables associated with treatment acceptability such as: positive/reward

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treatment vs. negative/time-out or punishment procedures, severity of the problem to be treated, and perceived effectiveness of the treatment and the amount of time, resources needed to implement the treatment and need for instructional modifications (Elliott, 1988a, 1988b; Johnson & Pugach 1990; Reimers et al. 1992a, 1992b; Whinnery, Fuchs, & Fuchs, 1991). The most common variables studied for effects on treatment acceptability ratings have been (a) intervention type, (b) treatment effectiveness, (c) how the treatment was described, (d) the complexity and time involved, (e) who was to be responsible for implementation of the intervention, and (f) the severity of the behavior problem to be treated.

Intervention types. According to Calvert and Johnston (1990) the most frequently assessed types of interventions include (a) some variation of time-out, (b) reinforcement, (c) response cost, (d) pharmacological intervention, (e) behavioral contracts, (f) self-monitoring, and (g) instructional modifications or adaptations to curriculum. The pharmacological intervention was rated as least preferred by parents (Brown & Sawyer, 1998; Tarnowski, Simonian, Part, & Bekeny, 1992). Instructional modifications or adaptations to the curriculum were rated low in acceptability by teachers (Johnson & Pugach, 1990; Munson, 1987; Schumm & Vaughn, 1991; Whinnery et al. 1991). Positive treatment or reinforcement-based treatments designed to increase behaviors were rated as most acceptable (Calvert & Johnston, 1990; Gajria & Salend, 1996; King et al.

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1998; Miltenberger, 1990; Rasnake, 1993; Tarnowski et al. 1992). Some interaction effects have been noted. Social reinforcement was significantly more acceptable but primarily for mild problem students. Self-instructional strategy training (which was seen as more intensive and costly in time, effort and resources) was rated as significantly more acceptable at the severe problem level (Harris, 1990). Usually the more complex and time intensive treatments have received lower acceptability ratings (Calvert & Johnston, 1990; Gajria & Salend, 1996; Miltenberger, 1990).

Data on effectiveness. Descriptions of the expected effectiveness of a given treatment at the initial or pre-treatment stage positively correlate with treatment acceptability. The exception is that for more severe problem behaviors, efficacy information does not influence treatment acceptability ratings (Calvert & Johnston, 1990; S. Elliott, 1990).

The language used in describing the treatment. Professional jargon can effect the treatment acceptability rating. Calvert and Johnston (1990) found that treatments described as "behavioral" received the lowest ratings. Treatments described as "humanistic" received higher ratings. The treatments described as "pragmatic" received the highest acceptability ratings. Elliott (1988a) and Rolider, Axelrod and Van-Houten (1998) also found communication style as having an effect on acceptability ratings. The optimal style included the use of conversational language followed by detailed descriptions of the intended

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The person in charge of implementing the intervention. The development and implementation of the intervention is viewed differently by staff members questioned. Teachers report that they prefer to develop the intervention plans in collaboration with the school psychologist (Kutsick, 1991). School psychologists reported preferring a 3-way collaboration with teachers and parents (Colton & Sheridan, 1998; Sheridan, 1995). Teachers generally prefer to be the one in charge of the actual implementation of the intervention (Calvert & Johnston, 1990; Elliott, 1988b).

Characteristics of the Raters.

Recent studies include rater characteristics the evaluation treatment acceptability. Earlier studies (Miltenberger, 1990) reported on rater characteristics only in broad terms of role of the rater, i.e., institutional staff vs. community based staff, or college students and their mothers, or students vs. teachers vs. school psychologists. In general, differences between adult rater groups have not been substantial, and most comparisons yielded similar relative rankings of treatments (Calvert & Johnston, 1990).

Most recent studies have looked at acceptability of interventions for specific populations such as children with cancer (Miller, Manne, & Palevsky, 1998), instructional interventions for mainstreamed students (Allinder & Oats,

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1997; Sheridan, 1995; Smith, Young, Nelson & West, 1992) and specifically at students with ADHD (Bennett, Power, Rostain, & Carr, 1996; Power, Hess & Bennett, 1995).

Parents. Preliminary studies assessing interaction effects when parents are the ones rating treatment acceptability indicated that parental income and race were related to acceptability judgements (Heffer & Kelley, 1987). However, a later study by Tarnowski et al. (1992) found that treatment acceptability did not vary as a function of maternal race, socioeconomic status or the child's symptom severity. The main effect found in the Tarnowski study was for type of treatment. Behavioral treatments were rated as acceptable and pharmacological interventions rated as unacceptable.

The Bennett et al. (1996) study assessed parent acceptability of two types of treatment for children with ADHD who were being seen in an outpatient clinic. The two treatments described to the parents were counseling and medication. The researchers reported that the parent's knowledge of ADHD was positively related to their initial acceptability ratings of stimulant medication. However, initial acceptability of each treatment did not predict adherence to the treatment. The authors conclude that more information is needed to predict client adherence to treatment beyond initial acceptability ratings.

Miller and Kelley (1992) also studied treatment acceptability and variables that may affect the acceptability ratings including parent characteristics. The

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rank order of treatment preference was similar for all parents regardless of gender or marital distress. Treatment conditions were generally ranked in the following order: 1) positive reinforcement, 2) response cost, 3) room time out, 4) chair time out, 5) spanking, and 6) medication. While there was no main effect for gender or marital adjustment, there were significant interaction effects as the actual scores on the parent's acceptability ratings differed significantly across the six treatment conditions depending on parent gender, marital adjustment, and the severity of the child's behavior. Parents with a higher degree of marital distress gave significantly lower acceptability ratings for treatment involving positive reinforcement and higher acceptability ratings for time-out in the child's room as a treatment option. The authors suggested a possible explanation in that distressed parents may be accustomed to relating to their family in a negative manner and thus be more inclined to use aversive control techniques when managing problematic behavior as marital discord is associated with increased maternal negativism towards children. Increased interpersonal stress on the part of the parents may result in the greater acceptance of procedures such as room time-out that remove the child from the parent's immediate surroundings (Miller & Kelley, 1994).

Children . Children's ratings of treatment types differ significantly from adults. College students were the most negative in their ratings of all treatment plans. The younger students preferred in-classroom behavior contingencies to

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Teachers. The Smith, Young, Nelson and West (1992) study asked regular education teachers and students trained for inter-observer agreement to rate the acceptability of self-management procedures for 8 tenth grade boys. Students recorded percent of work completed for English assignments, the percent of work correct, and time on task. The self-management procedure resulted in a decrease in disruptive behaviors and an increase in both the quantity of academic work completed and the quality of the work done. However, the benefit did not transfer from the special education setting to general education until the treatment was initiated in the general education setting. Jenkins and Leicester (1992) worked with 10 elementary school teachers to design instruction for students with reading problems. They also found some differences between general and special education. In this case, the difference was in the general education teachers' approach to problem identification, selection and implementation of instruction to meet the needs of the reading problem identified compared to the findings of a study done in 1985 by S. L. Deno with elementary level special education resource teachers.

In the Allinder and Oats (1997) study, Curriculum Based Measurement was used to measure math achievement for 42 third through sixth grade students in special education. A positive relationship was found between

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acceptability ratings and the implementation of Curriculum Based Measurement. Neither teacher nor student characteristics were related to the outcome.

Further research is needed to determine which characteristics of the raters account for differences in acceptability. Learning more about variables that influence treatment acceptability will assist in enhancing a match between client characteristics and choice of treatment (Calvert & Johnston, 1990). This study is designed to look for teacher characteristics that may influence treatment acceptability.

Interaction of Variables.

The past five or six years of treatment acceptability research has looked at specific variables such as gender of parent rating the acceptability of treatment and the quality of the relationship between parents and between parent and child (Kemp, Miltenberger & Lumley, 1996; Miller & Kelley, 1992). Age and gender of the child (Phares, 1996), gender of the student depicted in the case vignette (Miller, Martens & Hurwitz, 1990; Phares, Ehrbar & Lum 1996), race and socioeconomic status (Tarnowski, Simonian, Park & Bekeny, 1992) have been included as possible confounding variables in the design of treatment acceptability studies. In most studies, the child's age, grade, gender and location of the misbehavior have had no effect on ratings of treatment acceptability (Calvert & Johnston, 1990; Miller et al.1990; Phares, Ehrbar & Lum, 1996). However, Calvert and Johnston found an interaction of age with type of

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Prior Research on Acceptability of School-Based Interventions for Students with ADHD

At the time of this writing, only two studies have been published that assess teacher acceptability of school-based treatment for students diagnosed with ADHD. Hoff and DuPaul (1998) studied the use of self-management strategies to decrease disruptive behavior of three 9-year old students diagnosed with either ADHD or Oppositional Defiant Disorder (ODD). Teacher and student acceptability ratings were collected before the initiation of the treatment. This was a multiphase treatment across two general education settings and playground time. After baseline measures were collected, a token reinforcement phase was initiated to teach the students to rate their own behavior. Teacher responses and reinforcers were used during this phase. Student self-evaluation and teacher evaluations were compared to assist the students to accurately self-evaluate their behavior. Eventually the teacher ratings were faded to an average of once every six days. There was a general decrease in aggressive behaviors during the treatment. A lower level of disruptive behavior was maintained even when the teacher was not present. The teachers found this treatment initially

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acceptable. However, one teacher reported that she did not have time to consistently rate students during the teacher matching phase and found this treatment intrusive and time-intensive.

The Power, Hess, and Bennett (1995) study asked elementary (n=76) and middle school (n=71) teachers in regular education to read vignettes describing five possible configurations of school-based interventions for treatment of ADHD. Teachers then rated the acceptability of each treatment type. The interventions included (a) use of a daily report card with school based consequences, (b) a response cost procedure with school based consequences, (c) a stimulant medication treatment requiring the teacher to complete a checklist daily for 20 days, (d) a combination of the daily report card and the stimulant medication, and (e) a combination of the response cost procedure and stimulant medication. The researchers found that the daily report card was more acceptable than the response cost procedure. Both behavioral treatments were viewed as more acceptable than the medication alone by elementary teachers although a fairly high number of teachers rated the response cost procedure as least acceptable particularly among the middle school teachers. Teacher knowledge of ADHD was not correlated with ratings of acceptability. The number of years of teaching experience was also not related to acceptability ratings.

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Variables to be Assessed in This Study

This research project asks middle school and high school teachers to read two clinical vignettes of students with ADHD, one with mild to moderate behavior problems and one severe as described in the DSM-IV criteria (American Psychiatric Association, 1994). Each vignette is followed by descriptions of three similar intervention plans that have been shown effective in ameliorating the effects of ADHD. All three treatments are designed to increase desired behaviors and are similar in complexity and teacher time involved. The treatments are described in conversational language and can be implemented by the teacher. Teacher rater characteristics to be assessed include gender, years of teaching experience grade level taught, type of class taught and familiarity with the intervention plan. The primary goals of the study are to look for differential acceptability rates for the three interventions, to look for possible interaction effects, and to determine if rater characteristics account for differences in acceptability. The information on students and treatment types is counterbalanced in the survey format to determine if teacher opinion is affected by the order in which the material is presented.

This study is unique in that it accessed the opinions of over 100 middle and high school teachers in several school buildings in more than one school district. The focus was on teacher opinion and included a measure of reliability of teacher opinion with the counterbalanced design. Based on the Jenkins and

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Leicester (1992) suggestion that there may be a difference between the opinion of regular education and special education elementary teachers in their choice and implementation of intervention, this study separated the responses of general and special education teachers in addition to a variety of other teacher characteristics that may influence treatment acceptability.

In summary, this study is distinctive in terms of its (a) focus on school-based behavioral treatments to be implemented at the secondary school level and used separately rather than in combination with other treatments such as medication, (b) sample size with secondary level teachers with ADHD students, (c) assessment of the reliability of teacher opinion, (d) comparison of regular education and special education teachers at the secondary level, and (e) examination of selected teacher characteristics that might moderate treatment acceptability

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CHAPTER 3

Methodology

This investigation obtains teacher ratings of acceptability of three school based interventions. The Self-monitoring intervention teaches students to identify goals or "target" behaviors, identify steps required to achieve those goals, and to state awareness of natural reinforcers or consequences for their actions or lack of action. Contingency Contracting, as described here in use with adolescents, is a behavior management technique which involves the negotiation of a mutually agreed upon contract between the student and teacher describing the reward for desired levels of academic and social behaviors and a description of the consequences if the student engages in behaviors that are not acceptable. School-Home Notes are a form of written communication between teacher and parent that allows parents and school staff to work together to clarify expectations that will help the students develop desired learning and/or social behaviors.

Relevant information about the teachers was obtained to determine specific teacher characteristics such as gender, years of teaching experience, and courses/grades taught. This is done to help determine if there are any specific characteristics that may influence the acceptability rating of a given intervention.

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Participants

Principals in all of the middle and high schools in two public school districts were contacted for permission to distribute surveys to teachers. The two school districts are located in one North Central State and have similar student demographics. Of the eight schools in one district, only one middle school and one high school principal allowed distribution of the surveys. Thirteen of the 82 middle school teachers returned completed surveys. Eighteen of the 81 high school teachers returned surveys. This is a 19% return rate for the two schools in this one district. In the second district, principals in seven of the eight schools allowed survey distribution. Thirty-nine of the 212 middle school teachers receiving surveys returned completed surveys. Forty-five of the 294 high school teachers returned surveys. This is a 16.6% return rate for the second school district. Of the 115 total surveys returned, 14 were not complete and not included in the data analysis. Of those who responded to the question of gender, 31% were males and 69% were females. Seventy-two percent of the participants indicated that they taught general education. Twenty-five percent reported that they taught either special education or a combination of special education and general education. Table 1 helps delineate the participants in this study.

Table 1.

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Table 1.

Responses by Demographics of Participants in This Study

	Percent response rates		
Participants	District 1	District 2	Overall
Middle-school	43	46	45
High-school	57	54	55
Male	25	33	31
Female	75	67	69
General education	64	80	72
Special education	36	20	25
Years of teaching experience (range)	1-42	1-39	1-42
Mean number of years teaching	16.6	16.3	16.6
Total of teachers Contacted	115	31	84

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Procedures

Research review committees in both school districts were contacted for approval to implement the research plan. The two school district research offices that gave permission to distribute surveys to teachers differed on the topic of a stipend for participating teachers. One district insisted on a per-teacher stipend. In this case, teachers who returned completed surveys received a $5.00 check. Nineteen percent of the surveys distributed in this district were returned. Twenty-nine percent of the total surveys returned came from this district. The second school district recommended a lottery system whereby participants had an equal change of receiving a check for $100.00. There was a 16.6% survey return rate in this district.

In both school districts, approval of individual building principals was required before distributing the surveys to the teaching staff. Surveys were put in teacher mailboxes and teachers were asked to return the completed surveys within 10 school days. A portable file box for collecting completed surveys was in an easily accessible location near the teachers' mailboxes. All returned survey cover letters were put in one box and an independent third party drew one name for the winner of the $100.00 stipend. The survey cover sheet informed the teachers that their participation was voluntary and that all responses would remain confidential. The data were coded by identification number assigned to each survey. No individual, school, city, or district name can be connected to the published data.

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Participants read two student vignettes, one describing an adolescent with mild symptoms of ADHD and one severe. There was a counterbalanced presentation of both student vignettes and three intervention plans. This was accomplished by teachers' having an equal chance of receiving a materials packet in which the vignette for the student with ADHD: Predominantly Inattentive Type was presented first or the student with more severe symptoms was presented first. The order of presentation of the intervention types varied so that each intervention had an equal chance of being first or second. Using the analog methodology, all survey data were transformed into numeric values and entered into spreadsheet format for data analysis. The accuracy of the data entry was verified by a second person trained in the computer program techniques.

Instrument

The survey instrument is a compilation of materials used to assess teacher acceptability ratings of three school-based intervention plans that prior research has shown to be effective in ameliorating the effects of ADHD on student achievement (DuPaul & Stoner, 1994). The need for teacher opinion was explained and informed consent obtained on the cover sheet of the survey instrument. The learning and behavior problems of two hypothetical students were described in some detail. The descriptors were taken directly from the DSM-IV criteria for Attention-Deficit/Hyper-activity Disorder and Oppositional Defiant Disorder (American Psychiatric Association, 1994, p. 83-94) and are

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Student "S" was described as presenting six of the nine symptoms that would warrant the diagnosis of ADHD: Primarily Inattentive Type with characteristics a, c, d, f, g, and i of the description for "inattentive" such as (a) makes careless mistakes in schoolwork, work; (c) often does not seem to listen when spoken to directly; (d) fails to finish schoolwork; (f) often avoids or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework); (g) often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books, or tools) and (i) is often forgetful in daily activities. It was intended that in this case, the presenting problems would be viewed as being in the mild to moderate range of severity.

Student "J" was described as presenting more severe symptoms of ADHD: Combined Type with some characteristics of Oppositional Defiant Disorder (O.D.D.) (American Psychiatric Association, 1994, p. 93-94) but not to the degree that this student could also be diagnosed O.D.D. Student "J" is described as a student with ADHD: Combined Type demonstrating inattentiveness in addition to a pattern of hyperactivity and impulsivity, with poor quality of work, failure to finish work, forgetting materials necessary for school, being fidgety, often out of seat, talking excessively and disrupting the group. In addition, student "J" 's description included some defiant behaviors such as arguing with adults and refusing to follow the rules. These vignettes were pilot tested for rater perception of severity and raters confirmed that student "J" had a higher rating of severity on a scale of 1-10. However, to improve confidence in

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the validity of the assumption of severity, participants' rated their perception of severity of the learning and/or behavior problems for both student vignettes. A 10 point rating scale for teachers to rate their perception of severity of the behavior/learning problems followed each student vignette. Teachers were also asked to rate on a 10 point rating scale how much the student description given was like any student they may have known.

Descriptions of three intervention plans: School-Home Notes, Self-monitoring and Contingency Contracting follow each of the student vignettes. A copy of the survey instrument including student vignettes and intervention descriptions is in Appendix C. Descriptions of these interventions include effectiveness data and estimates of the amount of time required for implementing the intervention. All three interventions could be classified as requiring a 'medium-low' amount of teacher time needing 1 to 2 hours of preparation and or consultation time to initiate the program and less than 15 minutes per day to maintain the intervention.

A modified form of the Treatment Evaluation Inventory - Short Form (TEI-SF) (Kelley, Heffer, Gresham & Elliott, 1989) follows each intervention description. The goal is to determine acceptability of treatment alternatives. The original Treatment Evaluation Inventory (TEI) was developed by Kazdin (1980) and contained 16 items with a seven-point Likert format. Miller and Kelley (1992) worked extensively with the TEI and found it an instrument that does discriminate between alternative treatment methods. Kelley, Heffer, Gresham and Elliott (1989) developed a simplified version of the TEI called the Treatment Evaluation

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Inventory -Short Form (TEI-SF) which is a 9-item questionnaire designed to assess adults' acceptability of treatment used with children. This is a five-point Likert-type scale (1 = Strongly Disagree; 3 = Neutral; 5 = Strongly Agree). The survey instrument for this study used a modified version of the TEI-SF with the approval of Dr. M. L. Kelley. A copy of the survey instrument used in this study is included in Appendix 2. A treatment is deemed "Acceptable " if the total score is at or higher than the mid-point (Calvert & Johnston, 1990) or a score of 3 or greater on each item of the treatment acceptability measure (Kelley et al. 1989).

Following the modified TEI-SF, teachers rated their familiarity with each of the interventions described on a scale of 0-Not familiar with it, to 3-Use it frequently. Teachers were also asked to provide demographic information regarding years of teaching experience, gender, type of class taught (general education or special education, science, math, English, etc.), grade levels (sixth - twelfth) taught in the past, grade level taught the most, and grade level they are currently teaching. The total time necessary to read and complete the TEI-SF for the six scenarios was estimated to be less than 30 minutes.

Research Hypotheses

The main dependent variable is acceptability of the intervention types described. Teachers' perception of the severity of the learning and behavior problems described was assessed to determine if severity was indeed a valid variable. The independent variables include teacher familiarity with students

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similar to the students described in the vignettes, familiarity and frequency of use of the interventions described and characteristics of the teachers participating in the study. The three intervention types presented are School- Home Notes (N), Self-monitoring (M), and Contingency Contracting (C). The question of greatest interest in this study is to determine if teachers find these interventions acceptable for use with students demonstrating symptoms of ADHD.

Hypothesis 1:

Teachers will rate all three intervention plans acceptable for use with students demonstrating symptoms of ADHD.

Hypothesis 2:

For all treatment types, treatment acceptability ratings will be higher for the student demonstrating the more severe problem behavior, i.e., student "J".

A teacher's perception of severity of students' problem behaviors may be a major influence on teacher willingness to implement intervention plans and on ratings of treatment acceptability in general. If teachers differentiate between students "S" and "J" on the ratings of severity, it is predicted that there will also be differentiation on the acceptability ratings.

Hypothesis 3:

There will be an interaction between teacher characteristics and teacher ratings of treatment acceptability as measured by the modified TEI-SF.

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Several demographic variables might be related to how teachers evaluate acceptability of an intervention. The following information was collected to assess potential covariates that might account for significant amounts of variance in TEI-SF scores: degree to which respondents knew a student like J, degree to which respondents knew a student like S, most common grade taught by respondent, current grade taught by respondent, total years spent teaching, familiarity and frequency of use of intervention C, familiarity and frequency of use of intervention M, familiarity and frequency of use of intervention N, number of students in special education, number of students taught this year, and general versus special education teachers.

Hypothesis 4:

There will be no effect of order of vignette.

The order of presentation of the intervention descriptions and the order of student vignettes was counter balanced in the survey packets. This is a standard technique in survey research of this type. It is predicted that the order of the information presented will not effect the dependent measures.

In summary, this study builds on what is known through prior research about three interventions that can be effective in ameliorating problems of social and learning behaviors of children and youth with ADHD and blends that information with a survey of general and special education teacher opinions to answer four questions. The first question was asked to determine if classroom teachers agree with the clinical/medical (DSM-IV) literature on the severity of the

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problem behaviors described in the student vignettes. The second question asked of the classroom teachers was how acceptable are the three treatments described for the two different hypothetical students. Thirdly, teacher demographics were included in the analysis to determine if the answers found in the first two questions are likely to be true for most teachers or are there specific characteristics of the teacher that the school psychologist or clinician consulting with the teacher needs to take into consideration when recommending a specific intervention. The fourth major issue of this survey was included to analyze the possibility that survey responses were an artifact of the order of information presented in the survey instrument.

Statistical Analysis

The first order of analysis was to determine if the participant response rate was sufficient to allow analysis of the data and then to determine if the modified TEI-SF was actually a measure of one thing, i.e. treatment acceptability. The next variable assessed was severity. There was an assumption of perception of severity. Therefore, a paired-sample t-test on teacher ratings of severity of behavior problems for students S and J was conducted to determine if teachers recognized these two students descriptions as different in severity of presenting behavior problems and to determine if severity was a valid variable. Several multivariate analyses were conducted to analyze differences between teacher ratings of acceptability on a modified version of the TEI-SF in the six conditions presented in the survey instrument. Modifications to the TEI-SF included

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dropping two questions and changing the wording slightly to specifically address the fact that teachers were the respondents, not parents as in the Kelley et al. study (1989). Item number eight was new to the scale. Item 8 was intended to measure the degree to which a teacher needs assistance to implement a specific intervention. Including item 8 in the scale required further analysis of this item as a dependent variable.

A four-way mixed factorial ANOVA (order of intervention x order of student x intervention x severity of ADHD) was conducted. Analysis of variance was also used to look for main effect of intervention. The goal was to determine if teachers find these three treatments acceptable and if there was a difference between the acceptability ratings of the interventions to support use of one intervention type over another and to analyze possible interaction of continuous co-variables of years of teaching experience, grade level taught, and familiarity with the types of students described. Teacher gender, type of class taught, and school district teaching in were included into the analysis to see if there is a difference in severity, familiarity or acceptability ratings as a function of these variables. In the final analysis, all non-significant co-variables were dropped and the analysis was re-run with only the significant co-variables to look for main effects and interactions.

CHAPTER 4

Results

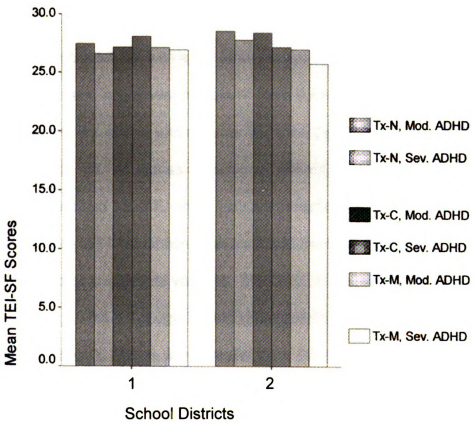
Acceptability ratings for the three interventions were found to be influenced by several contextual conditions. General information about the teachers responding to the survey, the reliability of the modified TEI-SF, and perceived severity of the student behaviors described in the vignettes is presented first. The effects of intervention type and a review of variables that account for the variance in the acceptability ratings and perceived severity of behavior follow this. As predicted, certain characteristics that a teacher brings to the consultation and intervention planning setting play a role in determining which treatment is most acceptable for which student.

Participant Response Rate and Demographics

Of the 669 surveys sent out, 115 teachers returned completed surveys within 2 weeks (response rate = 17.2%). Of the 115 returned packets, 14 had incomplete data for the six vignettes. The data from the remaining 101 respondents were used in the following analyses. Seventy-three respondents (72%) checked that they taught general education while 18 teachers (18%) checked that they taught special education. Seven (7%) checked that they taught both special education and general education and three (3%) did not

respond to this item. Respondents who taught both were combined with special education teachers (for a combined total of 25% of respondents) in subsequent analyses. Of the 101 respondents, 23 reported being males and 51 reported being females. Twenty-seven respondents did not identify their gender. Because these missing data would greatly reduce sample size, gender was not used as a variable in omnibus analyses. The school districts did not make characteristics of teachers in general (age, gender, years of teaching experience, percent of teachers in general and/or special education) available to allow comparison of respondents to nonrespondents. Thus, no demographic information was available to ascertain whether respondents differ from nonrespondents. In addition, no attempt was made to do a follow-up interview with nonrespondents to see if the two groups differed in major ways. However, as shown in Figure 1, teachers from both school districts participating in the study gave similar responses to questions of treatment acceptability. Furthermore, the total N of 101 usable surveys was sufficient for the necessary data analysis.

Figure 1.



Teacher Acceptability Ratings for all 6 Treatment Combinations by School District

Reliability of the Modified TEI-SF

Reliability refers to the property of the measurement instrument that causes it to give similar results. In this study, internal consistency reliability was used to assess the homogeneity of the TEI-SF scale. To this end, Cronbach's alphas and bivariate correlations were conducted using the eight items of the modified TEI-SF scales for each of the six vignettes. All items showed high positive correlations with each other except for item 8: "Would you need support to design and implement this plan?" Item 8 was either not correlated or negatively correlated with all other items on the TEI-SF. The analysis was rerun without item 8. All alphas were higher without item 8 (see Table 2). Thus, item 8 of the modified TEI-SF, which indicated teachers' need for support to design and implement the intervention, was excluded from the composite TEI-SF score and analyzed as a separate variable. Modified TEI-SF scores were calculated by summing items 1 through 7 making the possible range of scores to be 7 to 35. All Cronbach's Alphas were greater than .90, supporting the reliability of this measure.

Table 2.

Cronbach's Alphas Across All 6 Treatment Combinations for the Modified TEI-SF Items With and Without Item 8.

Vignette	With item 8	Without item 8
Student S		
Contingency contracting	.817	.924
Self-monitoring	.864	.933
School-home notes	.869	.933
Student J		
Contingency contracting	.804	.900
Self-monitoring	.875	.936
School-home notes	.874	.947

Perceived Severity of Behavior

One hundred respondents rated the severity of student S and student J's behaviors on a 10 point Likert scale. A paired-sample t-test was conducted on respondents' ratings of severity of behavior for student S (ADHD: Primarily Inattentive Type) and student J (ADHD: Combined Type). Student J's behavior was rated significantly more severe ($M = 8.51$, $SD = 1.37$) than student S's behavior ($M = 6.64$, $SD = 1.55$), $t(99) = -11.05$, $p < .05$. This result suggests that teachers do recognize the two student descriptions as different in severity of presenting behavior problems. In addition, this supports the issue of severity as a valid variable and allows it to be kept as a factor for further analysis. This was of particular interest when accounting for variance in the acceptability ratings.

Hypothesis 1: Effects of Intervention Type

Hypothesis 1 examined teachers' ratings of all three intervention plans as acceptable for use with students demonstrating symptoms of ADHD. A three-way mixed-factorial ANCOVA (order of student, type of intervention, and severity of ADHD) found a significant main effect of type of intervention, $F2 (94)= 4.43$, $p = .014$. Follow-up t-tests showed the mean rating of acceptability for School-Home Notes (N) was significantly higher than acceptability ratings for Self-monitoring (M) T (100) = 2.91, f-.004. Contingency Contracting was ranked in

the middle and not significantly different from the other two interventions, $p < .05$. Table 3 presents the means and standard deviations for all six treatments by severity combinations using the first seven items on the modified TEI-SF. All interventions were rated as acceptable thus providing support for Hypothesis 1.

Table 3.

Means and Standard Deviations (SD) for All 6 Treatment Combinations Using the First 7 Items on the Modified TEI-SF Scale.

Treatment	N	Mean	S D
Student S			
Contingency contracting	101	24.8020	5.5318
Self-monitoring	101	23.6634	6.0881
School-home notes	101	25.4752	5.7194
Student J			
Contingency contracting	101	24.1584	5.3136
Self-monitoring	101	22.6634	6.5746
School-home notes	101	24.6337	6.1963

Hypothesis 2: Treatment Acceptability and Severity

Hypothesis 2 stated the expectation that for all three treatments, treatment acceptability ratings would be higher for the student demonstrating the more severe problem behavior, i.e., student "J". However, the effects of intervention type were the same for student S and student J. Thus Hypotheses 2 cannot be supported. There was no interaction between severity and type of intervention. Thus, it was feasible to collapse across severity levels and report the overall means for each of the three treatments in Table 4 below.

Table 4.

Mean and Standard Deviations (SD) of the Modified TEI-SF Ratings Across Interventions

Intervention	Mean (SD)
Contingency contracting (C)	24.48 (4.82)
Self-monitoring (M)	23.16 (5.76)
School-home notes (N)	25.05 (5.55)

Note: Means were collapsed across student S and student J. The difference between M and N was significantly different, $p < .05$

There was, however, a significant main effect of severity of ADHD, $F(95) = 4.64$, $p = .034$ as determined by a four-way mixed-factorial analysis of variance (ANOVA) (order of intervention x order of student x intervention x severity). The overall mean TEI-SF scores were significantly higher for the student with the moderate symptoms of ADHD (student S: $M = 24.64$, $SD = 3.90$) than for the students demonstrating the more severe symptoms of ADHD (student J: $M = 23.82$, $SD = 4.16$). This is the opposite of what was predicted in Hypothesis 2. Both the effect of severity and the effect of intervention were relatively small. Severity of ADHD accounted for 4.7% of the overall variance and type of intervention accounted for 4.3% of the variance. The small effects sizes should be considered when the practical meaning of the results of this study are addressed.

The results suggest that the differences found in the first ANOVA may have been influenced by type of teacher (general versus special education) and how often teachers have used intervention C (Contingency Contracting) or N (School-Home Notes). In addition, these main effects may be due to differences in other dependent variables not included in the design. Thus, variables that potentially may have contributed to the variance in TEI-SF scores were evaluated as possible covariates for the overall analysis.

Hypothesis 3: Teacher Characteristics and TEI-SF Ratings

Hypothesis 3 predicted an interaction between teacher characteristics and teacher ratings of treatment acceptability as measured by the modified TEI-SF. Bivariate correlation was calculated between scores on the modified TEI-SF scale and several demographic variables that might theoretically be related to how teachers evaluate interventions. These variables were: degree to which respondents knew a student like J (ADHD: Combined Type), degree to which respondents knew a student like S (ADHD: Primarily Inattentive Type), most common grade taught by respondent, current grade taught by respondent, total years spent teaching, familiarity and frequency of use of intervention C (Contingency Contracting), familiarity and frequency of use of intervention M (Self-monitoring), familiarity and frequency of use of intervention N (School-Home Notes), number of students in special education, number of students taught this year, and general versus special education teachers. These variables were examined as potential covariates that might account for significant amounts of variance in TEI-SF scores. Three of the variables were significantly correlated ($p < .05$) with TEI-SF scores for at least one of the six vignettes. These variables were familiarity and frequency of use of intervention C (Contingency Contracting), familiarity and frequency of use of intervention N (School-Home Notes), and general versus special education.

Frequency of Use

The intervention reportedly used the least is Self-monitoring. Thirty-five percent of teachers report never using this intervention. Only 6% of teachers reported they use it frequently. Contingency Contracting was used frequently by 7% of the teachers and never used by 10%. School-Home Notes were used frequently by 32% of the teachers and never used by only 6%. Table 5 presents the mean rating of use by intervention. Teachers rated each intervention twice, once for student S and once for student J. Therefore, by combining the two, the range of ratings is now from zero (not familiar with it) to six (use it frequently).

Table 5.

Mean Rating and Standard Deviation (SD) of Use by Intervention

Intervention	Mean	S D
Self-monitoring	1.95	SD = (1.71)
Contingency contracting	3.06	SD = (1.42)
School-home notes	4.16	SD = (1.58)

General Education vs. Special Education Teachers

To compare the means of the TEI-SF scores for general education and special education teachers, six t-tests were run on the modified TEI-SF scores using general education versus special education as the independent variable. General education teachers gave significantly higher TEI-SF scores for the School-Home Notes intervention ($M = 26.44$, $SD = 5.37$) than teachers who taught some or all special education courses ($M = 23.20$, $SD = 5.09$), $t(96) = 2.63$, $p = .01$. Table 6 looks at the mean acceptability rating given by general education versus special education teachers.

Table 6.

Mean scores on the Modified TEI-SF Using General Education Versus Special Education Teachers for Each of the 6 Treatment Combinations.

Intervention	General Ed. Teachers	Special Ed. Teachers	
Student S			
Contingency contracting	24.79	25.08	
Self-monitoring	24.33	21.08	
School-home notes	26.44	23.2	t(96) = 2.63, p = .01
Student J			
Contingency contracting	24.34	23.88	
Self-monitoring	22.97	21.68	
School-home notes	25.99	23.52	

These results suggest there is a slight tendency for general education teachers to rate interventions as more acceptable in comparison to the ratings by special education teachers. The results also suggest that teachers who use Contingency Contracting do not like the School-Home Note and Self-monitoring interventions, and teachers who use School-Home Notes like the intervention but do not like Contingency Contracting. These effects only hold true for ratings for the student with moderate ADHD (student S). There was no significant correlation between the measure of use of an intervention and the score given on the TEI-SF for any intervention applied to student J (severe ADHD). The three variables (intervention x severity x general education versus special education teachers) were retained as covariates for the analysis of covariance.

General education and special education teachers were similar in frequency of use Self-monitoring (2.87 for special education teachers and 1.63 for general education) and School-Home Notes (4.12 for special education and 4.19 for general education teachers). It was apparent that Self-monitoring is used much less often than School-Home Notes for both area teachers. There was a significant difference ($t(94) = -4.34$, $p. < .001$) between means of how often general education and special education teachers use Contingency Contracting (2.09 for general education teachers and 4.08 for special education). Thus, type of teacher (general education versus special education) is a significant covariate as it was already demonstrated that teacher acceptability of Contingency Contracting depends on how much the intervention is used. Special education teachers use it more, so they evaluate it higher. Teachers in

both general and special education use Self-monitoring less and rate it lowest in acceptability. This provides partial support for Hypotheses 3 in that some teacher characteristics play a role in the acceptability ratings of the three interventions. These findings suggest the need to differentiate between special education and general education teacher responses in the data analysis in research of this nature.

Hypothesis 4:Effects of Order of Vignettes

Student Vignettes, Intervention Type, and the Modified TEI-SF: Items 1-7

Of the 101 respondents, 59 received descriptions of the student with ADHD: Primarily Inattentive Type (student S) first and 42 received descriptions of the student with ADHD: Combined (student J) first. In addition, 35, 34, and 32 respondents received the three possible orders (CMN: Contingency Contracting first then Self-monitoring and School-Home Notes; NCM: School-Home Notes first then Contingency Contracting and Self-monitoring; and MNC: Self-monitoring first then School-Home Notes and Contingency Contracting) respectively. The four-way mixed-factorial ANOVA was conducted to test whether the order of intervention (CMN, NCM, or MNC) or order of student (student S first versus student J first) had a significant effect on TEI-SF scores. Assumptions of homogeneity of variance and covariance, normality, and sphericity were tested. Levene's test of homogeneity and Mauchly's test of sphericity showed these assumptions to be met. However, a Box's M test found

significant heterogeneity of covariance, F (105, 10,034) = 1.70, p < .001. The number of subjects was sufficiently equal across between subject groups so that subsequent analyses would be robust against this violation of general linear model assumptions (Tabachnick & Fidell, 1996).

No significant main effects of student order or intervention order were found. However, the interaction of student order x severity was significant, F (1, 94) = 4.04, p = .047. Specifically, respondents who received student S vignettes first had significantly higher TEI-SF ratings overall for student S (M = 24.81, SD = 3.88) compared to J (M = 23.36, SD = 4.79), t(58) = 3.21, p = .002. For those who received student J's vignettes first, the TEI-SF ratings were not significantly different in general across student S (M = 24.42, SD = 3.96) and student J (M = 24.47, SD = 3.00), t(41) = -.116, p = .908. These results suggest that the order in which respondents received vignettes (student S with ADHD: Primarily Inattentive Type first versus student J, severe ADHD, first) had an effect on TEI-SF scores. Thus, order of severity was used as a between subject factor for analyses. Hypothesis 4, "There will be no effect of order of vignette", must be rejected. Though statistically significant, the effect of order was not large and only accounted for 4.8% of the overall variance (eta-squared =. 048).

TEI-SF Item 8: Need for Support in Development and Use of a Treatment

Item 8 on the modified TEI-SF measured the degree to which teachers believed help would be needed to develop and implement a specific intervention.

An interaction effect of order indicated teachers tended to rate the intervention plan that appeared first in the survey packet as requiring more assistance. A four-way mixed-factorial ANOVA (order of intervention x order of student x intervention x severity of ADHD) was conducted using item 8 as the dependent variable. There was a significant interaction between order of intervention and type of intervention, $F(196) = 3.06$, $p = .018$. No effects or interactions involving order of student were significant. Thus, the ANOVA was rerun without order of student as an independent variable.

The three-way mixed factorial ANOVA (order of intervention x type of intervention x severity of ADHD) showed a significant main effect of type of intervention, $F(97) = 17.94$, $p < .001$. This effect accounted for 27% of the variance in item 8. Respondents rated Contingency Contracting and School-Home Notes as both being significantly easier to implement compared to Self-monitoring (see Table 7). This effect was qualified by a significant order of intervention by type of intervention interaction, $F(196) = 3.06$, $p = .018$.

Table 7.

Need For Help to Implement a Specific Intervention

Mean ratings for item 8 on the modified TEI-SF across three interventions

Intervention	Mean	(SD)
Contingency contracting(C)	3.27	(1.13)
Self-monitoring (M)	3.41	(1.17)
School-home notes (N)	2.78	(1.16)

Note: Means for both Contingency Contracting and Self-monitoring interventions were significantly higher than School-Home Notes, $p < .001$.

Table 8.

Need for Assistance Developing Type of Intervention x Order of Intervention

	Order of presentation of intervention in survey packet		
Intervention type	CMN	MNC	NCM
Contingency contracting (C)	3.34 (1.19)	3.40 (1.03)	3.09 (1.18)
Self-monitoring (M)	3.27 (1.21)	3.95 (0.86)	3.06 (1.24)
School-home notes (N)	2.66 (1.13)	2.94 (1.04)	2.78 (1.32)

For CMN, C and M were significantly greater than N, $p < .05$.
For NCM, there were no significant differences between means.
For MNC, all three means differed significantly from each other, $p < .05$.

Note: When Self-monitoring was first, it was the highest mean, and when the School-Home Note intervention was first, it was not significantly less than Self-monitoring or Contingency Contracting. These results suggest that teachers tended to rate first interventions higher.

Table 8 shows the mean of teacher ratings for item 8 of the modified TEI-SF, think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker." for each of the interventions by order of treatment. These results suggest that there was an effect of order (being the first intervention rated by the teacher) at least for intervention M. More broadly, it was clear that the context in which the interventions were presented affects the teachers' acceptability rating of type of intervention.

All teachers, both general education and special education, were basically in agreement that they would not need additional assistance developing a School-Home Note intervention. More teachers saw a possibility for the need for assistance for the other two intervention types (see Table 9), particularly Self-monitoring.

Table 9.

General and Special Education Teachers' Report of Need for Assistance in Developing School-based Interventions

some special ed or none		ITEM8C	ITEM8M	ITEM8N
general ed	Mean	3.2534	3.4452	2.7945
	N	73	73	73
	Std. Deviation	1.1935	1.2263	1.2186
special ed or mixed	Mean	3.3400	3.4200	2.9000
	N	25	25	25
	Std. Deviation	.9652	.9755	.9465
Total	Mean	3.2755	3.4388	2.8214
	N	98	98	98
	Std. Deviation	1.1355	1.1627	1.1515

Note: ITEM8**C** = need for assistance in developing Contingency Contract

ITEM8**M** = need for assistance in developing Self-monitoring

ITEM8**N** = need for assistance in developing School-Home Notes

In summary, Hypothesis 1 stated that teachers would rate all three intervention plans acceptable for use with students demonstrating symptoms of ADHD. As predicted, all interventions were rated as acceptable thus providing support for Hypothesis 1. However, the three interventions were not all rated equally. Ranked in order of acceptability based on mean TEI-SF scores, School-Home Notes received the highest rating, followed by Contingency Contracting, then Self-monitoring.

Hypothesis 2 stated that for all treatment types, treatment acceptability ratings would be higher for the student demonstrating the more severe problem behavior, i.e., student "J". However, the effects of intervention type were the same for student S and student J. Thus Hypotheses 2 could not be supported.

Hypothesis 3 stated that there would be an interaction between teacher characteristics and teacher ratings of treatment acceptability as measured by the modified TEI-SF. The three variables significantly correlated with TEI-SF scores were use of intervention C (Contingency Contracting), use of intervention N (School-Home Notes), and the rater being a teacher in general education only versus one who teaches special education students. This provides partial support for Hypotheses 3 in that some teacher characteristics played a role in the acceptability ratings of the three interventions.

Hypothesis 4 stated that there would be no effect of order of vignette. This hypothesis was rejected. There was no effect of order of treatment presentation but there was an effect of order of presentation of the student vignettes. Teachers that read student S (moderate ADHD) first tended to give

higher TEI-SF ratings to all three interventions for student S (ADHD: Primarily Inattentive Type) than to those for student J who was described as having the more severe symptoms of inattention combined with hyperactivity and impulsivity and some oppositional type behaviors. Teachers that got student J first in the survey packet tended to rate the acceptability of the interventions the same for student S and student J.

It appears that the modified TEI-SF for items 1-7 is a reliable instrument as a measure of acceptability. It was teacher opinion in general that could be swayed by contextual issues such as teacher experience with special education and the order in which information was received.

One additional finding in this study was the information obtained from item 8 of the modified TEI-SF. While all three interventions described have been recommended for use in the general education classroom, general education and special education teachers agree that teachers would need help developing and implementing these interventions, particularly Contingency Contracting and Self-monitoring.

CHAPTER 5

Discussion

Synopsis of Results

As stated in the introduction to this study, a common hurdle in the planning and implementation of classroom intervention techniques has been a difference of opinion as to what constitutes a "reasonable" accommodation for an individual student in the general education classroom. Teacher opinion of what is "reasonable" was identified as a very important component of the intervention as the implementation of an intervention plan is most often the responsibility of the classroom teacher (Bahr, 1994). A "reasonable" intervention was defined as one that (a) could be done by the people involved, (b) was liked by the teacher, (c) meet the needs of the student, and (d) the teacher might expect the student to have a positive response to the proposed intervention. Prior research found Kazdin's (1981) Treatment Evaluation Inventory to be an instrument that could be administered before the selection and initiation of treatment. The basic assumption being that treatments viewed as more acceptable were most likely to be initiated.

The primary goal of this study was to determine if teachers found the interventions presented as reasonable school-based interventions for secondary school students with ADHD. The answer to that question was yes. The data

support Hypothesis 1, in that teachers' ratings on the three treatment plans found all plans acceptable for use with students with ADHD. The type of treatment did affect teacher ratings of treatment acceptability on the modified Treatment Evaluation Inventory-Short Form (TEI-SF). The rank order of acceptability with the treatment receiving the highest acceptability rating listed first was School-Home Notes, Contingency Contracting and Self-monitoring.

Hypothesis 2 predicted that treatment acceptability ratings would be higher for the student demonstrating the more severe behavior problems. This hypothesis was not supported by the results of this study. The mean TEI-SF scores was significantly higher for student S (presenting the moderate behavior problems) than for student J. This effect is in the opposite direction of that hypothesized. Anecdotal data from notes several teachers wrote in the margins of the surveys returned stated that those teachers thought that student J's behavior problems were too severe for a student like that to benefit from the treatments described. Respondents were able to discriminate between the moderate and severe behavior problems presented in the student descriptions. Special education teachers gave student S (ADHD: Primarily Inattentive Type) a severity rating, on a scale of 1-10, of 6.6 and gave student J (the more severe ADHD: Combined Type) a severity rating of 8.3. General education teachers responded similarly with severity ratings of 6.72 (student S) and 8.63 (student J).

Hypothesis 3 was partially supported by the results of this study, as there

was an interaction of certain teacher characteristics with teacher ratings of acceptability. Type of education (general versus special) was a significant covariate. Teacher familiarity and use of Contingency Contracting did correlate with special education teacher evaluations of Contingency Contracting and they rated it higher in acceptability. General education teachers reported highest use of School-Home Notes and rated School-Home Notes as highest overall on the modified TEI-SF. Teacher status as either regular education or special education could not be included as an independent variable in this study as the sample size of special education teachers was too small.

Hypothesis 4 predicted that there would be no effect on ratings of acceptability by the order in which the information was presented in the survey. However, this was not supported by the data. The interaction between severity and order of student was significant. This means that the order in which teachers received vignettes (moderate first versus severe first) had an effect on ratings. Teacher acceptability ratings of the three interventions were effected by the severity of student behavior but only when teachers received student S (moderate problem behavior) first. Ratings did not differ as a function of severity when they received student J first. This effect of order is problematic because it calls into question the reliability of the modified version of the TEI-SF. If a teacher's evaluation of an intervention can vary as a function of whether they read a vignette about a moderately ADHD student first or second, it may also

vary as a function of other context-related factors (e.g., types of students that respondents interacted with that day).

In addition to the four hypotheses examined in the data analysis, the responses to item 8 of the modified TEI-SF pointed to one additional finding of probable interest to school psychologists and others who consult with teachers to develop school-based interventions. That is, that both general and special education teachers indicated they could develop and implement the School-Home Note intervention without help. However, they indicated that for the Self-monitoring and Contingency Contracting interventions they would probably need help. This supports the need for support personnel such as school psychologists working in the general education setting to assist with the development and implementation of school-based interventions for students with ADHD.

Extent to Which Results are Congruent to or Discrepant with Past Data

This study is similar to other studies in that it identifies a specific population for which to rate the acceptability of a specific intervention. Miller et al. (1998) studied treatment acceptability for children with cancer. Bihm et al. (1997) and Miltenberger & Lumley (1997) studied treatment acceptability for persons with mental retardation. Bennett et al. (1996); Power, Hess & Bennett (1995) and Hoff & DuPaul (1998) all studied acceptability of intervention plans

for elementary and middle school students with ADHD.

This study is unique in that the participants include teachers of high school students and discriminates between general and special education teachers. This study is also unique in that it assesses teacher familiarity with type of student described in the vignette. No correlation was found between teacher report of familiarity with type of student and rating of treatment acceptability. However, given the differences found between general and special education teachers, one might question the lack of effect of familiarity with type of student.

Previous studies of treatment acceptability suggested that the style of presentation of the treatment information in conversational language followed by detailed descriptions of the intended procedures increased the likelihood of the treatment being rated as acceptable (Calvert & Johnson, 1990). Research also indicated that teachers prefer interventions that do not require changes in the basic curriculum, material or instructional style (Elliott, 1988a, 1988b; Johnson & Pugach 1990; Reimers et al. 1992a, 1992b; Whinnery, Fuchs, & Fuchs, 1991). The intervention techniques need to be primarily positive (increasing desired behaviors such as doing homework on time) not aversive (such as use of time-out for off-task behaviors) and appropriate for the age of the student (Calvert & Johnston, 1990; Gajria & Salend, 1996; Rasnake, 1993). Complexity, time and resources needed for the intervention all affect acceptability (Gajria & Salend,

1996; Reimers et al. 1992). All three of the intervention plans presented in this study were described as requiring a similar amount of time and resources. All three met the above criteria for acceptability and the teachers participating in the study rated all three treatments as acceptable.

Age and gender of the child (Phares, 1996), gender of the student depicted in the case vignette (Miller, Martens & Hurwitz, 1990; Phares, Ehrbar & Lum 1996), race and socioeconomic status (Tarnowski, Simonian, Park & Bekeny, 1992) have been included as possible confounding variables in the design of other treatment acceptability studies. In most studies, the child's age, grade, gender and location of the misbehavior have had no effect on ratings of treatment acceptability (Calvert & Johnston, 1990; Miller et al.1990; Phares, Ehrbar & Lum, 1996). However, Calvert and Johnston found an interaction of age with type of treatment. In their study, reinforcement procedures were rated as more acceptable for older children than for younger children. Accepting the findings of previous research, this study did not include the students' age, grade or gender in the student vignette. The students in the vignettes were presented as adolescents, therefore somewhat older than the children described in previous studies. It is interesting that the two intervention plans that included the potential for reinforcement, Contingency Contracting and School-Home Notes, were both rated as somewhat more acceptable than the Self-monitoring strategy.

Many studies of treatment acceptability include pharmacological

interventions and combinations of procedures for acceptability ratings (Calvert & Johnston, 1990). This study present three discrete treatments all based on behavioral procedures and a combination of social learning theory and cognitive behavior modification.

The severity of behavior problems described has been included as a variable in several studies. Generally, the more complex the intervention, the lower the acceptability ratings (Calvert & Johnston, 1990; Gajria & Salend, 1996; Miltenberger, 1990). Given that teachers indicated a greater need for assistance in developing and implementing the Self-monitoring strategy (item 8 on the modified TEI-SF) proposed in the present study, this may explain why Self-monitoring received the lowest acceptability rating.

However, Harris (1990) found that the more effort required in terms of time and resources the more acceptable the intervention for the more severe problem. Calvert & Johnston (1990), Gajria & Salend (1996), Kutsick (1991), Miltenberger (1990), and Reimers et al. (1992b) all found the more severe the problem, the more acceptable the treatment. Some interaction effects have been noted. Social reinforcement was significantly more acceptable but primarily for mild problem students. Self-instructional strategy training was seen as more intensive and costly in time, effort and resources in the study by Harris (1990) and was rated as significantly more acceptable at the severe problem level. In the present study, the self-instructional, i.e. Self-monitoring strategy was

designed to be similar in time and effort to the other two interventions. However, teacher lack of familiarity with Self-monitoring may have influenced the perception of need for assistance implementing the plan.

There was a significant main effect of severity. The overall mean TEI-SF scores were significantly higher for the student with the moderate symptoms of ADHD than for the students demonstrating the more severe symptoms of ADHD. This is the opposite of what was predicted. It may be that Self-monitoring was perceived as more complex but not complex or intensive enough to address the needs of the more severe problem behavior.

The need for assistance implementing an intervention has been a significant factor in teacher opinion. Calvert and Johnston (1990), Elliott (1988b), Gajria and Salend (1996) and Kutsick (1991) all report teachers prefer to be the ones in charge of the actual implementation of the treatment. The need for assistance may have been a more significant factor in this study than anticipated.

Limitations

Subject Selection Variables

Volunteer samples are a fact of life for applied researchers and one that does limit the generalization of the research. The difference in response rates

between the two school districts, the question of representativeness of the participants to teachers in general, and the use of different incentives ($5.00 stipend for each respondent versus the $100.00 lottery system) all limit the generalizability of the results of this study. However, the sample size is sufficient for analysis of variance and the assessment of teacher characteristics as covariables adds to the confidence with which the data can be interpreted.

Lack of Usable Information as to the Gender of the Participants

Of the 101 respondents, 23 reported being males and 51 reported being females. Twenty-seven respondents did not identify their gender. Because these missing data would greatly reduce sample size, gender was not used as a variable in omnibus analyses. Previous research found gender of rater when the raters were parents to have no substantial affect on acceptability ratings. However, it is not known if gender of teacher might influence treatment acceptability ratings, as it has not been used as a variable in previous research and was not included in this study.

Representativeness of Students Described in Student Vignettes

The learning and behavior problems of two hypothetical students were described in some detail. The descriptors were taken directly from the DSM-IV criteria for Attention-Deficit/Hyperactivity Disorder and Oppositional Defiant

Disorder (American Psychiatric Association, 1994, p. 83-94) and are reprinted in Appendices A and B with copyright approval of the APA. However, not all students with ADHD will have this particular composite of characteristics. It may be that an identical study using different descriptions of the two students with ADHD may have different results. The specific student's descriptions used in the student vignettes limit the generalizability of this study.

Questioning the Use of a "Neutral" (3) Rating to Conclude Acceptability

The modified TEI-SF instrument used in this study incorporates a five-point Likert-type scale (1 = Strongly Disagree; 3 = Neutral; 5 = Strongly Agree) like that used by Kelly et al. (1989) and Kazdin (1981). Previous researchers have used these instruments with the stated understanding that a treatment is "Acceptable " if the total score is at or higher than the mid-point (Calvert & Johnston, 1990) or a score of 3 or greater on each item of the treatment acceptability measure (Kelley et al. 1989). There may be a point of contention using "neutral" to equal "acceptable". However, this was the standard used in previous research and replicated in this study.

Questioning the Definition of Severity

Severity was defined as the relationship of the subtype of ADHD to predicted outcomes. The two subtypes presented in the student vignettes in this study are ADHD: Primarily Inattentive Type which has far fewer comorbid psychiatric conditions and ADHD: Combined Type (Barkley, 1997). Students

with ADHD that includes impulsivity and hyperactivity combined with inattention are more likely to have anxiety disorders and other mood disorders and often are more likely to present aggressive, defiant and oppositional characteristics. Barkley (1997) stated, "Findings from follow-up studies have shown that early hyperactive-impulsive behavior is associated with a greater risk for adolescent delinquency, early substance use and abuse, and school suspensions and expulsions...." (p. 27). The study hypothesized that there would be a main effect of severity on teachers' ratings of acceptability. Teachers' were not given a definition of severity nor were they asked to give their definition of severity. It is not clear that teachers understood the definition of severity the same way it was defined by Barkley (1997). However, it is clear that whatever the teachers' definition of severity, they rated the students with ADHD: Combined Type as more severe that the students with ADHD: Primarily Inattentive Type

Acceptability is Not a Measure of Effectiveness

Kazdin (1980) defined treatment acceptability as, "Judgements about treatment procedures by ...potential consumers of treatment. Judgements of acceptability are likely to embrace evaluation of whether treatment is fair, reasonable, and intrusive, and whether treatment meets with conventional notions about what treatment should be." (p. 259). There may be acceptable interventions that are not effective for use with ADHD students in the school setting. There may be interventions that are effective but not acceptable to teachers for implementation in the school setting. Choice or acceptability of a

treatment, personal meaningfulness, social significance and social validity are important factors in applied research as they help connect research results to a social context in which decisions can be made. This was a study of acceptability. Further research is needed to determine a correlation or lack thereof between acceptability and effectiveness. Bearing in mind all of the above limitations, this study makes some significant practical contributions to the study of school-based interventions for adolescents with ADHD.

Contributions for Practice

Classroom Performance Based Focus

The majority of previous research studies of school-based interventions for children and youth with ADHD have focused on elementary school age children, and have targeted "on-task" behavior as the dependent variable. This study adds to the information base three school-based treatment procedures for adolescents with ADHD and includes skills teachers have rated as the most important for success in the classroom (Gresham et al., 1987), i.e., completing classroom assignments in the required time, following directions and producing correct academic work. An increasing emphasis exists in the school psychology literature on providing this assistance to students and teachers through consultation and prereferral intervention. This study adds to the literature to confirm the need for consultative services from someone such as the school psychologist for both general and special education teachers to develop and

implement classroom based interventions to assist students with ADHD to benefit from learning in the general education classroom.

Focus on Adolescents

This study is distinctive in that it focuses on adolescents with ADHD and support for the social and academic needs of adolescence within the school setting. According to Barkley (1994 and1997), ADHD students are often delayed in development. Some students in early adolescence may still be in the beginning of the 'reciprocal' stage of social development (Yates & Sleman, 1989 and Hoffman et al., 1994). Some students may be better than others at viewing their actions from the psychological viewpoint of another, better able to delay gratification and to make deals to get their needs met. Students still operating in the earlier reciprocal stage of peer relations may need immediate and tangible procedures implemented such as a combination of Contingency Contracting and Self-monitoring training in addition to frequent contact between school and home to keep the parents informed and involved in the process. Many adolescents may not recognize the impact of their behavior on the classroom environment and on their learning. When the adolescent begins to observe how their own behavior effects other people's reactions, the adolescent usually becomes much more effective in negotiating mutual goals.

Developing a Database Permitting Treatment Acceptability to be Incorporated Into the Decision-making Process of Consultation and Service Delivery

The primary goal of this study was to determine what intervention(s) would be most acceptable to teachers, for which student, and under what conditions. The teachers participating in the study rated all three interventions presented in this study as acceptable using the modified TEI-SF. Contextual conditions such as previous use of an intervention, previous work with special education students, and the order in which the teacher is presented with information such as severity of behavior problems influenced teacher opinion as to the acceptability of a given treatment. It may be that an instrument sensitive to contextual variables may be just what the clinician/consultant needs in dealing with a variety of individual differences.

Prescribed Research Procedures

Specific teacher characteristics of having previously used an intervention and previous experience or lack of experience teaching special education students played a role in the teacher ratings of treatment acceptability. This study is distinctive in that it identifies significant variables for applied research. Given the findings of this study, future studies involving teacher opinion of school-based interventions will need to include the two variables of teachers' previous use of a specific treatment and the type of teacher, i.e. general

education versus special education.

In addition, as this study highlights the effect of order, future studies need to continue the practice of presenting information in a counter-balanced format to assess the possible effect of order on outcome variables.

Future Directions for Research

The order in which respondents received vignettes (student S with ADHD: Primarily Inattentive Type first versus student J, severe ADHD, first) had an effect on TEI-SF scores. Thus, order of severity was used as a between subject factor for analyses. The order effect is problematic. To assess the reliability of teacher opinion, further research is needed. Future studies should attempt to test the reliability of the modified TEI-SF over time with the same teachers using a test-retest methodology to assess stability of evaluation of interventions and of teacher opinion.

Further research is needed to determine additional characteristics of the raters that may account for differences in acceptability. This may also help in identifying a good match between client characteristics and choice of treatment.

Teachers are primarily the ones to implement intervention strategies in the school setting. However, the opinion of building administrators, professional support staff, parents, and the students themselves should also be studied to

fully assess treatment acceptability.

Subgroups of students with ADHD have significantly different patterns of behavior. Future studies could change the descriptions of student behaviors to assess possible change in teacher ratings of acceptability for the three intervention plans described as a function of different clusters of behaviors.

Future studies could assess other school-based intervention plans that have been shown effective for students with ADHD, such as Shapiro and Cole's (1994) Self-Management program. A study might assess the total self-management program and the individual aspects of the program, such as the cueing techniques, to determine teacher acceptability of all aspects of an intervention strategy.

Additional questions could be asked on the modified TEI-SF such as, " for student __, which of the treatments described would you be most likely to try in your classroom." This forced choice question would give the researcher and the practitioner a better idea of which treatment teachers found most acceptable.

Additional treatment outcome studies are needed to determine if a proposed intervention will work particularly for adolescents in the general education secondary school setting. Of additional importance is knowing what makes the treatment work. As stated previously, the value of assessing treatment acceptability is based on the assumption that the more acceptable the treatment, the more likely it is that the treatment will be implemented. Further

study is needed to assess the reality of that assumption. Finally, follow-up studies need to be done to determine a relationship between initial acceptance of an intervention plan and the implementation of that plan, and the final effectiveness of that intervention.

Summary

The primary goal of this study was to determine what intervention for which student would be most acceptable to which teacher. General education teachers were found to prefer using School-Home Notes particularly In the case of students with mild ADHD (ADHD: Predominantly Inattentive Type). Special education teachers preferred Contingency Contracting and were more likely to have used it in the past. Further study is needed to make an optimal match between teacher, student and school-based intervention plans. The test-retest reliability of the modified TEI-SF and the of teacher opinion need further study. It seems that the modified TEI-SF is an instrument sensitive to contextual factors, which may be just what the clinician needs in dealing with a variety of individual differences.

Individual differences must be taken into account when making treatment recommendations. Research often relies on standardized diagnostic labels and rigid treatment regimes. Individual differences of teachers and students and the life situations they bring to the planning table must be taken into account in the

actual goal setting and intervention planning process. The general acceptability of a specific intervention does not presuppose that all teachers of students with ADHD are identical just as the students are not identical. The presence of individual differences does not mean researchers should give up on investigating optimal treatments for different individuals with varying characteristics. Over time as finer refinements are made as were made in this study, further distinctions can be made to better match type of treatment with subtypes of presenting problems with type of teacher, practitioner or therapist implementing the treatment.

The bottom line is that teachers in both general education and special education at the secondary school level have expressed a need for support in the design and implementation of interventions that in the past have been found to be effective in ameliorating the negative affects of ADHD. Trained consultants need to be available to support teachers in both general education and special education in order to provide services to students in the least restrictive setting. Additionally, the consultants need to be sensitive to the contextual issues of teacher and student characteristics when working with public school teachers in the design and implementation of school-based interventions for adolescents with ADHD.

APPENDICES

APPENDIX A

Diagnostic Criteria for

Attention-Deficit/Hyperactivity Disorder

(American Psychiatric Association, 1994, p. 83-84)

Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

(1) Six (or more) of the following symptoms of inattention have persisted for a least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

(a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
(b) often has difficulty sustaining attention in tasks or play activities
(c) often does not seem to listen when spoken to directly
(d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions
(e) often has difficulty organizing tasks and activities
(f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
(g) often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books, or tools)
(h) is often distracted by extraneous stimuli
(i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level.

Hyperactivity

(a) often fidgets with hands or feet or squirms in seat
(b) often leaves seat in classroom or in other situations in which remaining seated is expected
(c) often runs about or climbs excessively in situation s in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
(d) often has difficulty playing or engaging in leisure activities quietly
(e) (e) is often "on the go" or often acts as if "driven by a motor"
(f) often talks excessively

Impulsivity

(g) often blurts out answers before questions have been completed
(h) often has difficulty awaiting turn
(i) often interrupts or intrudes on others (e.g., butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7.
C. Some impairment from the symptoms is present in two or more settings.
D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

APPENDIX B

Diagnostic Criteria for

Oppositional Defiant Disorder

(American Psychiatric Association, 1994, p. 93-94)

Oppositional Defiant Disorder

A. A pattern of negativistic, hostile, and defiant behavior lasting at least six months, during which four (or more) or the following are present:
   (1) often loses temper
   (2) often argues with adults
   (3) often actively defies or refuses to comply with adults' requests or rules
   (4) often deliberately annoys people
   (5) often blames others for his or her mistakes or misbehavior
   (6) is often touchy or easily annoyed by others
   (7) is often angry and resentful
   (8) is often spiteful or vindictive

Note: consider a criterion met only if the behavior occurs more frequently than is typically observed in individuals of comparable age and developmental level.

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.
C. The behaviors do not occur exclusively during the course of a Psychotic or Mood Disorder.
D. Criteria are not met for Conduct Disorder, and, if the individual is age 18 years or older, criteria are not met for Antisocial Personality Disorder.

APPENDIX C

Survey Instrument

A Search of "Reasonable" Accommodations in General Education for Secondary Students with AD/HD

Dear Teacher,

It seems that teachers are often advised to make modifications and/or accommodations to instruction and classroom procedures, but seldom are asked their opinion of the proposed treatment. Yet, the implementation and success of the treatment may, at least in part, depend on teachers' acceptance of the plan as reasonable, fair and appropriate to the situation. The following survey assesses teacher acceptability of three classroom-based plans for students diagnosed with Attention Deficit / Hyperactivity Disorder. The three plans all focus on solving a problem related to the student's learning behaviors. No change in instruction, curriculum, basic materials or course work is required. The goal of the study is to collect information about which treatment, for which student, under what conditions, is most likely to be accepted by teachers.

The survey should take less than 30 minutes to complete.
Your participation is voluntary, and there is no penalty for refusing to answer questions.

Teachers returning a completed survey by _____ will have their identification number put into a lottery for a $100.00 cash prize.

_____

(Print your name clearly here to be entered in the lottery.)

To protect your confidentiality, this sheet will be separated from the survey form prior to the data being sent for analysis.

Your responses will not be identified and confidentiality will be maintained in any report of the findings.

You indicate your voluntary agreement to participate by completing and returning the questionnaire.
Thank you for your consideration.

Questions, concerns, or requests for copies of the results of this study should be directed to Marilyn M. Higgins at higgin16@pilot msu.edu or 517/333-4142.

A Search of "Reasonable" Accommodations in General Education for Secondary Students with AD/HD

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The survey should take less than 30 minutes to complete.

Your participation is voluntary, and there is no penalty for refusing to answer questions.

Teachers returning a completed survey by _____ will be compensated $5.00 for their participation.

_____

(Print your name clearly here to receive payment.)

To protect your confidentiality, this sheet will be separated from the survey form prior to the data being sent for analysis. It will be returned to you with payment.

Your responses will not be identified and confidentiality will be maintained in any report of the findings.

You indicate your voluntary agreement to participate by completing and returning the questionnaire.

Thank you for your consideration.

Questions, concerns, or requests for copies of the results of this study should be directed to Marilyn M. Higgins at higgin16@pilot msu.edu or 517/333-4142.

Below is a description of a hypothetical student. After reading the description, please give your perception of the overall severity of this child's problems and similarity to a student you might know.

Student "S"

"S" is often forgetful, doesn't do chores requested to do at home, and has trouble getting started and finishing work both at home and at school. When assignments do get done, they are often incomplete, messy, hard to read, and contain careless mistakes. "S" may even loose the work before it gets turned in.

Both the Art and Physical Education teachers report that "S" has a lot of difficulty following directions, is often distracted by the activities of others, sometimes just doesn't listen and seems to be daydreaming or staring off into space. "S" does not plan ahead, seems to lack awareness of time and requires a lot of external guidelines to do the job required.

Socially, "S" is a little immature but gets along well with others at school, home, and in extracurricular activities.

On a scale of 1 - 10, how severe do you think the behavior/learning problems are for Student "S?" (Please circle your choice.)

1	2	3	4	5	6	7	8	9	10
Mild				**Moderate**					**Severe**

On a scale of 1 - 10, how much is Student "S" like a student you know? (Please circle your choice.)

1	2	3	4	5	6	7	8	9	10
Not at all like any student I know									**I know a student just like this**

Now consider that the above student actually exists and is a member of your class. On the following pages are descriptions of three possible interventions that you could use. After reading each of the three interventions, please complete the corresponding evaluation form.

Description of Intervention: **Contingency Contracting**

This is a behavior management technique which involves the negotiation of a contract between student and teacher. The contract describes the reinforcement for desired levels of academic and social behaviors and a description of the response cost (i.e., loss of privileges, points, or tokens) if the student engages in behaviors that are not acceptable.

An important variable to consider when developing a contract is the length of time delay between the behavior and the consequence. Optimal timing for delivering the consequence is at the end of the class period or that school day. This intervention loses effectiveness as the time increases between the student's behavior and the delivery of the consequence.

Teachers negotiate directly with the student to be sure there is mutual understanding of behaviors that need to change. All students should be involved in developing a menu of possible reinforcers. Reinforcers are very individual and situation specific. If the student has trouble identifying preferred activities that could be used as reinforcers, the teacher could suggest some of the "off-task" behaviors that the student typically engages in when they are expected to be attentive in class (for example, talking to a classmate, drawing, getting something from their locker, etc.).

The response cost procedure is an integral part of the plan. The student can lose points they have been working for to acquire a desired reinforcer. The teacher needs to be sure that on most days the child acquires more points than they lose. A student's point total should never fall below zero or the response cost procedure loses its power and the student could continue to be disruptive or off-task and the consequences would be nonexistent as one can not lose what one does not have. A sample of a classroom-based contingency contract is printed below.

Sample Contingency Contract

I, _____ agree to do the following:
(insert student name)

1. Record all of my assignments in my daily planner.
2. Turn in at least 80% of my homework assignments on time.
3. Give the teacher my full attention when s/he is speaking.
4. Remain quiet while the teacher is speaking.
5. Follow all school rules.

I will earn one point for each of these things I do correctly, each class period. For every 5 points I earn, I will be allowed to choose on of the following:
1. _____ 2. _____ 3. _____

If I choose to not do what is necessary to gain points, I understand that loss of points will lead to loss of the above listed choices.
I agree to fulfill this contract to the best of my ability.

Signed _____ Signed _____
(student signature) (teacher signature)

Modified Treatment Evaluation Inventory Short Form (TEI-SF)

Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "S"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
4. I like the procedures used in the treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
6. I believe it would be acceptable to use this treatment with students who cannot choose treatments for themselves.	_____	_____	_____	_____	_____
7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Description of Intervention: **Self-Monitoring**

Self-monitoring is a form of self-assessment. It is a process by which one changes a behavior due to knowledge of being observed; specifically, being observed by one's self. This technique increases a student's understanding of the relationship between classroom expectations and his or her behavior, and develops the student's awareness of the effects his/her behaviors have on others.

Self-monitoring must be taught to the student and occasionally cross-checked by the teacher to be sure the student assessment is accurate. The emphasis is on the student. Training can be done either individually for a specific student or it can be used as a whole class technique. There are three basic phases for this type of intervention technique: 1) Awareness and 2) Skill Building and Feedback, and 3) Monitoring change over time. Self-monitoring forms might look like the following examples:

Phase I: Awareness

The teacher provides the student with graphic information on the past few weeks' work. The student then takes over the job of recording the information. (See Figure A below.) The goal of this phase is to increase the student's awareness of course expectations and his/her own performance.

Figure A.

Math Assignment	Due Date	Actual Date Turned In	#Problems Attempted	#Problems Correct	Percent Correct

(Please see next page for Phase II and III.)

Phase II: Skill Building & Feedback

The goal of this phase is to help students identify academic goals and the steps required to achieve those goals. As each class begins, teachers need only to remind students to get out their self-monitoring charts. Students need to:

A. Continue charting work product and accuracy, as in example above

or

B. (1) Identify other goals or "target" behaviors for school success (See Figure B),
(2) Identify steps required to achieve those goals, and
(3) State awareness of natural reinforcers or consequences for actions taken (or not taken).

Figure B.

Effort and Its Payoff

1	2	3	4	5
I did not try to do my best.				I tried to do my best.
I gave up.				I stayed with it.
I hurried through the task.				I took enough time.
I fooled around.				I stayed on task.

Why? _____

_____

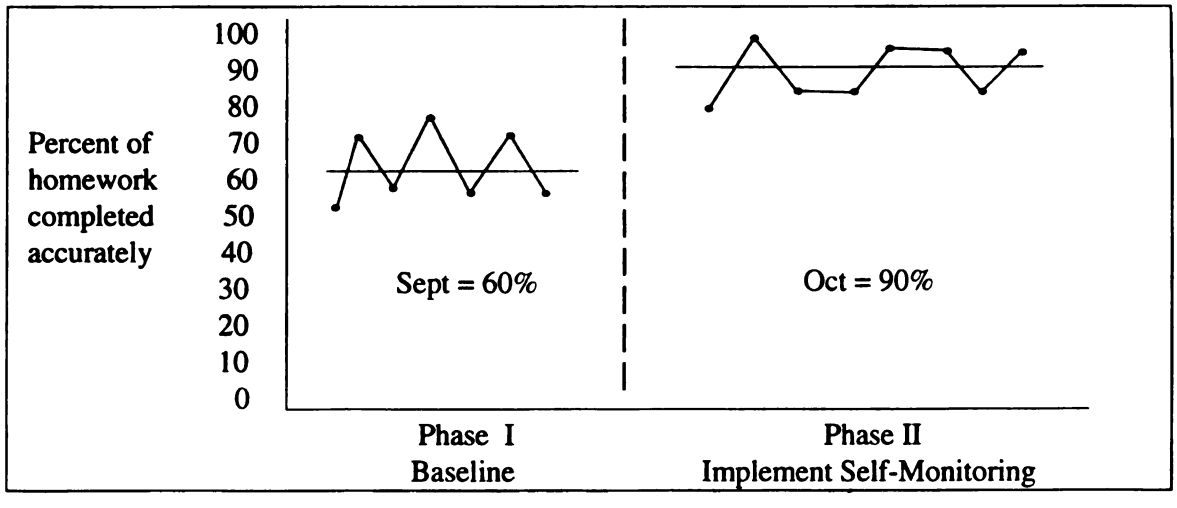
What was the "Payoff?" _____

_____

Phase III: Monitoring Change Over Time

Students are taught to convert data from daily charts (as in Figures A & B) into graphs that provide a picture of progress toward their goal over an extended time, such as an entire school semester (See Figure C).

Figure C.



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Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "S"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
4. I like the procedures used in the treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
6. I believe it would be acceptable to use this treatment with students who cannot choose treatments for themselves.	_____	_____	_____	_____	_____
7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Description of Intervention: **School - Home Note**

School-home notes are like daily reports cards, i.e. a form of communication that allows parents and school staff to work together to clarify expectations both at home and at school that will help develop a student's learning and/or social behaviors. The procedure requires parents and teachers to work together to define the problem and to determine mutual goals. The goal is to emphasize desired behaviors and increase communication between teachers and parents. Teachers evaluate students' behavior in a systematic manner and provide frequent feedback to the parents.. Several goals can be identified and worked on at one time. The emphasis is on keeping parents informed.

Parents are to use this information to develop a set of consequences at home in response to the student's school performance. School staff do not need to be involved in family choices for reinforcement. It is assumed that parents have access to and control over a wider variety of consequences than do teachers.

Three important variables in the use of the school-home note include A) emphasis on the student's achieving individual goals (e.g. "S" behaved cooperatively before and during class), B) reliance on the studentto get the notes back and forth between school and home (although this could be done by fax or e-mail), and C) the parents following through with appropriate consequences at home.

Sample School-Home Note (From M.L. Kelley, 1990, pg. 120)

Date:_____ Teacher Signature:_____

Class:_____ Student Name:_____

Was prepared for class	Yes	No	NA	Homework Assignment:
Paid attention in class	Yes	No	NA	
Handed in homework	Yes	No	NA	
Worked appropriately with others	Yes	No	NA	

Homework/Test Grade_____

Comments _____

_____

_____

Parent Comments (consequences provided) _____

_____

_____

_____

Modified Treatment Evaluation Inventory Short Form (TEI-SF)

Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "S"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
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7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Below is a description of a hypothetical student. After reading the description, please give your perception of the overall severity of this child's problems and similarity to a student you might know.

Student "J"

"J" has trouble getting up in the morning, often arrives late for school and forgets materials necessary for school including lunch money. "J" seems really restless and fidgety, often drops things, and finds reasons to get out of the seat in class. "J" is not doing well academically although at times seems to be quite bright. "J" is often confused and disorganized and has a lot of trouble following directions. "J" may start a project but doesn't finish the work or at least often doesn't turn the work in. The quality of the work is often poor and sloppy. "J" is difficult to discipline and difficult to help, tends to argue or talk back, and doesn't accept responsibility for mistakes.

"J" is often left out of group activities because of disrupting the group. People can not depend on "J" to get the work done on time or do a fair share of the project. Besides, "J" talks incessantly, gets lost in the details, and loses sight of the main idea. Maybe the worst thing is that "J" does things without thinking, like setting off the fire alarm.

On a scale of 1 - 10, how severe do you think the behavior/learning problems are for Student "J?" (Please circle your choice.)

1	2	3	4	5	6	7	8	9	10
Mild				**Moderate**					**Severe**

On a scale of 1 - 10, how much is Student "J" like a student you know? (Please circle your choice.)

1	2	3	4	5	6	7	8	9	10
Not at all like any student I know									**I know a student just like this**

Now consider that the above student actually exists and is a member of your class. On the following pages are descriptions of three possible interventions that you could use. After reading each of the three interventions, please complete the corresponding evaluation form.

Description of Intervention: **Contingency Contracting**

This is a behavior management technique which involves the negotiation of a contract between student and teacher. The contract describes the reinforcement for desired levels of academic and social behaviors and a description of the response cost (i.e., loss of privileges, points, or tokens) if the student engages in behaviors that are not acceptable.

An important variable to consider when developing a contract is the length of time delay between the behavior and the consequence. Optimal timing for delivering the consequence is at the end of the class period or that school day. This intervention loses effectiveness as the time increases between the student's behavior and the delivery of the consequence.

Teachers negotiate directly with the student to be sure there is mutual understanding of behaviors that need to change. All students should be involved in developing a menu of possible reinforcers. Reinforcers are very individual and situation specific. If the student has trouble identifying preferred activities that could be used as reinforcers, the teacher could suggest some of the "off-task" behaviors that the student typically engages in when they are expected to be attentive in class (for example, talking to a classmate, drawing, getting something from their locker, etc.).

The response cost procedure is an integral part of the plan. The student can lose points they have been working for to acquire a desired reinforcer. The teacher needs to be sure that on most days the child acquires more points than they lose. A student's point total should never fall below zero or the response cost procedure loses its power and the student could continue to be disruptive or off-task and the consequences would be nonexistent as one can not lose what one does not have. A sample of a classroom-based contingency contract is printed below.

Sample Contingency Contract

I, _____ agree to do the following:
(insert student name)

1. Record all of my assignments in my daily planner.
2. Turn in at least 80% of my homework assignments on time.
3. Give the teacher my full attention when s/he is speaking.
4. Remain quiet while the teacher is speaking.
5. Follow all school rules.

I will earn one point for each of these things I do correctly, each class period. For every 5 points I earn, I will be allowed to choose on of the following:
1. _____ 2. _____ 3. _____

If I choose to not do what is necessary to gain points, I understand that loss of points will lead to loss of the above listed choices.
I agree to fulfill this contract to the best of my ability.

Signed _____ Signed _____
(student signature) (teacher signature)

Modified Treatment Evaluation Inventory Short Form (TEI-SF)

Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "J"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
4. I like the procedures used in the treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
6. I believe it would be acceptable to use this treatment with students who cannot choose treatments for themselves.	_____	_____	_____	_____	_____
7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Description of Intervention: **Self-Monitoring**

Self-monitoring is a form of self-assessment. It is a process by which one changes a behavior due to knowledge of being observed; specifically, being observed by one's self. This technique increases a student's understanding of the relationship between classroom expectations and his or her behavior, and develops the student's awareness of the effects his/her behaviors have on others.

Self-monitoring must be taught to the student and occasionally cross-checked by the teacher to be sure the student assessment is accurate. The emphasis is on the student. Training can be done either individually for a specific student or it can be used as a whole class technique. There are three basic phases for this type of intervention technique: 1) Awareness and 2) Skill Building and Feedback, and 3) Monitoring change over time. Self-monitoring forms might look like the following examples:

Phase I: Awareness

The teacher provides the student with graphic information on the past few weeks' work. The student then takes over the job of recording the information. (See Figure A below.) The goal of this phase is to increase the student's awareness of course expectations and his/her own performance.

Figure A.

Math Assignment	Due Date	Actual Date Turned In	#Problems Attempted	#Problems Correct	Percent Correct

(Please see next page for Phase II and III.)

Phase II: Skill Building & Feedback

The goal of this phase is to help students identify academic goals and the steps required to achieve those goals. As each class begins, teachers need only to remind students to get out their self-monitoring charts. Students need to:

A. Continue charting work product and accuracy, as in example above

or

B. (1) Identify other goals or "target" behaviors for school success (See Figure B),
(2) Identify steps required to achieve those goals, and
(3) State awareness of natural reinforcers or consequences for actions taken (or not taken).

Figure B.

Effort and Its Payoff

1	2	3	4	5
I did not try to do my best.				I tried to do my best.
I gave up.				I stayed with it.
I hurried through the task.				I took enough time.
I fooled around.				I stayed on task.

Why? _____

_____

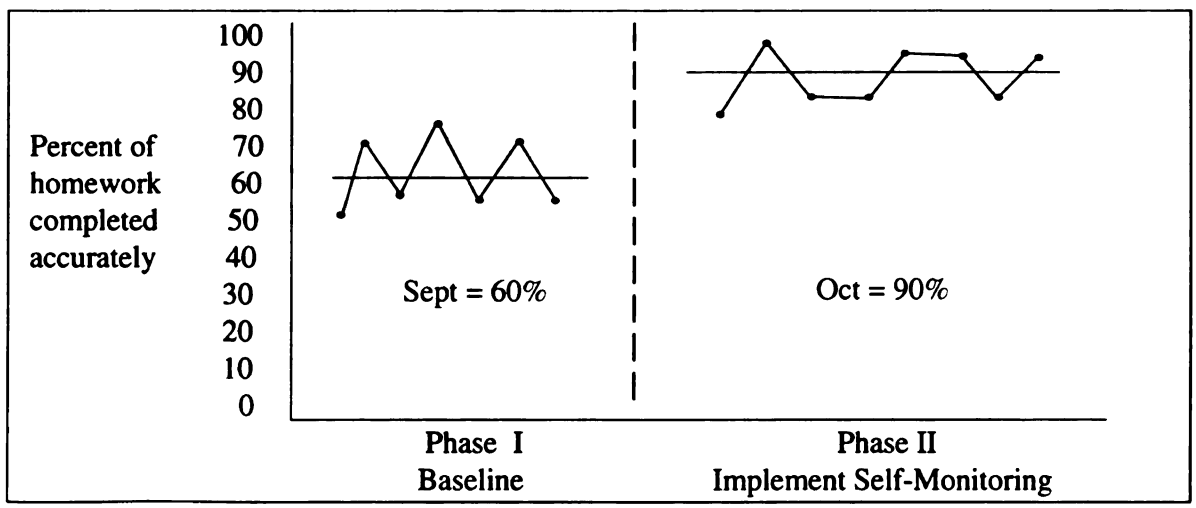
What was the "Payoff?" _____

_____

Phase III: Monitoring Change Over Time

Students are taught to convert data from daily charts (as in Figures A & B) into graphs that provide a picture of progress toward their goal over an extended time, such as an entire school semester (See Figure C).

Figure C.



Modified Treatment Evaluation Inventory Short Form (TEI-SF)

Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "J"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
4. I like the procedures used in the treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
6. I believe it would be acceptable to use this treatment with students who cannot choose treatments for themselves.	_____	_____	_____	_____	_____
7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Description of Intervention: **School - Home Note**

School-home notes are like daily reports cards, i.e. a form of communication that allows parents and school staff to work together to clarify expectations both at home and at school that will help develop a student's learning and/or social behaviors. The procedure requires parents and teachers to work together to define the problem and to determine mutual goals. The goal is to emphasize desired behaviors and increase communication between teachers and parents. Teachers evaluate students' behavior in a systematic manner and provide frequent feedback to the parents.. Several goals can be identified and worked on at one time. The emphasis is on keeping parents informed.

Parents are to use this information to develop a set of consequences at home in response to the student's school performance. School staff do not need to be involved in family choices for reinforcement. It is assumed that parents have access to and control over a wider variety of consequences than do teachers.

Three important variables in the use of the school-home note include A) emphasis on the student's achieving individual goals (e.g. "S" behaved cooperatively before and during class), B) reliance on the studentto get the notes back and forth between school and home (although this could be done by fax or e-mail), and C) the parents following through with appropriate consequences at home.

Sample School-Home Note (From M.L. Kelley, 1990, pg. 120)

Date:_____ Teacher Signature:_____

Class:_____ Student Name:_____

Was prepared for class	Yes	No	NA	Homework Assignment:
Paid attention in class	Yes	No	NA	
Handed in homework	Yes	No	NA	
Worked appropriately with others	Yes	No	NA	

Homework/Test Grade_____

Comments _____

_____

_____

Parent Comments (consequences provided) _____

_____

_____

_____

Modified Treatment Evaluation Inventory Short Form (TEI-SF)

Please complete the items below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because the checkmark accidentally placed on one space rather than another may not represent the meaning you intended

For Student "J"	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the student's learning behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the student's learning behavior.	_____	_____	_____	_____	_____
3. I believe that this treatment could be done in the general education setting.	_____	_____	_____	_____	_____
4. I like the procedures used in the treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
6. I believe it would be acceptable to use this treatment with students who cannot choose treatments for themselves.	_____	_____	_____	_____	_____
7. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____
8. I think a teacher would need help to develop and use this plan from someone such as a teacher consultant, school psychologist or social worker.	_____	_____	_____	_____	_____

How familiar are you with **this intervention**?

Not familiar with It _____	Am familiar, but haven't used it _____	Have used it _____	Use it Frequently _____

Please provide the following information about yourself.
(This information is essential to the study.)

1. Years of teaching experience: _____

2. Check the grade levels you have taught in all of your years of teaching. (Check all that apply.)

6__ 7__ 8__ 9__ 10__ 11__ 12__

3. Check the grade level you have taught the most. (Check only one.)

6__ 7__ 8__ 9__ 10__ 11__ 12__

4. Check the grade level you teach the most this year. (Check only one.)

6__ 7__ 8__ 9__ 10__ 11__ 12__

5. Check the content areas you teach this year. (Check all that apply.)

Fine Arts __	Social Studies __	Physical Education __
Math __	Technology __	English __
Science__	Languages __	Other __ (Specify: _____)

6. Are you currently teaching general education or special education?

General ___ Special ___

7. How many students from all of your classes are receiving special education/504 services?

_____

8. How many students in total do you teach in all of your classes?

_____

9. Gender

Male ___ Female ___

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