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STUDY IN THE USE OF MODIFICATIONS  
WITH STUDENTS DIAGNOSED WITH  
ATTENTION DEFICIT DISORDER

by  
Judith M. Thourot

A Thesis

Submitted in partial fulfillment of the requirements of the  
Master of Arts Degree in the Graduate Division  
of Rowan University  
1998

Approved by

Dr. Theodore Johnson

Date Approved April 30, 1998

## ABSTRACT

Judith M.Thourot  
Study in the Use of Modifications with Students Diagnosed  
with Attention Deficit Disorder  
May 1998  
Dr. Theodore Johnson  
Educational Leadership

The purpose of this study was to survey the modifications made for students who had been diagnosed with attention deficit disorder in two school districts and to compare the results with those recommendations made by experts. This was accomplished by comparing two school district programs: Waterford Township Public School and Edgewater Park School District.

A survey recorded the information on these recommendations. The results provided the documentation of individual student needs.

The conclusions indicated that there was a correlation between the modifications being used by the professionals in both school districts and the recommendations as proposed by experts.

MINI-ABSTRACT

Judith M.Thourot  
Study in the Use Of Modifications with Students Diagnosed  
with Attention Deficit Disorder  
May 1998  
Dr. Theodore Johnson  
Educational Leadership

This study hypothesized that there would be a significant difference between the behavior and academic modifications recommended by experts in the field of ADD and ADHD and the actual modifications being made for the students in an academic setting.

The conclusion states that the recommendations made by the experts are being utilized by academic professionals in two school districts. However, each district differed in the number and type of modifications used.

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# CHAPTER I

## INTRODUCTION

### Focus of the Study

As defined by Melinda Blau: “Attention-deficit disorder is an umbrella term for a category of complex, idiosyncratic, and chronic conditions characterized by impulsiveness, short attention span, low frustration tolerance, distractibility, aggressiveness, and, in varying degrees, hyperactivity; it affects anywhere from 3 to 9 per cent of all school-age children.” (1)

According to Daniel Safer of Johns Hopkins University Medical School, “Approximately 2.8 per cent of people age five through eighteen are currently taking Ritalin as part of their treatment for ADD.” (2)

The educational community is becoming more aware of the significant learning problems that are a result of children diagnosed with Attention Deficit Disorder (ADD) and with this information and the statistical data reported, the educational community has an obligation to become informed and knowledgeable in issues regarding students with a diagnosis of ADD. Students with ADD are more likely to have learning disabilities or exhibit behavioral disorders than other children. Poor school performance is often due to unfinished assignments, trouble following directions, fidgeting, excessive talking, and distractibility. Students with ADD often blurt out answers, interrupt others, and lose things. It has been found that not every student will have all the symptoms and any one of those symptoms can be referred to as normal in a child’s development. However, when a student exhibits a number of these behaviors, it becomes problematic, particularly in the school environment.

Because ADD makes the students unavailable for learning as opposed to a learning disability

that makes them unable to learn, it takes special approaches, techniques and modifications to effectively assist the students who view school as their biggest stumbling block.

Educating students has evolved greatly from the traditional one-room, individualized instruction format. The increasing curriculum demands and state guidelines place greater expectations on both the teacher and students. The question to be asked is: How can educators provide students who are diagnosed with ADD the tools for academic success, tools that with or without Ritalin will equip the students for long term results?

The burden which comes to bear on the educational system is identifying and assisting students with attentional concerns.

Since not all students diagnosed with ADD have a learning disability, they do not fall under the rules and regulations of Special Education and are not privy to all the special related services that are state and federally funded.

However, Section 504 of the Rehabilitation Act has been with us since 1973. Over the last several years, the Office of Civil Rights has been charged with the enforcement of Section 504 and has become pro-active in the field of education.

Many aspects of Section 504 are directly related to education and require a response from the regular education staff and curriculum in addressing the needs of children who are as the Act states: ...handicapped students, defined as those having any physical or mental impairment that substantially limits one or more major life activities (including learning).

It is under Section 504 that ADD students are identified and given services for assistance in the academic venue. A formal plan is devised that clearly outlines the modifications that will be made and how they will be carried out. This can be facilitated through a number of techniques

such as positive discipline, simple, clear instructions, organizational techniques, routines and consistency. According to Armstrong the approaches used should include: Cognitive, ecological, physical, emotional, behavioral, social and educational. (3) He also urges, “We need to initiate a new field of study to help children with behavior and attention difficulties - one based upon their strengths rather than their deficits.” (4)

When attempting to identify the strengths that Armstrong suggests, school districts need to place the children on a level playing field. Through the use of Ritalin and any number and combination of modifications, a student’s strengths and success will surface as cream rising to the top of milk that has “settled”.

Although the process of identifying and evaluating students for ADD is worth examining, the purpose of this paper was not to investigate this process but rather to look at the follow up and supportive practices provided in the educational environment.

The intent of this paper was to survey, study and evaluate current methods being used with students diagnosed with ADD. The effectiveness was demonstrated by the students’ success as outlined in their educational plan. Additional input from parents and professionals responsible for the ADD students was added to give a more complete student profile.

Issues at hand include: Do the intervention plans recognize behavioral, social, educational, and emotional needs of the ADD child? According to Armstrong, “What’s needed is a new vision of educational interventions to reflect a deeper appreciation for the whole child based upon a wellness paradigm...” (5) Are districts taking this holistic approach? Will the interventions taken demonstrate this?

Other questions to be considered: Do the school interventions interface with school

personnel other than the teacher? Are the modifications monitored for student success? Who determines the modifications and interventions for the student?

Finally, it is to be noted that educators recognize attention deficit disorder as a condition characterized by inattention, impulsivity, and overactivity and they see a need for strategies to decrease the intensity of these characteristics. Without intervention, children with ADD have difficulties in academic performance, behavior and peer/social relations.

It is hoped that strategies were identified in this study that have promise in the classroom.

#### Product Outcome Statement

Currently, there are no specific procedures for prescribing and evaluating for success, modifications recommended for students with attentional problems.

The need for this is evident by the number of referrals to the Child Study Team and the number of Educational Planning Team meetings conducted on students with attentional concerns.

In order to offer these students the greatest opportunity for academic and social success in the school environment, plans with recommended modifications need to be in place with a system for tracking success of these modifications.

#### The Specific Problem

What are the modifications that are being used in the classroom with students who have been diagnosed with ADD and how do these modifications compare with those recommended by the experts?

### Purpose of the Study

The purpose of this study was to obtain information about the existing methods used by teachers to address students with ADD at the elementary school level and to pool information on the recommendations of experts for comparison.

### Limitations of the Study

This study was limited due to a partial sampling of elementary school children in Edgewater Park, Burlington County and Waterford Township, Camden County.

The students' programs were followed from October through March, a sixth month period as opposed to a ten month school year and ranged in grades one through five.

### Setting of the Study

Waterford Township is an expanding suburban residential community which encompasses an area of 37 square miles in the eastern part of Camden County.

Waterford Township Public School District is a Kindergarten through Sixth Grade district (including classes for preschool handicapped and special education students). There are three schools in the district: Waterford Elementary (Preschool Handicapped, grades 5 and 6), Atco Elementary (grades 1 and 2) and Thomas Richards Elementary (grades 3 and 4).

The total student population is 1,100 students. Average class size in grades 1-6 is 25 students.

The staff of Waterford Township Public Schools consists of a broad range of instructional and non-instructional employees. Instructional employees include the Superintendent,

administrative personnel for Business, Curriculum, Special Services, Affirmative Action, three Principals, one Child Study Team, Counselors, Specialized Teachers for Reading, Remediation, Computers and Gifted and Talented, Librarians, Art, Music (Vocal and Instrumental), Physical Education Teachers, Physical Therapist, Occupational Therapist and classroom teachers.

Edgewater Park School District is located in Burlington County with a population considered to be mid to low income and has been coined the “Rustbelt on the River”.

The district is comprised of two schools and encompasses grades kindergarten through eighth grade, with a total population of 873 students. The student population is described as “transient” with a 35% turnover exhibited over the past five years. This is reportedly due to the availability of renting potential within three large apartment complexes located in town.

The personnel in the Edgewater Park School District consists of a number of certified teachers as well as classroom aides and administrative personnel including the School Superintendent, School Business Administrator, a Director of Special Services and two building principals. The district also employs a Child Study Team and a School Counselor to address students with special needs.

#### Importance of the Study

Many children with ADD also have a learning disability. Others do not work up to their academic potential because of problems with attention and distractibility.

It is important for school personnel involved in the education of these children to be aware of the educational needs of each child in order to help each child realize his or her potential.

### Organization of the Study

Chapter 2 will present a literature survey of many techniques used with Attention Deficit Disorder. The information presented will include practical recommendations by experts as well as new and creative treatments that are being used or researched.

Chapter 3 will specifically look at the modifications and strategies being used by teachers when instructing students who have been diagnosed with ADD. The statistics on each child and the modifications along with other interventions (e.g. medication or counseling) will be reported. This chapter will also include survey results and interviews with professionals and parents.

Chapter 4 will present documentation of the methods used with the students diagnosed with ADD or ADHD over a six month period and include a summary of the most recommended methods as well as those actually used.

Conclusions of this study, its implications, its usefulness and suggestions of further study will be reported in Chapter 5.

### Definitions of Terms Used

Attention Deficit Disorder - a term used to describe a set of symptoms which include short attention span, trouble concentrating, distractibility and poor impulse control.

Americans with Disabilities Act - ADA, 504 - part of the Rehabilitation Act of 1973 that prohibits discrimination against handicapped persons and provides such persons with a free, appropriate public education.

Clonidine - an antihypertensive drug that is prescribed for children with attention deficit disorder that involves aggression or a tic disorder.

Conners Teacher Rating Scale - an index used to determine factors of attention deficit disorder with and without hyperactivity.

Dexedrine - a stimulant medication similar to Ritalin that is frequently prescribed for children between the ages of three and six to treat attention deficit disorder.

Ritalin - a nonamphetamine based stimulant most often prescribed for children with attention deficit disorder.



NOTES

1. Melinda Blau, "A.D.D. The Scariest Letters in the Alphabet," New York, (Dec. 1993), p. 46.
2. Laurie L. Hayes, "Ritalin Use Has Doubled In Past Five Years," Counseling Today, (May 1997), p. 18.
3. Thomas Armstrong, "A Holistic Approach to Attention Deficit Disorder," Educational Leadership, (Feb. 1996), p. 36.
4. Armstrong, p. 35.
5. Armstrong, p. 34.

## CHAPTER 2

### Review of Literature

#### The History of Attention Deficit Disorder

Historical accounts of the presence of conditions or activities that can be called ADD are plentiful. Early on, the attributes of ADD were linked to brain damage and given such names as Minimal Brain Dysfunction and Hyperkinetic Syndrome. The early focus on brain injury was initiated in 1902 and researched over the next three decades according to Hallowell and Ratey, “In 1902, Dr. George F. Still said that children he had treated who were impulsive, hyperactive, inattentive, and troublemakers were suffering from defects in moral control and he attributed their problems to organic disorders of the brain.” (1)

As the years progressed, thinking about the disorder evolved over time as scientists discovered more connections such as prenatal complications, encephalitis and insults to the brain. The association between brain damage and behavioral problems seemed to be growing stronger. In 1937, Dr. Charles Bradley reported successful treatment using the central nervous system stimulant Benzedrine. This seemed to support the idea that behavioral problems were indicative of an organic or neurological deficit.

In the 1940's, according to Larry Silver, “It was soon realized that there was little proof of brain damage and that with most of the children the problems seemed to relate to a difficulty with brain functioning.” (2) Silver also states, “In 1966, the U. S. Department of Health, Education and Welfare established a task force to clarify the terminology surrounding

the disorder. The governmental agency settled on the name Minimal Brain Dysfunction or MBD. Children with MBD were said to be of near average to above average intelligence and to have learning or behavioral disabilities caused by functional disturbance of the central nervous system.” (3)

Today, there are areas of the brain that are still being investigated. Robert S. Boyd reports information from Julia Schweitzer, a psychologist at Emory University in Atlanta, “...MRI scans of children who have attention deficit disorder, which affects one out of 20 youngsters in America, show little or no response in their working memory area. These kids have trouble taking notes in class or remembering the last paragraph they read. We may be able to find drugs that help them.” (4)

Although drugs may be considered in treatment, with the development of diagnostic tools such as the Conners Rating Scale and the DSMIV, along with the realization that ADD is a combination of many problems, diagnosis is complex and pharmaceuticals such as stimulants are singularly not the answer.

Although ADD has been and continues to be widely researched, there is no universal agreement on what constitutes ADD, what causes it, or how it should best be treated. The variability in each individual child as well as the constellation of other aspects in the child’s life complicates and demands a very systemic approach.

### Management of ADD in Children

Treatment for an ADD child seems most successful through a multi modal approach provided by a team of professionals such as the pediatrician, neurologist, counselor, teacher and

parents. On the forefront and the first means of addressing the symptoms of ADD is the use of pharmaceuticals.

### Medical Management

The use of medication is considered highly effective when treating children with ADD. Since Dr. Bradley's use of Benzedrine in 1937, other drugs were developed and according to Lisa Bain, "In the 1960's Ritalin was developed and quickly became the most widely used treatment for what was called hyperkinesis. Other commonly used stimulants include Dexedrine and Cylert." (5)

The concept of using a stimulant to treat hyperactive behavior may seem nonsensical since these drugs are known to increase behavior activity. This may be true with high doses, however as Bain states, ".....in low doses prescribed by most physicians, these drugs enhance attention and thereby suppress overactivity. In addition, they increase mental alertness and the ability to focus and concentrate, while they reduce fatigue, brighten spirits, and sometimes produce a mild sense of euphoria." (6) In other words, stimulants seem to help control the core problems associated with ADD. The documented success of the use of stimulants with ADD children factors into the decision parents must make when deciding on a treatment. Lynne Weisberg and Rosalie Greenberg report, "The major class of drugs used to treat ADHD in youngsters are stimulants, with an estimated 200,000 to 400,000 children in the United States taking stimulants for attentional and behavioral problems." (7)

### Behavior Management

According to Lisa Bain, “The term behavior management refers to the number of techniques that are designed to change or eliminate undesirable behaviors and increase wanted behaviors through the use of rewards, skills training, and environmental manipulation.” (8) It has been found that despite the effectiveness of medication, it does not have long lasting benefits for the child with ADD because it does not help with the academic and social functioning. The challenge is to find approaches that enable the child to become responsible for controlling his or her behavior. One method of addressing the impulsivity aspect of the ADD child is through problem solving therapy. According to Weisberg and Greenberg, “Problem solving therapy teaches children how to take things in perspective. They need practice at imagining the consequences of their action and at grasping how one thing causes another event.” (9)

Parent training is another effective way to help children with ADD manage their behavior. It teaches parents how to focus not just on the child but on family interactions and teaches them techniques or parenting skills geared specifically to ADD children. According to Harvey Parker, Ph.D., “For many ADHD and ADD children and their families, psychological counseling is a necessary component of the treatment plan.” (10) This can take on many forms: family therapy, individual therapy, or problem solving therapy. Parker also feels strongly that psychological counseling is very important in helping the child “to learn more effective problem solving behavior patterns and to better understand their behavior.” (11) When their behavior is under control, no one would guess that there was a problem. But for the ADD child, their behavior is subject to impulse and their judgement impaired, which leads to perceptions that the child has a bad attitude or likes to cause trouble. This does not endear these children to their classmates or

teachers when they reach school age. Social skills training can be effective in helping children choose more acceptable ways of interacting, solving problems, and communicating with their peers. In addition to other behavioral and medical treatments, some psychologists use cognitive-behavioral methods. These methods are designed to help children self-monitor their behavior with a supervising adult.

Drugs are not the only option for Attention Deficit Hyperactivity Disorder. A great concern over the use of Ritalin has arisen with Luise Light reporting, "In a 1995 report, the International Narcotics Control Board (INCB) of the United Nations noted the huge increase in the use of Ritalin by children with ADHD in the United States, five times more than in the rest of the world." (12) She quotes Hoffman, a specialist in environmental medicine, "What Ritalin does to ADHD children is to temporarily slow them down and give them the appearance of behaving normally, but it does not address the underlying cause of their problem." (13) This information indicates an overuse of Ritalin for the treatment of ADD children and prompts a look at other alternatives.

According to Blau, Gene Arnold, a special expert in the Child and Adolescent Disorders Research Branch of the National Institute of Mental health was a co-collaborator on an ambitious five year research project to clarify which treatments work best for certain ADD children. He states, "While there is no doubt of the short-term benefit of medication, no one has satisfactorily demonstrated long term benefits." (14) This idea leads to speculation on other forms of treatment for ADD. For parents who are convinced that their child suffers from ADHD or ADD and are dissatisfied with Ritalin and its unproven long-term results, alternative therapies can be chosen. Some of the most promising include:

### Nutrition

Pat Wyman and Sandra Hills feel that the implications of taking schedule II drugs such as Ritalin and Dexedrine are too numerous and serious to be ignored and query, “Could it be that certain factors in our children’s lifestyles actually contribute to the symptoms of a learning disability? Are there safer and more humane alternatives to drugging millions of children just so they can attend school?” (15)

There has always been a recognized connection between learning and nutrition. Learning requires that the brain function at optimum levels. Wyman and Hills suggest, “When brain functions are impaired, symptoms like memory loss, lack of concentration, and hyperactivity can result.” (16) Based on this information, it is noteworthy to look at how nutrition can play an integral part in the treatment of ADD.

The Feingold Diet which eliminates artificial colors and flavors as well as preservatives is based on the hypothesis of Dr. Ben Feingold that food additives are the cause of hyperactivity.

Food allergies and elimination diets are based on the idea that a wide number of foods might produce the symptoms of ADHD in certain children.

Following nutrition guidelines is low risk in terms of side effects and may be more palatable to parents as a form of treatment along with vitamin supplements.

### Vitamin and Supplement Therapy

Another nontraditional, yet practical approach to treating attentional disorders involves the use of large doses of vitamins. This idea harkens back to the premise suggested in the 1930's that ADD was connected to some type of brain deficiency. This form of therapy, while not

based on this exact premise, does support the notion that hyperactivity and attentional problems are caused by a deficiency of certain chemical substances in the brain and that these deficiencies can be remedied by oral intake of large doses of vitamins, usually C and B.

One of the few examples of research completed on adding food supplements to children's diets is a study that took place in Nicaragua, a country where malnutrition has a large impact on the population. According to Claudia J. Jarrett, Director of the Center for Family Wellness, this study looked at the results of feeding blue green algae to children who suffered from malnutrition, ranked low in academic performance, behavior, and attention. At the conclusion of the study, marked improvement was noted in several areas, including increased class participation and ability to focus. (17)

Other studies are being conducted, such as one by Martin Martek, who claims that using DHA supplements can be useful in treating various maladies and states, "Scientists think DHA also may be useful against attention deficit hyperactivity disorder." (18)

In strengthening the belief of the connection between mind and body, chiropractic treatment is being researched as an option. Spinal manipulation has widely been used to treat many maladies. The newest area to be studied through chiropractic methods is that of learning disabilities. According to Lisa Bain, "Chiropractic has been promoted as a possible non-drug intervention for ADHD, but its effectiveness has not been clearly established at this time." (19) Still, many branches of chiropractic treatment are being investigated such as Neural Organization Technique, Massage and Cranial Sacral Manipulation.

Other new alternatives include looking at the effects of biofeedback and related therapies. One study conducted by Rossiter and LaVague compared the effects of EEG biofeedback and



stimulant medication in reducing ADHD symptoms. Their results indicated that the EEG biofeedback program is an effective alternative to stimulants. They state, “EEG biofeedback leads to lasting symptom reduction.” (20)

This chapter has not presented all of the traditional and nontraditional methods of therapy available that may be beneficial to a child with ADD. New ideas and treatments continue to be investigated and developed. However, it is clear that there is no one single treatment for ADD/ADHD. As stated by Wingert and Kantrowitz, “Medical doctors tend to accentuate differences in genetics, as well as brain organization and function. Psychologists focus on dysfunction in areas like perception, processing, memory, and attention. Teachers zero in on the specific areas of academic difficulty.” (21) This leads to concerns of how the educational professional can address these concerns.

### ADD and the School Age Child

For school age children and ADD, school is a frustrating experience because they can't demonstrate what they know. Since learning disabilities relate to reading and language (writing and spelling), students usually fail in the three R's.

Complicating this picture in education is the fact that according to Wingert and Kantrowitz, “Many learning disabled children also have a variety of motor, social, memory, organizational and attention problems that effect their schoolwork, such as attention deficit disorder (ADD).” (22) They also state, “Researchers estimate that up to 30% of children with learning disabilities may have ADD which makes it even harder for them to focus.” (23)

Educators recognize attention deficit disorder as a condition characterized by overactivity,

impulsivity, inattention, and disorganization. Fortunately, there are a number of adjustments teachers can make in their classroom to help ADD children overcome many of their difficulties. Beginning with the environment, the following modifications can provide the opportunity for the ADD pupil to have his/her best opportunity for successful learning.

### Environment

There is a definite interaction between the child and the environment. Thomas Armstrong states, “Some kids have difficult temperaments. Temperament may interact with an environment that is not particularly flexible or resilient to that particular temperament.” (24)

Due to extreme distractibility which is part of the ADD student’s disability, everything in the classroom competes for his/her attention. Classroom environmental factors such as light, noise, seating, and temperature can influence the child’s capacity for learning. Suggestions made by Suzanne Stevens include:

- earplugs and stereo headsets playing white noise
- low intensity lighting or wearing a baseball cap
- close monitoring of classroom temperatures  
(below eighty, above mid-sixties)
- varied seating such as the front row, near a door  
rather than a window and alternative postures (25)

Sandra Reif also feels that there are many environmental modifications in the classroom that can make a significant difference with ADD students. She suggests, “Teachers should take care to seat students away from distractors such as the door, learning centers, noisy heaters, air conditioners, etc.” (26)

Suzanne Stevens strengthens this insight, “Research makes it clear that some very small

adjustments in the classroom environment can make a gigantic difference in a student's academic achievements." (27)

### Inattentiveness

An ADD child tends to be active rather than passive in their attentiveness. In the past, erroneous thinking of ADD was that the children had too much stimulation and they would progress better in a sterile environment. Although it is important to remove distractors such as the abovementioned from the child's environment, the right kind of stimulation is an important part in the child's classroom.

The school day is fraught with frequent transitions and various activities. For an ADD child this can pose a problem because changing activities means shifting gears and an opportunity to drift. This can cause continual conflict between the teacher and the student in terms of completing assignments, remaining on task and working within time frames.

Currently, the most available option for use by the classroom teacher in addressing the unique learning style of an ADD student is the computer. Dr. Armstrong feels, "The computer is particularly effective because it is interactive, has immediate feedback, is novel, and addresses shorter attention spans." (28)

Suzanne Stevens reinforces this idea, "Computers offer an even more powerful aid to overcoming distractibility and short attention span." (29) While the computer can offer the tactile and kinesthetic involvement that seems to be so important, it can also, "trigger the hyper focus mechanisms that make them get totally absorbed in whatever activity is on the screen since it produces a state that is the extreme opposite of their usual classroom distractibility, it can be

helpful in all academic areas.” (30)

Recommendations to help students stay focused are:

- keep instructions simple
- keep instructions clear
- be sure you have the child’s full attention before you ask him to do something
- use a hand signal to help the child pay attention
- provide sequencing
- remind the child to stay with one thought when talking or one task when it has been started (31)

### Overactivity and Impulsivity

Since the overactive and impulsive nature of the ADD child is sometimes one and the same when they are in a school situation, the recommendations made will address the concerns raised by both these issues. Dr. Armstrong states, “Many kids who are labeled ADD or ADHD are in fact under stimulated and the hyperactive behaviors they engage in are their attempts to give an optimal level of stimulation to themselves.” ( 32)

Understanding this can assist teachers in providing an environment that can actualize human potential. In order to accomplish this, Armstrong recommends, “What we need to do as educators is to provide that stimulation to students in a learning environment with intensive experiences that can actually calm them down.” (33)

One way that is suggested in doing this is by providing tactile-kinesthetic involvement in the lessons. As defined by Sandra Reif, “Tactile kinesthetic strategies make use of manipulatives, computers, games, movement/dance, role playing, projects, hands-on-activities, writing in the air, and demonstrations.” (34)

A creative outlet such as a play can tap into the usually inventive nature of an ADD child.

Armstrong feels, “There is too much emphasis on controlling the child and not enough on empowering.” (35) This is one activity that would afford the student the opportunity to create on their own terms while addressing the strong need for hands on experiences through set making, costume design and movement.

Impulsivity refers to acting out before one thinks. For the ADD child this can include calling out in class, interrupting peers and the teacher and generally annoying students. The impulsive nature of an ADD child can lead to problems both academically and socially. Armstrong feels, “Interventions that need to be made have to do with systems and interactions.” (36) Bain writes, “An appropriate educational program for children with ADHD would also include social skills training as part of the curriculum.” (37) She also suggests, “School based social skills programs involve training teachers and playground aides to cue and reward positive social (prosocial) behaviors in children, such as listening when someone else is talking, taking turns, sharing, and making a new friend.” (38)

Teachers need to pay special attention to the ADD child by making a lot of eye contact, fostering connectedness and as recommended by Hallowell and Ratey, “Try discreetly to offer specific and explicit advice as a sort of social coaching.” (39) For example say, “Before you tell me your story, ask to hear the other person’s first.”

Positive interaction with classmates can be a great advantage to the ADD child. Through positive relationships, he or she can make use of a “buddy” in class. Suzanne Stevens calls this the “Good Neighbor Plan” and feels, “When given the opportunity, most children will gladly help a classmate without expecting anything in return.” (40)

Relating to others in a positive manner is important whether the child is involved with peers

or adults. Sometimes the teacher may have to create methods of encouraging this by designing plans specific for the child. Behavior management strategies are often needed in the classroom and should aim to teach the child better means of self control.

The following are several school based programs:

*The Daily Report* - targets a few specific misbehaviors which the teacher keeps track of during the day and offers positive reinforcements for compliance.

*Contingency Management and Response Cost* - the child must fulfill certain criteria before he/she can receive a benefit and are delivered immediate negative consequences for inappropriate behaviors. (41)

In the area of discipline, Wendy Coleman recommends, "Choose one or two behaviors to work on at a time. Change comes gradually and is easier on you and the child if it is done in small, focused steps." (42)

The following suggestions are everyday means of relating to the child in a positive manner:

- avoid judgmental comments
- never belittle or humiliate the child
- use descriptive praise
- teach rules of behavior and how it affects other people
- tell the child what you want him/her to do rather than what you don't want him/her to do (43)

Positive reinforcement and token reinforcement are a means of increasing desired behaviors.

Some techniques prove more effective than others.

- Reward the child with praise or a token every time he/she displays a positive behavior
- Try both individual and partial schedules of reward
- Try individual and group contingencies (i.e. the child is rewarded when he exhibits a positive behavior, or the whole class is rewarded when the target child reaches a certain level of performance) (44)

### Summary

The research reflects the idea that treatment of ADD will not make it go away. There is no magic pill or cure. The characteristics that are unique to children with ADD are inborn traits that have to do with behavior and temperament. However, treatment gives hope that children with ADD can meet their goals and be successful in their endeavors with the appropriate modifications.

Most experts agree that without interventions, children with ADD have difficulties in academic performance, conduct, and peer relations.

Lisa Bain reports, “The American Academy of Pediatrics recently issued a statement that medication should not be used alone in the treatment of ADHD; rather, proper classroom placement, physical education programs, behavior modifications, counseling, and provision of structure should all be tried first.” ( 45)

The research is far from comprehensive. However, strategies were identified that hold promise in the classroom.

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## CHAPTER 3

### Design of the Study

In this study, ten students who were diagnosed as ADD were reviewed. The intent was to identify recommendations and modifications that proved effective in addressing ADD students' needs. The modifications were based on the students' weaknesses and needs as demonstrated in the input from the Conners' Rating Scales which is an instrument based on childhood and adolescent problem behavior, Child Attention Profile, a document developed by the Edgewater Park Schools, and observations by the case manager and the teacher. In some instances, an examination by a neurologist, psychiatrist or pediatrician and a social history documented by the School Social Worker offered additional information on the students.

A review of records indicated the evaluation results, diagnosis and included a summary, impressions, and recommendations. The student's Individual Education Plan or Individual Intervention Plan was based on this information and distributed to the classroom teachers. Student success was monitored through behavioral reports, report card grades, interim reports and teacher, case manager and parent input.

### Description of the Instrument

Conners' Parent and Teacher Rating Scales are widely used instruments for clinical and research applications with children. They are used to characterize the behaviors of a child and compare them to levels of appropriate normative groups. The two scales are used to combine information from both the teacher and the parents in an effort to provide a complete diagnostic

picture.

The Conners' Teacher Rating Scales is a rating instrument completed by the child's teacher. Each item is rated with one of four responses: not true at all or seldom, just a little true or occasionally, pretty much true or often, very much true or very often.

Edgewater Park developed policies and procedures that were field tested from February, 1994 through March, 1996 and are now in implementation. The purpose of these policies and procedures was to put in place a system to identify, assess and treat students with Attention Deficit/Hyperactivity Disorder (ADHD).

When a teacher is concerned about a student's level of inattention and/or hyperactivity-impulsivity, a referral is made to the Pupil Assistance Committee (PAC), which consists of the school counselor, principal, speech therapist, school psychologist, school nurse and two teachers.

When a student is initially reviewed by PAC, a determination is made regarding the need for an initial assessment of ADHD. Also, at that time, an initial intervention plan including procedures to assess, recommend treatment, and determine the outcome is devised.

The initial assessment and intervention procedures included:

- \*A referral made to the Pupil Assistance Committee (PAC) determined the need for an initial assessment of ADHD
- \*The classroom teacher completed the Child Attention Profile (CAP), conducted direct observations and reviewed educational records
- \*The modifications in the treatment planning were made at the PAC meeting

The comprehensive assessment of ADHD students in Edgewater Park consisted of administering the ADHD Rating Scale IV with a diagnostic criteria of ratings of “pretty much” or “very much” on at least six of the nine items.

Ratings at or above a T-score of 65 on the Teacher Report Form and ratings at or above a T-score of 60 on the Child Behavior checklist indicated attentional problems.

Other diagnostic criteria included:

- \*Age of onset of ADHD - like symptoms before seven years of age
- \*Evidence the ADHD - like symptoms had been present for at least six months
- \*The decision regarding the diagnosis was made by the members of the Child Study Team along with the pediatrician.

Data obtained through the initial assessment process is reviewed at a Pupil Assistance Committee meeting no later than four weeks after the request for the assessment is made. Also at the PAC meeting data regarding intervention and modifications in treatment planning are made.

For every child who is diagnosed with ADHD, an individualized intervention plan which includes academic and behavior modifications is designed.

### Description of the Sample

The subjects who participated in this study were chosen due to their diagnosis of Attention Deficit Disorder as demonstrated in their evaluations and the results of the Conners Rating Scale or the ADHD Rating Scale IV. The intent was to identify the recommendations that were

effective in addressing their weaknesses or needs.

The students who were chosen for the study were done so with input from the case manager of the Child Study Team who monitors the students' academic success. The subjects ranged in grade levels first to fifth with an age range of five to ten. Ten students were studied in all--five students from the Waterford School District and five from the Edgewater Park School District. Six of the ten students were classified with an Individual Education Program with the treatment of the students' disability ranging from medication to behavior management plans. All student plans were implemented by the teacher and monitored by the case manager.

#### Description of the Data Collection

In Waterford, all teachers of the students in the study were administered the Conners Teacher Rating Scale. These scales were not intended to be the only means of judgement of a child's diagnosis of ADD. In all cases the counselor, school psychologist and social worker combined the results of the Conners Scale with parent and teacher interviews, direct observations and a review of medical records.

A rapport was established with the classroom teacher and the professional responsible for administering the Conners Scale and designing the modifications. Through constant interaction and follow-up on the students' progress, the case manager was able to determine the effectiveness and monitor the students' programs for any changes that were needed.

In Edgewater Park, the parents and school professionals continued to collaborate on school-based interventions to address the child's emotional needs as well as academic and behavior problems.

The Child Study Team professionals served a vital role in the management of programming for ADHD students and coordinated the efforts.

Daily report cards and other instructional and behavioral interventions were monitored and Pupil Assistance Committee meetings were held to report on effectiveness of the modifications.

Success was reflected in report card grades, daily reports as designed by the teacher and updates at PAC meetings.

#### Description of the Data Analysis Plan

The scores on the profile forms of the Conners Rating Scale were reported as T-scores which means that they are standardized scores with the same mean (50) and standard deviation (10). (See Appendix A).

The scale scores served as a summary of the child's tendencies but a pattern of specific item responses suggested both a cause and type of remediation for the problems exhibited by the child.

High scale scores were indicative of having a problem while low scale scores indicated the absence of a problem.

The second marking period ended January 23, 1998 and the students were evaluated for progress and other needs or modifications as apparent through documentation on their report card grades and teacher input and reports.

As the Conners and related evaluations represented the needs, the IEP documented the recommendations and the report card grades and teacher reports substantiated the progress or lack thereof. In some cases, a program review was held to adjust the student's program. This

was an ongoing process that will culminate in a plan for the following school year as part of the student's annual review. The annual reviews are held in the Spring and the students will not be a part of this study. However, they will continue to be monitored by the case manager.

Progress of the students, in respect to the effectiveness of the modifications recommended was reported on a form that was distributed to the case manager of the students in the study.

The modifications were identified as effective or ineffective from the date initiated to the date of reporting. This determination was made through report card grades, interim reports, teacher feedback and case manager observations. In cases where the modifications were ineffective, other means of addressing the concerns were sought.



## CHAPTER 4

### Analysis of Data

#### Introduction

This study sought to determine which modifications were being used with students who were diagnosed as ADD or ADHD. Specifically, data was gathered for the purpose of comparison with recommended modifications by experts in the field of working with children diagnosed with ADD or ADHD. The population for this study was five students from the Waterford School District and five students from the Edgewater Park School District.

A survey was used to determine the current use of the modifications being used with the selected students. The survey addressed the areas of age, classification, medication, program, both academic and behavior modifications, effectiveness as well as the dates of implementation and the individual responsible for the implementation. The survey produced results which were summarized to demonstrate which modifications were recommended to address academic and behavioral concerns as well as the effectiveness. (See Appendix B).

#### Analysis of Data

This study was designed to test the following: There will be no significant differences between the recommendations by the experts pertaining to the modifications used with students diagnosed with ADD or ADHD and the modifications used by the professionals interacting with these students in the educational environment as surveyed.

#### Age

The students included in the study were elementary school children. Three students at the Waterford School District were ten years old and two were nine years old.

Three of the students at the Edgewater Park School District were seven years old, one student was nine years old and one student was five years old.

### Medication

The population studied exhibited symptoms of ADD or ADHD with five of the ten students taking prescription medications. However, it was demonstrated in the input regarding the studied subjects that prescribing medication for the treatment of ADD and ADHD is not an expected modification. Three students reported were prescribed Ritalin, one student was prescribed a combination of Ritalin and Clonidine and one student was prescribed Dexedrine and Clonidine. These medications were either stimulants or antihypertensives as seen in Table 1.

Table 1

#### Types of Medication Prescribed for the students

<u>Class</u>	<u>Stimulant</u>	<u>Antihypertensive</u>
Generic Name		Clonidine
Commercial Name	Ritalin Dexedrine	
Effects	Improves behavior, attention, academics  Decreases aggression	Helps severely overreactive, aggressive children Reduces activity level and aggression.

### Classification

The information gleaned from the study also showed that not all students diagnosed with ADD or ADHD are classified and eligible for special education.

The students studied included regular education students or classified students placed in a special education program. Although all students had gone through the regular education referral process, eight of the ten students were eventually referred to the Child Study Team for a special education evaluation with the intent of assigning a classification. Six of these eight students who were referred to the Child Study Team for evaluation were classified.

In the Waterford School District two students were classified as neurologically impaired, one student as emotionally disturbed and two students as perceptually impaired. In the Edgewater Park School District, only one student was classified as neurologically impaired. Three students were returned to the regular education domain with the modifications in place and one student met with success using the modifications and was neither referred to the Child Study Team for evaluation nor followed up by the regular education program.

Although all ten students were given modifications, only five of the ten students were prescribed both academic and behavior modifications with the remaining five students receiving only academic modifications.

#### Academic Modifications

The academic modifications prescribed for the students in the Waterford Township School District were numerous. In the Waterford School District, the academic modifications included most often as seen in Table 2 were: reduced workload, assignment books or sheets and peer tutoring. Reading tests to the students, teacher redirection and providing visual clues were also used as modifications.

Table 2

## Academic Modifications - Most Recommended to Least Recommended

*Recommended for five out of five students*

Modified testing and grading  
 Reduced amount of written work  
 Small group testing

*Recommended for three out of five students*

Assignment sheet  
 Preferential seating

*Recommended for two out of five students*

More time for tests  
 Allow use of word processing  
 Buddy in class

*Recommended for one out of five students*

Modified homework assignments  
 Provide verbal rather than written responses  
 Go to the resource center for longer writing assignments  
 Reduced number of test or worksheet problems  
 Read tests for student  
 Provide notes  
 Visual reminders on the student's desk  
 Use of the computer  
 Study guide

In the Edgewater Park School District, the academic modifications most often used as reported in Table 3 were: an assignment book, shortened directions, visual clues and the oral reading of tests.

Table 3

## Academic Modifications- Most Recommended to Least Recommended

*Recommended for three out of five students*

Assignment book

*Recommended for two out of five students*

Repeat directions

Limit distractions

*Recommended for one out of five students*

Visual clues

Shortened directions

Test read to student

Reduced workload

Reading program

Teacher redirection

### Behavior Modifications

Nine of the ten students studied were diagnosed with attention deficit disorder with hyperactivity. In the Waterford School District, all five students were diagnosed with the hyperactivity component. There were no behavior modifications recommended for these students.

In the Edgewater Park School District, three of the five students studied exhibited the hyperactivity and all five students were assigned behavior modifications.

The recommended modifications addressing behavior as seen in Table 4 included: positive reinforcement, response cost, social skills training, time out, limiting distractions and behavior modification programs.

### Table 4

#### Behavior Modifications- Most Recommended to Least Recommended

*Recommended for two out of five students*

Behavior modification program

Positive reinforcement system

*Recommended for one out of five students*

Time out

Response cost modification

### Additional Modifications

In addition to behavior and academic modifications, other recommended services were recorded. In the Waterford School District, counseling was highly recommended. Three of the five students received counseling for social skills, coping skills and self concept.

In The Edgewater Park School District, the related services recommended included counseling for one student both in an individual and group setting and adaptive physical education for one student.

### Dates of Implementation

The period of time during which the modifications for most students was measured was approximately one half of the school year.

In instances where the modifications were proving ineffective, other educational avenues were investigated.

The dates of implementation for the modifications in the programs for the Waterford students were September 1997 to February 1998, a period of five months.

The dates of implementation for three of the students studied at the Edgewater Park School District were September 1997 to February 1998, a period of five months. For one student the implementation dates were September 1997 to February 1998 with the medication prescription implemented at a midpoint, in December 1997. One student was assigned the modifications in February 1997 to June 1997, a period of four months. During this time period, the modifications were measured as ineffective. As a result, this student was evaluated by the Child Study Team and assigned a classification of Neurologically Impaired.

### Person(s) Responsible for the Implementation of the Modifications

The responsibility for implementing the program changes for the students was most often upheld by the classroom teacher. However, in some instances parental involvement or the intervention of other professionals was invoked.

In five of the five students studied at the Waterford Township School District, the teacher alone was responsible for the implementation of the modifications.

In the Edgewater Park School District study, although the teacher was responsible for the implementation of the modifications for five of the five students studied, in some cases, other personnel were involved in monitoring these modifications. In four out of the five cases studied, the parents were also responsible for insuring the implementation of some of the modifications. These included the assignment book, the positive reinforcement program, and medication. In one of the five students studied, the nurse was responsible for the medication and in one of the five cases, the case manager was responsible for implementing the referral process to the Child Study Team for evaluation.

### Educational Programs

In the Waterford Township School District, five of the five students were placed in a resource center program, receiving academic assistance through the special education department in areas of need. However, these students remained in the regular education program for the majority of their instruction.

In the Edgewater Park School District, four of the five students were maintained academically in the regular education program while one student was placed in a self contained special education program for students with multiple handicaps.

Although the need for modifications for the students to meet academic and behavior success is evident, the results demonstrated different approaches. The implications of the different district approaches will be examined in Chapter 5.



## CHAPTER 5

### Summary, Conclusions and Recommendations for Further Study

#### Introduction

With the influx of students with behavioral and academic concerns into the educational system, comes the need to explore options and alternatives for assisting these students with meeting success.

One of the most recent concerns that has arisen on the educational front and has alerted parents and educators is that of attention deficit disorder and in particular, with hyperactivity. While students who fall under the special education programs or gifted program are afforded specialized accommodations to either challenge them or meet their unique needs, the general population with academic difficulties related to an attentional deficit tends to be overlooked. Many school districts do not have a specific means of identifying, evaluating and addressing these students. However, under the Americans with Disabilities Act, districts are focusing their attention on policies and procedures to develop plans to offer these students a thorough and efficient education.

This study attempted to document how two school districts, Edgewater Park and Waterford Township are providing the students diagnosed with ADD or ADHD with appropriate modifications related to academics and behavior. It compiled the recommendations of experts and compared these recommendations with those being implemented in the Edgewater Park and Waterford Township school districts.

It was the purpose of this study to determine the ways in which modifications are recommended in Edgewater Park and Waterford Township school districts and to compare these results with the recommendations of experts.

This chapter is divided into four parts:

Summary of the Problem and Hypothesis

Summary of the Method of Investigation

Discussion of Findings

Conclusions and Recommendations for Further Study

#### Summary of the Problem and Hypothesis

The hypothesis of this study states that there will be no significant difference between recommendations by experts pertaining to modifications proposed for students diagnosed with ADD or ADHD and the modifications being used in the Edgewater Park and Waterford Township school districts.

#### Summary of the Method of the Investigation

A survey was used to gather information from Edgewater Park and Waterford Township school districts. The survey addressed the following areas: student ID, age, classification, program, medication, academic modifications, behavior modifications, dates of implementation, effectiveness, and person(s) responsible.

### Discussion of the Findings

The experts have stated that there are many areas to be considered when implementing modifications for students diagnosed with ADD or ADHD. These areas included: medical, academic, behavioral, environmental, nutritional (including vitamin supplements), physiological, and psychological.

According to Lisa Bain, Ritalin is the most widely used pharmaceutical treatment for ADD. While not every student surveyed was prescribed this drug, a consistency was demonstrated between the commonly used pharmaceuticals as reported by Bain and the medication prescribed for the surveyed students, namely Ritalin and Dexedrine. Five students were prescribed these medications as stimulants, a major class of drugs used in the treatment of ADD and ADHD as documented by Weisberg and Greenberg.

In the area of academics, a modification recommended by Stevens was keeping instructions clear and simple. This modification was shown as recommended for the Edgewater Park students. However, it was not reported by the Waterford School District as a recommendation.

The experts suggested providing tactile kinesthetic activities for the students in the learning environment to calm them down. In particular, Armstrong and Reif highly recommended the use of the computer by students with attentional difficulties. The Waterford students had the use of the computer recommended specifically in the area of word processing. Edgewater Park did not use the computer as a supplemental resource.

Behavior management utilizes a number of techniques designed to change or eliminate undesirable behavior. The research indicated that classroom environmental factors can have an effect on behaviors indicative to an ADD student, in particular, focus and attentiveness.

Although the experts recommended altering the physical environment of the classroom through adjustments in lighting, temperature, seating arrangements, and noise reduction, there was no report of these modifications being made in the classrooms in either school district. In particular, Sandra Reif felt that environmental modifications can make a significant difference with ADD students and recommended that teachers seat students away from distractors. Preferential seating and limited distractions were the only two recommendations made for the students.

Providing the students with more acceptable ways of interacting, problem solving, and communication with peers is a concern for educators. Bain reinforced the use of social skills training to help address these issues while Armstrong felt that stressing positive interaction with peers was effective. Parker recommended psychological counseling as a necessary component of the treatment program for students with attentional concerns. Counseling for social skills and coping skills was reported in both district surveys.

Suzanne Stevens recommended the use of a classroom “buddy” to reinforce positive social interactions. This option was documented in Waterford’s survey but not addressed in Edgewater Park’s.

Fiore and Becker recommended relating to the child in a positive manner by avoiding judgmental comments and never humiliating the children while Coleman stressed behavior management strategies. Two techniques proven effective as reported by Fiore and Becker are classwide reinforcement for positive behavior and token reinforcement. Edgewater Park demonstrated use of these strategies in their survey results by reporting a response cost program and a classwide program. However, the Waterford survey did not report such recommendations.

## Conclusions

The survey results demonstrated different approaches from the Waterford School District and the Edgewater Park School District.

Edgewater Park has clearly completed a lot of research and has utilized the time and the funds to design a program to meet the district's needs as evidenced in the policies and procedures that were developed. Based on the procedures this district has utilized, the modifications recommended for the students, while not proliferous, were more in line with what the experts recommended as effective with students with a diagnosis of ADD or ADHD.

The Edgewater Park School District recognized the behavior component of the students with the attentional difficulties and made recommendations based on behavior modification theories as well as positive reinforcement approaches. This demonstrated that the district realized that academics are not the only area of focus in a student's educational success.

While Edgewater Park recognized the behavior and academic link, the mind and body link was not addressed as aggressively. There was no evidence of holistic approaches or medical techniques other than the prescriptive pharmaceuticals. The holistic approaches proven as successful in the treatment of ADD as reported by the experts including nutrition, biofeedback and vitamin therapy may be too unique for a conservative system such as education and may be seen as experimental at this time.

The Waterford Township School District had no procedure or policies in place for addressing students with attentional difficulties other than a referral process to the Child Study Team for evaluation as eligible for special education services.

The recommendations were plentiful but other than the use of the computer, did not strongly

reflect any innovative ideas as recommended by the experts. The lack of recommendations to address any behavioral concerns demonstrates that there has not been an in depth study of students with these particular concerns. The focus was strictly on academics without addressing the connection of the behavioral aspect. There was also a lack of holistic remedies or options other than medication to address the concerns.

In conclusion, it is demonstrated that there are still many options to be considered when treating students with ADD or ADHD in the educational venue. Every publication, whether medical, educational, nutritional or spiritual has a “magic pill” for students with such a diagnosis. It is clear that more research is being conducted. It is also clear that school districts need to be aware of all the options available to the students they are responsible for educating. Edgewater Park and Waterford Township are only two school districts that are investigating options for students with attentional concerns expressed in the diagnosis of ADD or ADHD.

#### Recommendations for Further Study

The following recommendations are based on the findings of this study:

1. The study should be expanded to include more school districts
2. The study could survey the identification process of students with ADD and ADHD in various school districts
3. The study could extend through an entire school year with evaluations conducted on the effectiveness of the modifications at each marking period
4. A study should be conducted after a system of identification of students with ADD or ADHD is in place in Waterford to note any differences

5. A study could be conducted on teachers' follow through on recommendations
6. A study could be conducted on the effectiveness of alternative and holistic approaches to the treatment of ADD and ADHD
7. Waterford Township could develop specific procedures for identifying, evaluating and designing educational programs for students with a diagnosis of ADD or ADHD. A study could be completed following this development

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Appendix A

## Conners' Rating Scale

## Interpretive Guidelines for T-scores

T-Score	Guideline
Above 70	Very much above average
66 to 70	Much above average
61 to 65	Above average
56 to 60	Slightly above average
45 to 55	Average
40 to 44	Slightly below average
35 to 39	Below average
30 to 34	Much below average
Below 30	Very much below average