August 8, 2010

Behavioral Modifications for Students with ADHD in the Classroom

EDCU 520
Background

Student teaching was one of the best experiences of my life. I learned how to manage a classroom that is gearing up for summer vacation and then onto middle school, I discovered how important review can be before a big test, and I realized how much love and time goes into every student. At the end of the year, I felt that I had a complete picture as to what it takes to be a good teacher. However, there is one concept that I have not been able to completely master. Throughout the school year I had two students with ADHD (Attention-Deficit Hyperactivity Disorder), one female and one male. They were on completely different sides of the spectrum in both behavior and symptoms. The one thing that puzzled me throughout the school year was, “How long does it take to see what works and what does not for each individual ADHD student?” When I asked my Master Teacher she said that it has taken up to the end of school for some students, but that it usually takes a couple months that she could be using really getting to know the child’s personality rather than what they need to help them focus better. From that point on I knew that this was an area that I needed to know more about.

Significance of this Study

As more and more students are being diagnosed with ADHD it is becoming more prevalent in the classroom, which leads to a higher demand from teachers to find ways to accommodate this influx of students. There is only an influx of students with ADHD because most cases are not bad enough to justify sending students to the resource or special education rooms. Now that more and more teachers are being paid by how good their student’s test scores are, it is very important that teachers find a way to help students who usually get lower scores to
be improved test takers, better at organizing their thoughts, and improved in using their time to lay out a plan and stick to it. Many behavioral modifications that can be made in the classroom include organizing homework assignments, lockers, and backpacks, learning how to take notes in a way that can be used to study from later, how to make homework compartmentalized so that students can do one step of their homework at a time to stay ahead of their class work deadlines.

This topics amount of research has risen dramatically in the last twenty years and the amount of in-depth quantitative research is amazing. The Multimodal Treatment Study of Children with Attention-Deficit/Hyperactivity Disorder is a great example of this. This study, better known as the MTA, was a 14-month randomized clinical trial using 579 children diagnosed with ADHD. This study revealed several things including “In children with ADHD plus anxiety, behavioral treatment surpassed community care and approached medication-based treatments regarding parent-reported ADHD symptoms.” (MTA Collaborative Group, 1999, p. 1088) However, with the amount of great studies there are others that are not as well researched yet still play a vital role in our society. For example, lately there have been several commercials on television advertising the ADHD Action Guide for children and adults. They claim to have received their information from a huge study funded by our national government on a system set up so that you can punch into a computer all of your symptoms and a magical “cure” will be sent to your email. Well, I have tried going on that website and although there are several great suggestions on how to manage your ADHD/ADD there are several things that are also very peculiar the site as well. The site cites their information at the bottom of the page in tiny print, “Results From the National Comorbidity Survey Replication” from 2006. I do not disagree that this could be a very helpful study, but when results are given to the American public they should be from a combination of studies, including this study and the MTA’s study.
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This shows how outreaching the amount of studies that are taking place over this topic right now, but so many of them have very mixed results due to a number of problems within either their own studies or in whose information they are using.

The further study of this topic is very beneficial to how we teach students with ADHD for several reasons. Langberg, Epstein, Urbanowicz, Simon, & Graham (2008) said it best when they said how important focusing on organizational skills can be to improving academic functioning as long as they are long-term plans rather than for a short amount of time. Teachers and parents need to be aware that any interventions that have been shown to work will need to go beyond a four week period in order to have lasting success. No studies have been done to show enduring effects and I think that would be the best reason to study this topic even more.

I also believe that this study will help teacher to have an informed checklist of tested ideas on how to help students cope with their ADHD symptoms. Despite the impairment ADHD causes for children in the classroom, several studies have found that teachers receive little training regarding ADHD (Barbaresi & Olsen, 1998; Jerome, Gordon, & Hustler, 1994). Without the proper training and support through tested options that can be used in the classroom many teachers are not able to help their students with ADHD in the best way.

Some of the concerns in regards to researching this topic are the frequency in which we as a nation or even as a world are changing what the parameters are for what we diagnose as ADHD. For example, “The medical approach versus psychosocial approach debate that envelops ADHD is of course at the root of the variance,” (Schlachter, 2008). Because so many other counties have different ways of classifying ADHD, it makes it difficult to work together around the world to come up with a common treatment. Even if we had the same definition of ADHD, it would also be hard to find a treatment that could keep up with the amount of new
cases diagnosed every year that would suit the needs of all doctors, teachers, and parents. It seems like every time we find some way to help students with their ADHD, new research comes out that says what we are not helping students by using a certain method.

Statement of the Problem/Area of Focus

The purpose of this project is to develop a list of scientifically tested behavioral methods in order to help teachers decide what methods will work best for their students with ADHD. With this information teachers can be pass on from year to year what modifications work for individual students, therefore, giving the next years teacher a starting place for what methods work and what methods do not work. The focus is on teachers understanding how to help students with organizational skills, note taking skills, and compartmentalizing skills that will be useful for the rest of their lives. By giving teachers a starting off point at the beginning of the year it allows teachers to get to know the interests of their ADHD students sooner instead of focusing their time understanding what problems need to be addressed.

Research Questions

In order to gather the right data for this topic I need to answer the following questions:

- What types of behavioral modifications are available?
- What modifications are teachers using in their classrooms?
- What is the best practice for teachers with ADHD students in the general education classroom?

Possible Limitations
The possible limitations to my plan to develop a list of behavioral modifications to send up through each child's school years include the consistent amount of effort given from year to year between teachers. For example, when the student transfers to middle school or high school where they have several different teachers, how those teachers will collaborate together for the best interest of the student in a uniform way. Those teachers have hundreds of students to look after and it may be overwhelming with the great influx of students being diagnosed with ADHD.

Another limitation I could have is how to deal with students who are changing their medications to find what works best for them and how that specific change can affect their behavior. Some students go through radical changes as their medication is being modified by either dosage or changing to a new medication all together.
CHAPTER TWO
LITERATURE REVIEW

"Defect of Moral Control" in 1902, "Post-Encephalitic Behavior Disorder" in 1922, "Minimal Brain Dysfunction" in the early 1960's, and "Hyperkinetic Disorder of Childhood" in the late 1960's has become what we know today as ADHD (Attention Deficit Hyperactivity Disorder) (Barkley, 2007). And although many doctors have discussed to similar symptoms as early as 1798, ADHD has been researched more in the last 20 years than the 200 years before, combined. Why is there so much interest all the sudden in ADHD? Primarily, this is because ADHD is being diagnosed rapidly in our country and is now affecting around 3 to 5 percent of U.S. children, although some studies suggest as many as 8.7 percent of children are affected (Froehlich, Laphear, Epstein, Barbaresi, Katusic, & Kahn, 2007). The reasons why ADHD is such a prominently looked at disorder are due to the 700% increase in use of psychostimulant drugs that were being prescribed to children with this disorder between 1980 and 1990 (LeFever, Arcona & Antonuccio, 2003). Because of the high increase of stimulant drugs being used and their adverse effects, researchers at the National Institute of Mental Health (NIMH) and several other organizations are trying to find behavioral therapies to help those struggling with ADHD.

This Literature Review will be focusing on behavioral therapies useful in the classroom for students diagnosed with ADHD. First, the types of behavioral therapies will be overviewed discussing the pros and cons to each one. Second, data will be given for each behavioral therapy as to its long term implications and what suggestions for further research for that topic. Finally, the research will be narrowed down into the best practice for behavioral therapies.
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Therapy Options

Behavioral

Although all of the options in this category are working towards modifying a student's behavior, the way those desired behaviors are modified are completely different. For behavioral modifications there are two focal points, one is behavioral therapy (BT) which works on helping students change their thinking and coping skills for immediate issues rather than understanding the emotional aspect. One example of BT is self-control strategies (Corrigan, Schade & Liberman, 1992). Using this method, students pinpoint a desired action such as thinking before acting. When they accomplish this goal they internally reward or self praise. The other behavioral option is a behavioral intervention (BI). Behavioral interventions are used to care for and treat persons suffering from serious mental illness and include: token economies (Ayllon & Azrin, 1968; Corrigan, 1995), behavioral contracting (Kirschenbaum & Flanery, 1983; O’Banion & Whaley, 1981), and skills training (Wallace, Liberman, MacKain, et. al., 1992).

Token economies are systems that use tokens or markers to establish when students should receive a reward. Many students will earn things like stickers, magnets, or cards that, when added together, will add up to a reward. These types of systems can have pre-established rewards or, with the School-Home Daily Report Card (Center for Children and Families, 2007) students are able to choose their own rewards for every level of achievement. Students can choose from a list for what they wish to receive for weekly rewards, daily rewards, weekend rewards, and other rewards. This system allows for positive reinforcement, but unless extrinsic motivation is used towards or with intrinsic motivation the results are not as positive (Joosten, Bundy & Einfeld, 2008).
Behavioral contracting is a written agreement between the student, teacher, and parent(s) centered on how the students will behave (Center for Children and Families, 2007). It is a laid out plan describing positive behaviors while setting a specified way for family and school to work together to achieve those goals. Behavioral contracts follow steps, for example first selecting the area for improvement. This step is to help focus down on two or three main areas that need improvement so that the student does not get overwhelmed. Second, establish the main goal and lower level goals to build up to accomplishing the main goal, (e.g., establishing a morning routine to sharpen all pencils before class begins, then adding in checking over homework file before the end of class, and so on to eventually reach the final goal of having all school supplies organized before class starts). Third, decide what criteria will be used to judge whether the student is following the behavioral contract. There needs to be several discussions with the student as to what counts and what does not, such as whether half-accomplished goals, should count for half credit or no credit? By discussing this with the student, it gives them choices which gives them ownership in the decision making process. Finally, review the contract to determine how close the student is to accomplishing their goals and decide if the contract should be modified in the future (Center for Children and Families, 2007).

Skills training targets the classroom management skills several students with ADHD may be dealing with in the classroom. “Academic impairment in students with ADHD is one of the most prevalent and problematic symptoms, students often forget to complete assignments, complete assignments but forget to turn them in, and make careless mistakes in their work.” (DuPaul & Stoner, 2003). Because grades depend on several of these factors it can be very hard for students with ADHD to get or maintain good grades if they do not know how to manage these skills. For this type of intervention, students usually attend an afterschool workshop
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program focusing on organization for lockers or backpacks, in binders and planners, and for note taking (Langberg, Epstein, Urbanowicz, Simon & Graham, 2008). This type of intervention can not only help students struggling with ADHD, but it can help anyone who needs assistance in this area, which means that ADHD students would not feel singled out in a program like this because their “normal” peers would also be participating. Because of this social aspect this method could work for both behavioral and social reasons.

Social Therapy

As mentioned above, skills training can be behavioral or social. In 2009, Help Guide said:

Because kids with attention deficit disorder often have difficulty with simple social interactions and struggle with low self-esteem, another type of treatment that can help is social skills training. Normally conducted in a group setting, social skills training is led by a therapist who demonstrates appropriate behaviors and then has the children practice repeating them. A social skills group teaches children how to “read” others’ reactions and how to behave more acceptably. The social skills group should also work on transferring these new skills to the real world.

With the social aspect playing such a huge part in this therapy it allows students to see how their peers react in everyday situations. This helps students to understand what is expected from them and to feel more comfortable with how they fit in with their peers. As wonderful as this all sounds there is a negative side. When ADHD students are learning from their peers it does allow for negative skill development as well (Saunders & Chambers, 1996). If students can learn how to act in a positive way by being around and watching their peers, it stands to reason that they could just as easily learn how to act in a negative way as well.
Behavioral family management is also a very helpful and social way that students with ADHD can receive the support they need in school. Behavioral family management equips all members of the family with knowledge, skills, and support to function better in daily life and to reach their own personal goals (Liberman, 1992). Because this type of therapy focuses on the entire family it allows the student to have an environment where they can feel safe to ask questions, receive homework support, receive tolerance, and to relax and be a kid. In a case study done by Liberman (1992) the student’s behavior and consequent achievement level rebounded after following this program for the first three months of school and continued the behavior throughout the rest of the school year without support from anyone other than his parents. However, this program is the most effective when it is shared between the family and the classroom teacher. The higher the level of support from peers, teachers, and the family, the higher the level of positive outcomes (Liberman, 1992).

Cognitive training

Cognitive training or brain training is a method that consists of a variety of exercises designed to help improve functioning in areas such as sustaining attention, thinking before acting, visual and auditory processing, listening, and reading. These are definitely areas in which individuals with ADHD often experience difficulties. If a student is having attention or learning problems, what this method calls “drill and practice”, also known as “drill and kill” in academic areas are often not effective. The principle of cognitive brain training is to help improve the critical abilities and self-control before an individual can function successfully in school (Katz, Ashley, O’Shanick, and Connors, 2006). Interventions for cognitive deficits are divided into three categories: First, they focus on environmental interventions that provide contextual support in the area of impaired ability. For instance, audio taping books for individuals with
reading disabilities. Second, interventions are aimed at compensating for the deficit in ability by the use of notebooks, for memory or watches with alarms, for an individual with memory impairment. And finally, the use of direct interventions aimed at “improving the underlying cognitive process and eliminating or reducing the deficit itself” (Kerns, Eso & Thomson, 1999, p.275). In students with ADHD, environmental interventions to improve attention can include a variety of alerting systems and reward systems to increase attention to the task. This method is most effective when used in combination with other behavioral therapies (Mateer & Mapou, 1996).

Multimodal

Although several studies (Corrigan, Schade & Liberman, 1992; Liberman, 1992; Mateer & Mapou, 1996) suggest that their methods work best when used in combination with other therapies, called a multimodal approach, several problems arrive when gathering data to support that recommendation. According to Hoza, Kaiser & Hurt in 2007, “These issues include: (1) sequencing and dosage of treatments being combined and compared; (2) difficulty drawing valid conclusions about individual components of treatment when treatment packages are employed; (3) differing results emerging from measurement tools that purportedly measure the same domain; and (4) the resultant difficulty in reaching a summary conclusion when multiple outcome measures yielding conflicting results are used.” (p. 324). In this same article the authors compared the differences between using a multimodal approach and a single therapy approach and came to the conclusion that using several therapies together produced a better end result. The one problem they had was that they could not contribute the success of the therapy to any one or even two therapies. The outcome of the study indicated that when using a multimodal
approach it is best to keep within three therapies, adjust when the approach is no longer working, and use research-based methods.

**Teacher Practiced Accommodations**

**Self-Monitoring**

There are two main types of self-monitoring strategies. The first is focused on attention and behavior. Self-monitoring for attention is a combination of self-assessment and self-recording (Harris, Friedlander, Saddler, Frizzelle, & Graham, 2005). During this process students monitor and evaluate their behavior throughout the day while also recording the details of what has happened. By making students more aware of their behavior it allows them to focus on what they need the most help with and causes student's disruptive behavior to decrease because they are more aware of what behaviors caused the most disruption (Harris et al., 2005). The study used to show this was done in the Middle Atlantic State using six third-, fourth-, and fifth-grade students with ADHD. The study showed that four out of six students showed high increases in positive behavior using self-monitoring of attention strategies on a daily basis. Then the same students were asked to use self-monitoring for academic performance strategies relative to spelling practice. These strategies included telling students the importance of practicing spelling words, exposing them to a new procedure for practicing spelling words, and counting and graphing how many times throughout the week the spelling words were practiced correctly. In the study the number of correct practices correlated positively to the number of correct words on the test (Harris et al., 2005). By being aware of when they were practicing the spelling words correctly and the time they were repeating them incorrectly it influenced the students to be more aware of how they spelt each word.
Proximity

Keeping students with ADHD in close proximity to the teacher has been a long used tradition (Help Guide, 2009; Kerns, Eso & Thomson, 1999; Schlachter, 2008). Proximity is known as a “teacher factor” or factors that teachers have control over in the classroom. A study of literature about ADHD by Sherman, Rasmussen, and Baydala, 2008, stated that, “Even studies widely held as the gold standard of ADHD research, namely the Multimodal Treatment Study of Children with Attention-deficit/Hyperactivity Disorder (MTA), do not include measures of teacher factors (MTA Cooperative Group, 1999a, 1999b; 2004a, 2004b)” (p. 351). Therefore, even though it may be used as a long time tradition, proximity has not been thoroughly tested to see if its effects really help students with ADHD focus as intended.

Chewing Gum

State standardized testing in many states has allowed students to chew gum while testing. In a Scholastic article by Markarian (1996) she said teachers have relayed to her that just chewing gum helps calm students with ADD/ADHD and ‘helps kinesthetic learners focus,’ says Jennifer Chase Chandler, a reading teacher and literacy specialist at White Station Middle School in Memphis.” (p. 1) Although many teachers allow or even encourage their students with ADHD to chew gum during testing there are few studies done on the true effects. Only one study has been found to be cited over and over again and that study was done by Wrigley who makes chewing gum. In this study done in 2002 Wilkinson, Scholey, & Wesness, found that chewing gum can improve episodic memory and working memory, however they could not indicate that chewing gum helped with aspects of attention. This shows that even though many teachers allow students with ADHD to chew gum, it may not be the best practice.
Best Practice: Behavioral Therapies

The first step to ensuring any behavioral therapy will be a success is to run a thorough assessment on the student for which the therapy will be applied. Without an in depth analysis of the student’s abilities, strengths, and establishing their needs, any therapy used will not conclude in positive results (Bach & McCracken, 2006). In the assessment stage the focus should be on what the behavior is and when it occurs. Does the student only use the restroom obsessively on days with far more lecture or does the student have the most problems with shouting out during less active lessons? Pinpointing when the behavior is occurring can narrow down what goals need to be worked on at any one specific time. Once these behaviors and their environments are confirmed it is much easier to decide what type of behavioral therapy will have the most effect. This gives teachers and parents the ability to pin point a starting place to help the student rather than just trying whatever is the most common intervention or therapy at the moment. ((Nelson & Hayes, 1986 as cited in Back & McCracken, 2006).

Once the assessment has taken place it is important to choose a research based therapy that has scientifically shown positive results. When considering behavioral therapies, the best practice is to choose the treatment that suits the assessed behaviors. Skills training methods would be best suited when the student’s symptoms are diagnosed as organizational problems. Because the skills training method focuses solely on these skills it gives students a strong background in skills they can use in the classroom as well as at home. If the student is having problems with acting out it would be practical to create a behavioral contract. And if the student is taking issue with negative feedback, establishing a positive reward system would be the best practice. Every therapy has its place, but it should only be used when the situation deems it necessary (Back & McCracken, 2006).
Socially, the best practice has been shown as a mixture of skills training and behavioral family management. Because behavioral family management does not always include the classroom teacher in how the program is established. By adding in a teacher based skills training assessment and execution can combine home and school efforts to help the student receive the highest level of support (Liberman & Liberman, 2003). Although, in some situation these two therapies could help on their own, it depends again on what the assessment has shown the student needs the most.

Cognitive training is based on positive behavioral modifications centered on real world events that are able to be repeated to attain the desired outcome. Cognitive training has been found to be very effective when combined with other behavioral therapies based on the student’s need. For example, when combined with token economies students would be asked to repeat desired behaviors at different parts of the day and receive tokens or markers for each time they preformed what was being asked of them. In this setting the behavior is not being “drilled” into the student’s head because they are being rewarded for positive behavior and not disciplined for negative responses (Katz, Ashley, O’Shanick, and Connors, 2006).

Multimodal therapies have been discussed throughout this section. With every approach there is a combination of therapies that work well in helping students work through their ADHD symptoms. During their study Hoza, Kaiser, and Hurt (2007) found literature to support their hypothesis that multimodal therapies, in the right combination, are far more effective than single treatments alone. This shows that there are situations when students need only one approach at one moment in time, but in many cases a combination of therapies helps students attain their goals in a faster and more manageable way (Hoza, Kaiser & Hurt, 2007).
The best practice relating to teacher accommodations are harder to determine because of a lack of evidence from qualitative and quantitative studies. The only teacher practiced accommodation that could be considered a best practice is the self-monitoring strategy due to its intensive study done by Harris, Friedlander, Saddler, Frizzelle, and Graham in 2005. Because of their comprehensive study and others like Braswell in 1998, Davies and Witte in 2000, and Hallahan and Sapon in 1983, this method of assistance for students with ADHD can be considered a best practice. As Harris et al. (1994) noted, all six students in the study demonstrated an increase in on-task behavior when using the self-monitoring strategies.

Summary

This literature review has listed several behavioral modifications shown to help students with ADHD in the classroom. Depending on an accurate assessment of the student’s needs and strengths, teachers should be able to initiate a behavioral therapy that helps each of their ADHD students. Although, this review did not focus directly on family interventions or the use of medication for students with ADHD, it is still a major factor in how beneficial these treatments can be. An abundance of studies have shown that behavioral therapy can work just as well as medication, therefore it would be favorable to help teachers understand the variety of modifications that have been researched and shown that they can be considered a best practice. With education given using these therapies, students with ADHD can soon begin to, “exert more control over their environment and their own behavior, including behaviors that help them attain their goals... and acquiring self-management techniques that give individuals more control in their environment.” (Bach & McCracken, 2006, p.2)
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Great job on the first draft.
EDUC 520
Self Evaluation of Chapters 1 & 2

Title of the Project: Behavioral Modifications for Students with ADHD in the General Education Classroom

Scoring Criteria:
4 Outstanding: Meeting or exceeding all expectations
3 Proficient: Meeting most expectations
2 Mediocre: Meeting some expectations, but lack of focus or organization
1 Novice: Major difficulties in meeting basic expectations
- does not reflect graduate quality work

Chapter 1
Knowledge of the topic
Articulation/Smooth flow
Convention/Format (Model F)
Depth of the analysis

Chapter 2
Relevancy/Focused all the time
with Research Questions in Chapter 1
Knowledge of the topic (15 sources)
Important figures/studies used
All perspectives
Multiple sources reviewed in each aspect
Articulation/Smooth flow
Between paragraphs
Between concepts
Convention/Format (Writing Manual)
In-text citations & References (APA style)

TOTAL 8/8 pts

TOTAL 18/20 pts

Comments: