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# A study to compare the effectiveness of a response cost approach and a traditional approach to behavior modification with an ADD child

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A STUDY TO COMPARE THE EFFECTIVENESS OF A RESPONSE COST APPROACH  
AND A TRADITIONAL APPROACH TO BEHAVIOR MODIFICATION  
WITH AN ADD CHILD

by  
Maureen T. Smith

A Thesis

Submitted in partial fulfillment of the requirements of the  
Master of Arts Degree in the Graduate Division  
of Rowan College of New Jersey  
May, 1996

Approved by \_\_\_\_\_  
Professor

Date Approved May 6, 1996

## ABSTRACT

Maureen T. Smith

A Study to Compare the Effectiveness of a Response Cost Approach and a Traditional Approach to Behavior Modification With An ADD Child, 1996  
Thesis Advisor: Dr. Stanley Urban  
Learning Disabilities

The purpose of this case study was to compare the effectiveness of a response cost approach and a traditional approach to behavior modification. The subject is a seven year old boy diagnosed with characteristics of ADD. Baseline data was collected for five consecutive school days. Three behaviors were targeted. Intervention consisted of six weeks of traditional behavior modification involving an individual sticker chart when filled earning computer time. Followed by six weeks of response cost involving the removal of chips for negative behaviors. Remaining chips could be exchanged for computer time at the end of each day.

The results of this study indicate consistent behavior modification approaches are effective in reducing negative classroom behaviors. The response cost approach appears to be slightly more effective than traditional approaches on this subject.

## MINI ABSTRACT

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A Study to Compare the Effectiveness of a  
Response Cost Approach and a Traditional  
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An ADD Child, 1996  
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This case study was intended to compare the effectiveness of using a response cost approach and a traditional approach to behavior modification with a child with characteristics of ADD. The results indicate that consistent behavior approaches are effective in reducing negative classroom behaviors.

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## CHAPTER 1

### INTRODUCTION

#### Background Information

It has been estimated by experts that 3 to 10 percent of school age children are affected by Attention Deficit Disorder (ADD). Teachers today can expect to have at least one child in their classroom with ADD. Some of the behavioral characteristics of children with ADD in the classroom include: easily distracted by extraneous stimuli, difficulty focusing and sustaining attention, difficulty listening and following directions, difficulty concentrating and attending to task, inconsistent performance in school work, disorganized, poor study skills, tunes out, difficulty working independently. Other behavioral characteristics seen by teachers in the classroom might include the following; appearing to be in constant motion, fidgety, falls from chair, finds and plays with nearby objects, difficulty remaining in seat, roams around the classroom, verbally blurts out, can't wait their turn, interrupts, talks excessively, doesn't stop and think but rather respond first, then think, might engage in physically dangerous and/or aggressive behavior, has difficulty with transitions, changing activities, socially immature, low self-esteem and a high frustration level.

Children usually do not outgrow ADD and are therefore seen throughout the educational system. There are ADD children who become successful adults but on the other hand there is a high correlation between ADD and failure in society. Without the benefit of identification, intervention and treatment, a significant percentage of ADD

individuals may drop out of school, may be unable to hold a job, may have poor interpersonal relationships and may even become part of the prison population. ADD is a significant and widespread problem which should be a concern of the educational system and our society.

### **Purpose of the Study**

The purpose of this study is to compare the effectiveness of a response-cost approach and a traditional system of behavior modification.

### **Research Question**

What is the relative effectiveness of the response-cost approach compared to traditional behavior modification in decreasing negative classroom behavior in a first grader?

### **Value of the Study**

This study will be particularly interesting and useful to elementary teachers in regular and special education classes. It is my hope that ADD children will also benefit from the knowledge obtained through this study. The results of this study can be used to incorporate behavior modification techniques which make it possible for ADD children to function in the classroom setting without the use of medication.

### **Limitations of the Study**

The design of this study poses several threats to the validity of the findings including

history, maturation, and observational data gathering which may contain inaccuracies.

### **Definition of Terms**

Behavior modification is a method which allows the teacher to increase, decrease or eliminate specific behaviors of their students by manipulating responses which follow behaviors. There are three types of responses which can affect behavior. They are 1) positive reinforcement, 2) negative reinforcement, and 3) response-cost. If positive reinforcement is used then the child receives a pleasurable or rewarding response after the demonstration of a specific behavior. Using positive reinforcement helps to strengthen the appropriate behavior while it can also weaken an inappropriate behavior. This would be considered a traditional behavior modification approach. Response-cost could involve the presentation of an aversive consequence following the demonstration of a specific behavior. An example of response-cost principle might include 10 chips given to the child in the morning. Each chip could be worth a specific amount of computer time, let's say 5 minutes. The response-cost is that the teacher can take one chip from the child every time a rule is broken.

Cognitive-behavioral modification, also referred to as CBM, involves teaching the student to stop, look and listen. Gagne and Briggs (1974) describe a cognitive strategy as an internally organized skill that selects and guides the internal processes involved in defining and solving novel problems. In other words it is a skill by means of which the learner manages their own thinking behavior. Cognitive strategies have as their objects the learner's own thought processes.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

#### **History of Attention Deficit Disorder (ADD)**

It was the encephalitis epidemic in 1912 which stimulated the scientific interest in attention and hyperactivity (Cantwell,1981). Encephalitis is an infectious disease of the brain which presented physicians with a large number of children exhibiting behaviors described as inattentive, hyperactive, and deficient in specific cognitive abilities such as perception and memory. Socially this group of children were seen as impulsive, defiant and oppositional. The term "minimal brain dysfunction" (MBD) was used and represented the presumption of neurological deficiency as the basis of learning, attentional, and affective disorders in the absence of firm evidence for anatomical and biochemical defects of the brain.

In the 1950's hyperactivity became the focus of research as the major symptom and the beneficial effects of stimulant medication on disruptive behavior and academic performance appeared. It was in the 1960-1970's that the label Minimal Brain Dysfunction (MBD) was changed to Hyperkinetic Reaction to Childhood in the 1968 Diagnostic and Statistical Manual of Mental Disorders (DSM-II). Although the label changed, the characteristics defining ADD and explanations hypothesized have endured. Issues of impulsivity, hyperactivity, problems of attention and working memory still have researchers writing as they did for MBD . Some of the hypothesized explanations for the disorder have included (1) defects having to do with the ability to receive, hold, scan, and

disorder have included (1) defects having to do with the ability to receive, hold, scan, and screen out stimuli in a sequential order; (2) deficits of the central nervous system, and more specifically, some lack of inhibitory controls for ADD with hyperactivity; (3) a specific learning disability with the cardinal symptom of defective attention and (4) problems of motivation or intention, such that problems with sustaining attention are exhibited only under some conditions.

The 1970's showed movement to focus on the nature of attention deficits and their defining behavioral characteristics. Douglas (1972) brought to light learning difficulties and social behavior were also often seen in children who were not hyperactive, but that these children also displayed difficulty with sustained attention and impulse control. Douglas also brought out that hyperactive children repeatedly performed poorly on tasks that required vigilance, sustained attention and impulse control and not necessarily on all cognitive tasks. It was Douglas' views which stimulated research during the 1970's and 1980's leading to a reconceptualization of Hyperactive Childhood Disorder in DSM-II to Attention Deficit Disorder in DSM-III (1980).

### **Definition of ADD**

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) provides a diagnostic criteria for Attention-Deficit/Hyperactivity Disorder:

A. Either (1) or (2):

(1) six (or more) of the following symptoms of inattention have persisted for at 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 school work, 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 supplies)
- (h) *is often* easily 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 situations 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) *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

- B. Some hyperactive-impulsive or attentive symptoms that caused impairment were present before age 7 years.
- C. Some impairment from the symptoms is present in two or more settings (e.g., at school or work and at home).
- D. There must be clear evidence of clinically significant impairment in social, academic or occupational functioning.
- E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

The DSM-IV identifies three subtypes:

**314.01 Attention-Deficit/Hyperactivity Disorder, Combined Type.**

This subtype should be used if six (or more) symptoms of inattention and six (or more) symptoms of hyperactivity-impulsivity have persisted for at least 6 months. Most children and adolescents with the disorder have the Combined Type.

**314.00 Attention Deficit/Hyperactivity Disorder, Predominantly Inattentive Type.** This subtype should be used if six (or more) symptoms of inattention (but fewer than six symptoms of hyperactivity-impulsivity) have persisted for at least 6 months.

**314.01 Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type.** This subtype should be used if six (or more) symptoms of hyperactivity-impulsivity (but fewer than six symptoms of inattention) have persisted for at least 6 months. Inattention may often still be a significant clinical feature in such cases.

The difficulty involved in isolating ADD from childhood/youth disorders including mental retardation, substance abuse, Tourette's syndrome and conduct, oppositional, mood, anxiety, borderline personality and learning disorders has to be noted. The literature suggests ADD is independent of other disorders while also suggesting the symptoms of ADD are found in other disorders.

## Assessment Methods

A clinical evaluation by a child specialist (school counselor, school examiner, psychological examiner, pediatrician, psychologist, child psychiatrist) should be the first stage of the assessment process. Rating scales completed by parents and teachers should be used by the specialist to confirm the areas where the problems lie, such as inattention, restlessness, impulsivity, hyperactivity, hypoactivity, passivity or inhibitory behavior. Rating scales have been found by Barkley(1990) to offer numerous advantages over other methods of assessment. Forty-two rating scales were identified by the Arkansas research team to describe and diagnose ADD. All of which provided norms and measures for reliability and validity. The advantages of rating scales include:

- :Rating scales allow one to obtain information from raters who have had many years of experience with children with ADD
- :They permit data collection on infrequently occurring behaviors that are likely to be missed by observational measures; and
- :They are cost effective and require little time to complete

The best rating scales provide extensive normative data that enable the user to score the statistical deviance of the ratings; that is, to score a subject's relative position in the age and sex group which is used to compile the test norms. Dykman, Ackerman and Raney (1992) found the Behavior Assessment System for Children (BASC) and the Attention Deficit Disorder Evaluation Scale (ADDES) to be the best of the new instruments on the market. The Achenbach scales are comparable but long. The most frequently used is the Conners scales. There are abbreviated Conners Teacher and Parent

Forms available.

If the detailed rating scales confirm the diagnostic impressions from the first step then structured psychiatric interviews, using both self-report and parent forms should be completed. Structured interviews' value lies with the fact they cover a broad range of childhood psychopathology; they are useful in confirming criteria for ADD, and they are invaluable in pinpointing combined conditions associated with ADD.

The next stage should include an individually administered intelligence and achievement tests. These will assess the child's intellectual functioning while also testing for possible learning disabilities. Neuropsychological tests involving the frontal lobe brain functions examines "executive functioning" such as planning, impulse control, sustaining attention, and working memory might be included. Neurological examinations could be administered to suggest soft or hard neurological signs which studies suggest ADD or LD children have. The results of all the assessments performed should be evaluated with all those involved in their administration present.

The Professional Group for Attention-Related Disorders (PGARD), the Children and Adults with Attention Deficit Disorder (CHADD) Educators Manual and the Arkansas researchers support the use of a two-tier assessment process. A comprehensive interview with past and present care givers and teachers would be part of tier one. The purpose of the interviews would be to obtain any medical information that might be associated with ADD, and to assess the existence of symptoms of ADD in different environments. Administration of standard psychoeducational tests are involved in tier two. Along with assessing classroom behavior (direct observation over several days by

someone other than the teacher) and academic productivity relative to a child's IQ (such as percentage of work completed and percentage completed correctly during written assignments over two weeks) are also involved in tier two.

### **Treatment Approaches**

Physiological, behavioral and cognitive-behavioral are the three major treatment approaches for working with ADD children. The use of medication to reduce impulsive behavior is emphasized in the physiological approach. Rosen, O'Leary and Conway (1985) have reported a 60% to 90% effectiveness rate for relieving the symptoms of ADD, while approximately 2% of all school age children are reported to be on medication for hyperactivity.

Wulbert and Dries (1977) studied Ritalin effect and task specificity and found that tasks requiring rote learning or fine motor control are facilitated by medication. Problem-solving and abstract reasoning, by contrast appear to be unaffected by psychostimulants. Whalen et al. (1979) research both confirms and elaborates on Wulbert and Dries findings. They hypothesize that hyperactive children on Ritalin demonstrate stylistic changes leading to "the perception that they are learning more and are better when on medication." Whalen et al. studied hyperactive boys on Ritalin and placebo. Task approach, actual task achievement, and social appropriateness were the focus. The boys without medication were found to be more excited, intense and expressive. The boys on Ritalin appeared mildly dysphoric (sadder or more self derogatory). Task achievement did not vary significantly under the Ritalin and placebo conditions. Whalen et al. concluded that "methylphenidate has a stronger influence on

behavioral style than on task outcome."

Houter (1980) studied the long and short term effects of medication. Houter used measures of intellectual and emotional growth as indicators of improvement. Children treated with Ritalin for an average of 51 months in Houter's study did not show anymore improvement than the children not treated. In a two year study, again by Houter, using academic achievement as the dependent variable, no more improvement was noted. Whalen et al. (1979) conducted similar studies producing similar findings. Houter's (1980) concluded although short term effects of methylphenidate on hyperactivity seem to be positive, long range administration of the drug fails to produce the same results. Kirby and Horne (1982) concluded that medication when it is effective produces a non-specific calming effect while behavior modification tends to affect the specific behaviors targeted.

Teaching of cognitive skills and manipulation of classroom and home environments are used in behavioral and cognitive-behavioral approaches. Behavioral programs require the teacher's consistent attention which sometimes makes implementation both difficult and stressful. On the other hand, cognitive-behavioral approaches significantly reduce teacher involvement and instead place the responsibility for modifying the behaviors onto the child.

Kirby and Horne (1982) conducted a rather small study focusing on the question "Can the professionals (teachers and counselors) who are responsible for the teaching of hyperactive children be taught effective use of cognitive training procedures?" Their study included 15 children randomly assigned to either a cognitive-behavioral

modification (CBM) group or a non-treatment waiting list control group. The professionals in the study included six teachers, four of whom were in special education and two who had experience as elementary guidance counselors. The CBM treatment and theory was new to all of them. Their training included approximately sixteen hours of preparatory training, half with direct instruction and modeling. They worked with 8 children in the CBM group, implementing the cognitive-behavioral training for approximately 30 hours.

The results of this study concluded that the CBM group made significant gains on twelve of the twenty measures used to evaluate the treatment, while the no treatment group gained on two of the same twenty measures and significantly lost on two other measures. Comparisons of the groups reveal approaching gain scores statistically significance on five measures. Although the CBM gains were greater they were only statistically significant on two measures. This research shows promise that CBM procedures can be taught in a relatively short period of time to professionals and that attention and impulsivity are affected by CBM. This research also leaves some questions unanswered; such as will the effects of the treatment be long-lasting and if the techniques taught in training are transferred to the classroom setting.

Behavioral and cognitive-behavioral approaches have consistently proven highly effective with ADHD children and these techniques have equaled or surpassed Ritalin's effect in modifying such critical classroom skills such as remaining in seat, on task work completion, accuracy in work completion, reducing impulsive responses.

Studies indicate that elementary children can be taught to correctly observe and

record their own behavior, successfully engage in self-instructional training, and accurately self-administer reinforcers as prescribed in the behavioral-cognitive approach. Bowers et al. compared the effect of self and teacher administered reinforcement, it took place in a learning disability resource room. It was there that such behaviors as sustained attention and staying on task showed consistently greater benefits through self-administered reinforcers. Through Rosenbaum and Drabman's (1979) review of literature, many studies cited that the act of self-recording alone resulted in a significant increase in study behavior and a substantial decrease in disruptive behavior. Positive behavior changes outside the classroom setting were also cited.

### **CHADD'S PHILOSOPHY**

CH.A.D.D. is a national organization representing Children and Adults with Attention Deficit Disorder. The educator's manual emphasizes that parents and educators must first accept ADD as a disability and that ADD children are behaving in a way that is natural to them. Combining the ability to readily identify ADD's manifestations and knowledge about the disability can help parents and educators see that the child is in trouble, not the cause of trouble. (Mary Fowler, 1992)

The CH.A.D.D. manual provides some statistics concerning the educational outcomes from the Barkley et al. (1990) study which followed children with the disability for eight years.

- \* 30% had been retained in a grade at least once, with many retained more than once;
- \* 46% had been suspended, often more than once

\* 10% had dropped out of school

Longer term follow-up studies of children with ADD into adulthood included:

\* Over 50% retained in a grade at least once

\* 35% never complete a high school education

\* Only 5% complete college

CH.A.D.D.'s interpretation of intervention is that the ultimate goal of all intervention is to help the child be competent, to do well in life, and to feel a sense of "I Can!" (Mary Fowler, 1992). Many interventions will be short term steps but should be taken so they create a positive self-image and a sense of self confidence.

CH.A.D.D. pulls from research obtained by Dr. Zentall, a premier researcher in the field of education to study ADD, and Dr. Barkley. Their research describes children with ADD as seekers of stimulation, biologically driven to look for the novel and interesting. Unfortunately, what catches the child's attention is generally not the relevant information. They believe in the performance of the child although it does require a more enriching environment, with clear rules and structure, lots of rewards. These children need the planning done for them, or else they need plenty of motivation to encourage their own use of planning.

## **CHAPTER III**

### **DESIGN OF THE STUDY**

The use of behavior modification strategies with ADD children has been supported in the research. The purpose of this case study is to use two different types of behavior modification and to see if they decrease the number of inappropriate behaviors.

#### **Case Selection**

The setting of this study is in a regular first grade classroom in the Millville School District. The classroom contains twenty-three children. The subject is a seven year old boy who has been diagnosed as having the characteristics of ADD.

#### **Instrumentation**

In order to record the behaviors of the subject in the classroom, a table for recording data was developed. The table listed the three behaviors which most interfered with the child's learning environment.

#### **Procedure**

Prior to intervention, the child was observed for five consecutive days during the school day. Lunchtime and special areas such as library, art, music and gym times were not included. Each time the subject exhibited any of the behaviors it was marked on the chart as a check. The behaviors included; using hands, feet or objects to touch other children, talking and playing in line, calling out, sitting in seat incorrectly, beginning work before directions were completed, not following directions the first time, talking

when the teacher or another child is talking, playing with objects in his desk.

After the completion of data collection, intervention was begun. Intervention consisted of behavior modification techniques. A traditional behavior modification technique was introduced and implemented for six weeks. Three behaviors were targeted. The subject kept an individual chart on his desktop and received a sticker each time he was observed demonstrating appropriate behaviors. When the chart is filled he earns computer time.

A response cost technique was introduced and implemented for an additional six weeks. The same three behaviors were targeted. The subject was given 10 counters in a film container at the beginning of each day. A counter is removed each time the subject was observed demonstrating any of the targeted behaviors. At the end of the day if there are any counters left he could trade them in for computer or free time.

After 12 weeks, data collection will be completed as reported.

### **Hypothesis**

A first grader exhibiting characteristics of ADD will show a decrease in negative classroom behavior following a response-cost approach compared to a traditional behavior modification program.

### **Analysis**

The data will be analyzed according to the number of incidences of each of the three designated behaviors using a traditional behavior modification and a cost-response approach. Kratochwill and Brody (1978) demonstrated the predominance of visual inspection as the preferred method of data analysis in the single-subject research

literature. Visual analysis according to Kazdin (1982) refers to reaching a judgement about the reliability or consistency of intervention effects by visually examining graphed data.

## CHAPTER IV

### ANALYSIS OF THE DATA

The purpose of this study was to compare the effectiveness of a response cost approach and a traditional system of behavior modification in decreasing negative classroom behavior in a first grader identified with characteristics of ADD.

Baseline data was obtained for a period of five school days, recording the number of incidents for six behaviors. The frequency of occurrences of the six behaviors are reported below in Table One.

**Table Number One - Baseline Behaviors**

	Day 1	Day 2	Day 3	Day 4	Day 5	TOTAL
Touching	1	0	2	2	0	5
Talking when teacher is talking	2	4	0	2	0	8
Sitting in seat in	4	5	4	1	7	21
Forgetting to follow directions the first time	4	4	3	3	3	17
Talking/Playing in line	4	1	0	2	2	9
Working ahead of class	2	1	1	0	2	6

The three behaviors with the highest number of incidents became the targeted behaviors. These targeted behaviors became known as Behavior One = sitting in seat incorrectly; Behavior Two = forgetting to follow directions the first time; and Behavior Three = talking/playing while in line. Intervention included six weeks of traditional behavior modification followed by six weeks of response cost. Data was collected and recorded. Results were analyzed for each week.

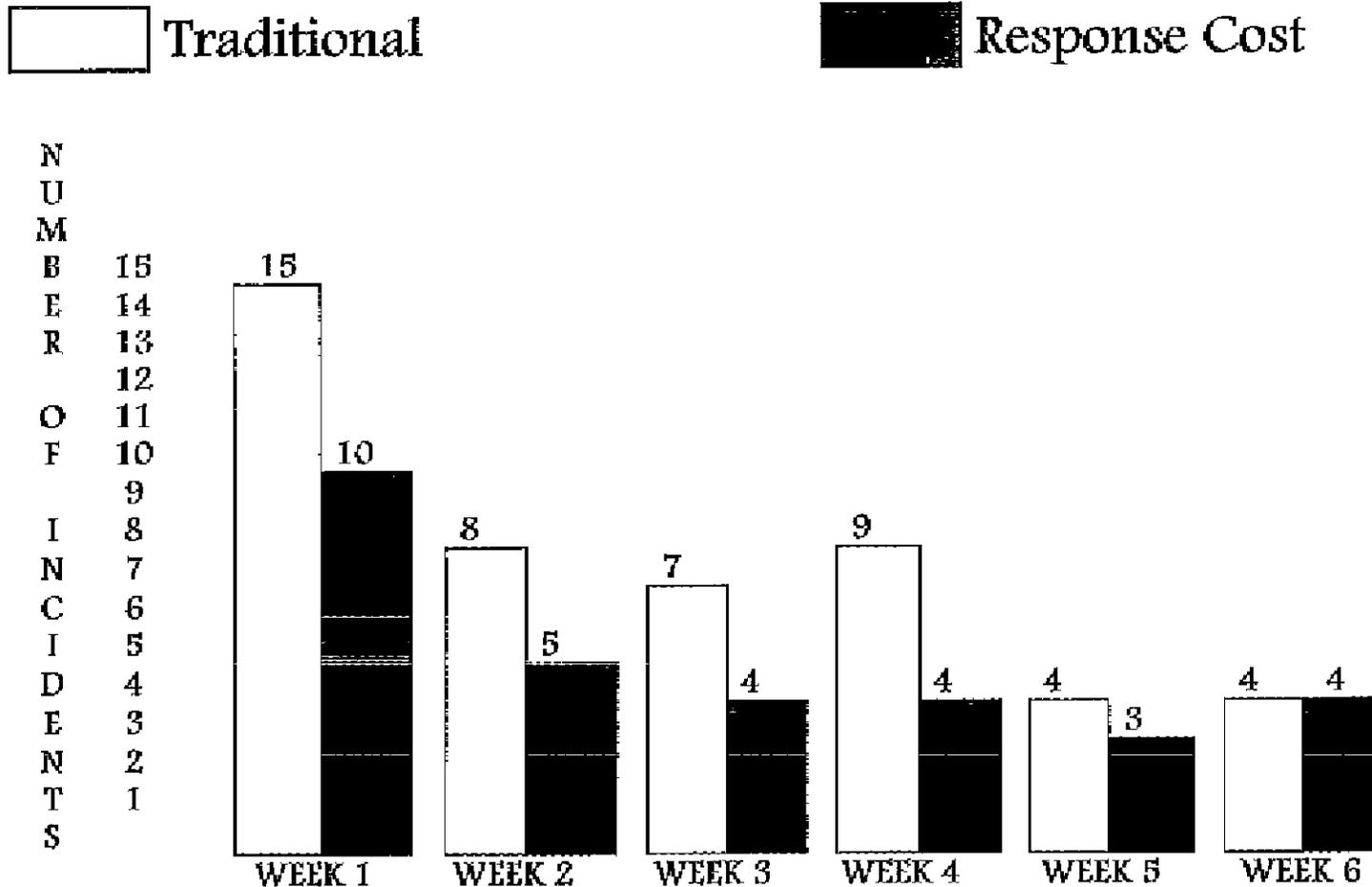
Graph number one reflects the number of incidents of Behavior one; sitting in seat incorrectly, for six weeks using the traditional approach followed by six weeks using the response cost approach to behavior modification. Initially, the response cost approach showed a greater decrease in the behavior. The difference grew smaller as the weeks went on and eventually the approaches were equally effective during the sixth week. It should be noted, the data collected for response cost during the fourth week included only two days due to three days off for snow.

Graph number two displays the number of incidents of Behavior two; forgetting to follow directions the first time. During the first, second and fourth weeks of response cost the number of incidents were less than during those same weeks using the traditional approach. The third, fifth, and sixth weeks show that both approaches were equally effective in decreasing the number of incidents of Behavior two. The data for response cost during the fourth week was collected for two of the five days due to school closing.

Graph number three reflects the number of incidents of Behavior three; talking/playing in line. The graph shows the six weeks using the traditional approach

followed by six weeks of response cost. During the first and sixth weeks the traditional approach showed a greater decrease in the number of incidents. During the second week the response cost approach yielded one less incident than the traditional approach. During the third and fifth weeks both approaches were equally effective. The data collected for the fourth week of response cost included only two days as compared to five days for the same week of the traditional approach.

# GRAPH ONE - BEHAVIOR ONE SITTING IN SEAT INCORRECTLY

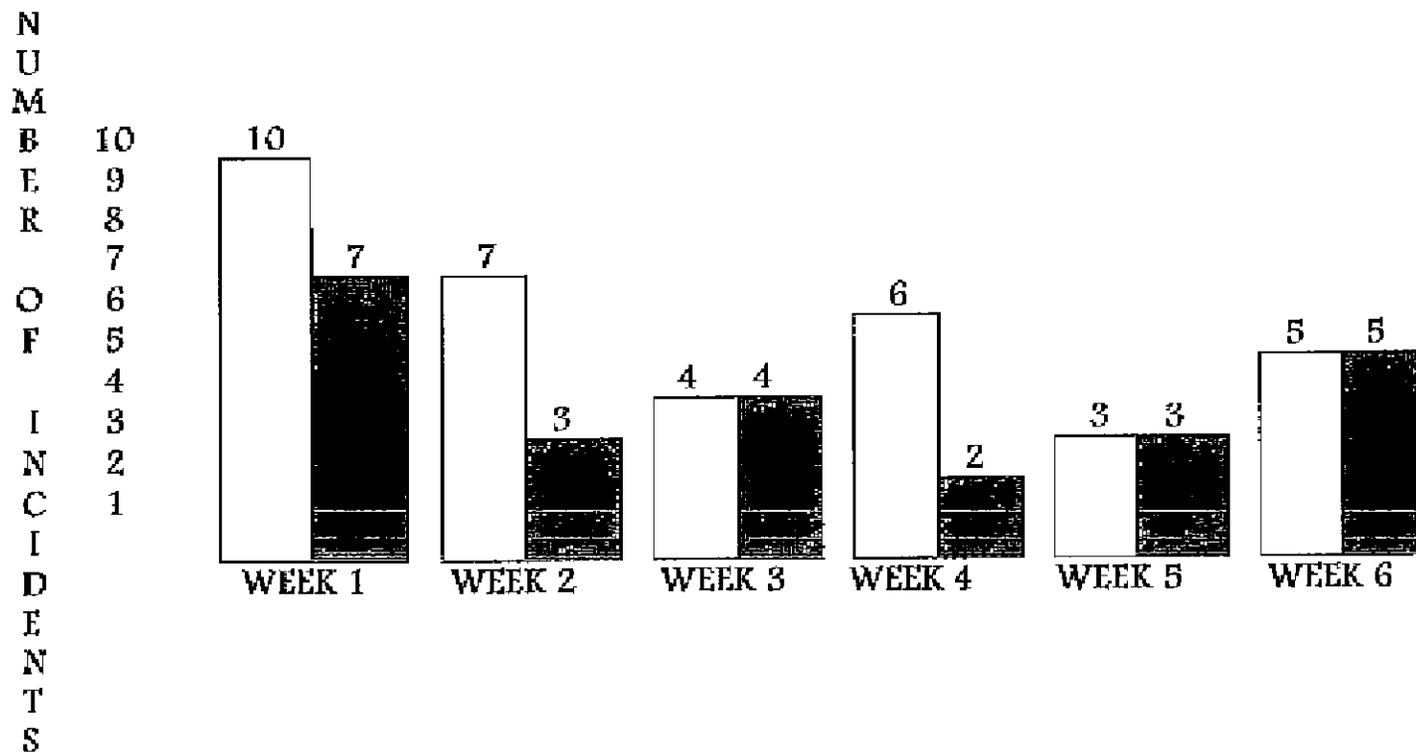


# GRAPH TWO - BEHAVIOR TWO

## FAILURE TO FOLLOW DIRECTIONS THE FIRST TIME

Traditional

Response Cost



# GRAPH THREE - BEHAVIOR THREE TALKING/PLAYING IN LINE

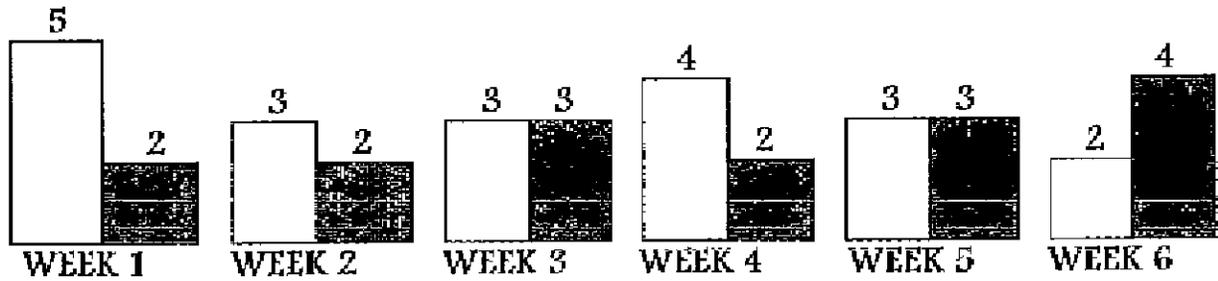


Traditional



Response Cost

N  
U  
M  
B  
E  
R  
O  
F  
I  
N  
C  
I  
D  
E  
N  
T  
S



## CHAPTER V

### DISCUSSION AND CONCLUSION

This study was conducted to compare the effectiveness of a traditional system of behavior modification and a response cost method in decreasing negative classroom behaviors in a youngster identified with characteristics of ADD.

It was hypothesized that after twelve weeks of behavior modification the youngster would show a greater decrease in negative classroom behavior using the response cost approach compared to a traditional behavior modification approach.

The results indicated that the response cost approach showed a greater decrease in negative behavior. Behavior #3 was the only behavior that showed a greater decrease using the traditional method for two out of the six weeks. In six occurrences the traditional approach of behavior modification and the response cost showed equal efficacy. The use of behavior modification with ADD children appears to have benefits which would merit its use as a way of decreasing negative classroom behavior. Looking at the baseline numbers from Table One the number of incidents for the targeted behaviors showed significant decreases. This supports Kirby and Horne's (1982) study that behavior modification tends to affect the specific behaviors targeted. The researcher observed the youngster in this study showed decreases in the targeted behaviors however other negative behaviors which were not targeted, such as calling out, increased. This may demonstrate a need to adjust the behaviors targeted accordingly when utilizing these methods.

When using behavior modification methods the individual may need a period of adjustment. The youngster in this study was, at first, unsure of his computer skills which may have affected his determination to obtain computer time as a reward. Once the youngster became familiar with the behaviors targeted and the process of receiving stickers on his chart as a reward and/or the removal of chips for negative behavior, along with observation of other classmates using the computer, his interest level increased. A limitation of this study is that only one child was involved. A child's interest level in the program may be influenced by the type of reward offered. This makes it an important factor in the process. This point was further tested by the researcher after the conclusion of the twelve weeks used in this study. The youngster's response cost plan was modified. Now the plan called for ten chips given at the beginning of the week and a chip was removed by the youngster when a negative behavior was observed. Once a chip was removed it was not replaced the following day. The goal was to have at least one chip left by Friday afternoon in order to earn a prize. The prizes revolved around a Batman toy of some sort. This youngster is a Batman fan and so his interest level peaked. After two unsuccessful weeks his determination did not lessen and at the end of the third week he earned his prize. Since then he has been successful for five consecutive weeks and the amount of chips given at the beginning of the week has been decreased to seven.

In addition to the youngster's individualized behavior modification program he was also part of a classwide behavior modification program which provided additional support to promote positive behaviors. He is a well liked boy and has a desire to please his classmates, his teacher and his parents so this researcher felt at times with certain

behaviors the classwide behavior plan was more accommodating than his individual one. The combination proved to be beneficial.

In summary, this study demonstrates that consistent behavior modification approaches can be highly effective with ADD children. Overall targeted behaviors were decreased while maintaining a positive self image.

## BIBLIOGRAPHY

Barkley, R.A. "A review of stimulant drug research with hyperactive children." Journal of Child Psychology and Psychiatry, 1977, Volume 18, pp. 137-165.

Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), Washington D.C., American Psychiatric Association, 1994.

Douglas, V.I. & Perry, P. "Effects of reward on the delayed reaction time task performance of hyperactive children." Journal of Abnormal Child Psychology, 1983, Volume 11, pp. 313-326.

Fowler, Mary. CH.A.D.D.'s Educators Manual, 1992.

Gordan, Michael. ADHD/Hyperactivity - A Consumer's Guide, New York, GSI Publications, 1991.

Hallowell, Edward & Ratey, John. Driven to Distraction, New York: Touchstone, 1994.

Kirby, Edward & Horne, Arthur. "Cognitive-Behavioral Modification with Hyperactive/Attention Deficit Disorder Children," 1982. ERIC ED226563.

Korkman, M. & Peltomaa, K. "A pattern of test findings predicting attention problems at school." Journal of Abnormal Child Psychology, 1991, Volume 19, pp. 451-467.

Mann, Philip, McClung, Rose Marie & Suiter, Patricia. A Guide for Educating Mainstreamed Students, Needham, Mass: Simon and Schuster, 1992.

Meichenbaum, D. "The shift toward cognitive behavior modification." Exceptional Education Quarterly, 1980, Volume 1, pp. 83-88.

O'Brien, Mildred & Obrzut, John. "Attention Deficit Disorder with Hyperactivity: A review and implications for the classroom." Journal of Special Education, 1986, Volume 20, pp. 281-297.

Rief, Sandra. How To Reach and Teach ADD/ADHD Children. New York, The Center for Applied Research in Education, 1993.

Van der Meere, J., Van Baal, M. & Sergeant, J. "The Additive Factor Method: A differential diagnostic tool in hyperactivity and learning disability." Journal of Abnormal Child Psychology. 1989, Volume 17, pp. 409-422.