ATTENTION DEFICIT HYPERACTIVITY DISORDER

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Introduction

The American Psychiatric Association (1994) states, "The essential feature of Attention-Deficit/Hyperactivity Disorder (ADHD) is a persistent pattern of inattention and or /hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development" (p. 78). This persistent pattern of inattention, impulsivity, and hyperactivity has left many parents, pastors, school administrators, and teachers in a quandry as to how to deal effectively with children that persist in these behaviors.

There are young people from good Christian homes who demonstrate these characteristics who, in all honesty, do not desire to disappoint Mom and Dad, their principals, and their teachers. When corrected, these young people seem to be truly repentant for not carrying through with what they know they ought to do. However, they soon find themselves involved in doing or not doing the very same things, even after praying and committing themselves to doing right.

Rather than give up on these young people and think their behaviors are deliberate acts of rebellion, it would be appropriate to consider other possible explanations. All too often, our inaccurate accusations become prophetic realities when young people who are looking for help give up on themselves because those to whom they have looked for help gave up on them first.

Prevalence and Distinctions

The U. S. Department of Education (1994) estimates that 3-5% of school-aged children may have problems related to ADHD. It is also estimated that attentional problems are found in 33% of children with learning disabilities. Therefore, disorders of attention and hyperactivity do not always occur together in children with learning disabilities. It must be remembered that ADHD primarily affects the behavior of a child, which in turn affects his schoolwork. Learning disabilities affect the child's actual ability to learn or to process information. ADHD has no special education classification of its own; thus, it falls under the category of ***other health impaired***.

Causes

As with learning disabilities, the causes of ADHD are not really known. Scientific and medical researchers continue to search for specific causes. In their search they have eliminated some factors and continue to pursue others. Factors that have been eliminated are a poor diet, sugar or food additives, a child's environment, or the parents' being either too strict or too permissive with their child. These factors may influence the severity of ADHD behaviors and may cause related symptoms, but they do not cause ADHD.

Recent research suggests that ADHD can be inherited and may be due to an imbalance of neurotransmitters or abnormal glucose metabolism in the central nervous system (U. S. Department of Education, 1994). Hallowell and Ratey in their book *Answers to Distraction* (1994) believe that there are neurobiological differences in the brain that contribute to the symptoms of distractibility, impulsivity, and hyperactivity. They believe that these differences exist on three different levels of brain operation: the macro level, the regional level, and the molecular or genetic level.

The macro level is the area where differences in the brain affect overall functioning of the brain process. Observations have been made in which there is diminished blood flow to the frontal cortex of the brain. It is believed that with the diminished blood flow there is diminished activity; therefore, the glucose (fuel for the brain cells) contained in the blood is not being used by the brain. This situation is significant because the main function of the frontal cortex is to slow down messages coming from other parts of the brain in order to shape the message that comes into consciousness. It is interesting to note that the frontal cortex controls the following:

- Orderly planning and sequencing of complex behaviors.
- Ability to perform several activities at the same time.
- Flexibility to change the focus on one thing to another.
- Ability to grasp the meaning of a complex situation.
- Ability to ignore or resist distraction.
- Ability to perform multistep instructions.

- Ability to delay self-gratification.
- Ability to control behavior.

Hallowell and Ratey report that in a study conducted by Dr. Daniel Amen, SPECT scans were used to observe and measure decreases in blood flow in the frontal cortex of the brains of ADHD individuals at the point when attention was necessary. When attention and focus were needed, this area of the brain all but shut down. This "circuit breaker syndrome" is contrary to what takes place in normal brains.

The second level, the regional level, deals with the actual structures of the brain. It is believed that differences in particular structures of the brain interfere with the way parts of the brain communicate with one another. In three studies the caudate nucleus has been shown to be significantly different in a group of ADHD children. The caudate nucleus is responsible for initiating, inhibiting, and sculpting our movements and our attention.

In another study referenced by the authors, researchers have shown that the volume of corpus callosum is lower in ADHD children than in normal children. The corpus callosum is that structure in the brain that allows the left and the right hemispheres of the brain to communicate. In children where this is the case, the ability to communicate what they are thinking is significantly impaired as compared to their "normal" peers. This could be connected to the fact that many with ADHD have difficulty articulating what they are actually thinking.

The third level, the molecular or genetic level, deals with the biochemical aspects of ADHD rather than the anatomical aspects. In this situation the gene that codes for a specific type of dopamine receptor has been found to be defective in about 60% of those diagnosed as having ADD. Dopamine is an important neurotransmitter used throughout the brain. It is especially prominent in the "attentional neural network" which is the interconnection of nerve cells that run throughout the structures in the brain and involve arousal, motivation, and attention. These genetic or molecular aspects could explain why some of the problems associated with ADHD seem to be passed from parent to child (Hallowell & Ratey, 1994).

Recognition

ADHD is identified primarily through evaluating the child's history and from observations made by parents, teachers, and others who deal with the child. It is not identified through a series of questions and answers, as aptitude and achievement are, and a medical diagnosis alone is not sufficient to render a child eligible for special services.

Characteristics

The three primary characteristics of ADHD are inattention, impulsivity, and hyperactivity. The *Diagnostic Statistical Manual for Mental Disorders*–4th edition (DSM-IV) outlines the symptoms associated with each characteristic and establishes the criteria upon which a child may be classified as ADHD. A copy of the DSM-IV is located on page five.

In order for a child to be diagnosed as ADHD, these characteristics and symptoms must also meet the criteria of being both chronic and pervasive. A condition is chronic when the child demonstrates the described behaviors for an extended period of time. They are present to the degree that significant social, emotional, and academic problems are occurring in the child's life. Behaviors must be present for a duration of at least 6 months. In some cases, however, mothers have indicated they knew something was different about their child during their pregnancy or soon after their child was born.

A condition is pervasive when the characteristics are demonstrated most of the time and in most, if not all, environments. The child exhibits these behaviors at home, at school, at a friend's house, and in church. When a teacher gives glowing reports about a child's behavior and his academic progress (assuming no intervention has occurred) and the parents wonder if the teacher is talking about their child, it is highly unlikely that the child suffers from this disorder.

Likewise, a child does not suffer from this disorder if he has no apparent difficulties at home, in church, or other environments, yet he cannot be controlled in a classroom environment. The problems are of a different nature.

Not all students with attention deficit disorders are hyperactive. Students with Attention Deficit Disorders without hyperactivity (ADD) or undifferentiated ADD do not exhibit hyperactive behaviors. They are sometimes described as daydreamers, uninterested, or off in their own world. ". . . their disorder frequently is not recognized, and they are often considered unmotivated or lazy" (U. S. Department of Education, 1994, p. 2).

Remediation

The following outline provides recommendations that have proven to be effective in assisting with the needs of young people with ADHD and/or ADHD symptoms.

A. Organization
   1. At home
      a. Develop a list of daily responsibilities and have the child check off each item as it is completed.
      b. Designate a specific place for doing homework.
      c. Have a duplicate of each book at home as a backup.
      d. Check the child's homework assignment book to be sure homework is complete.
      e. Have all materials by the door the night before so that things are not forgotten the next day.
      f. Develop a list of consequences for inappropriate behaviors.
   2. At school
      a. Have a list of classroom rules that are visible.
      b. Establish consequences for rules and consistently carry through with those consequences.
      c. Be organized.
      d. Have a designated format for materials that are to be turned in.
      e. Have a checklist of daily responsibilities. Have the student check off each item as is completed.
      f. Write all homework assignments on the board. Allow the student sufficient time to copy the assignments.
      g. Check the student's homework assignment book before he leaves for home.
      h. Prepare a special notebook for the student. It should include:
         (1) "Notes to go home" envelope
         (2) Assignment book
         (3) Pencil pouch with daily supplies
         (4) One folder for every subject
         (5) A supply of notebook paper
         (6) A "homework" envelope

B. Educational methods
   1. Structure and stimulus reduction
      a. The teacher directs the activities of the classroom providing the structure for the student.
      b. Stimulus reduction includes soundproofed walls, enclosed cabinets and bookcases, opaque windows, limited use of colored bulletin boards, and the use of study carrels.
   2. Behavior modification (Behavior modification will be discussed in detail in a future newsletter)
   3. Cognitive training – self-monitoring, the keeping track of one's own behavior, is the most common form and successful form of cognitive training (Hallahan & Kauffman, 1994).

C. Consistency
   1. Consistently follow through with rewards and consequences.
   2. Maintain consistency in the classroom schedule. (When having to change the schedule prepare the student a day or two before doing so.)
   3. Be consistent in your own actions.

D. Flexibility
   1. Give work in smaller increments.
   2. Give more time to complete assignments (within reason).
   3. Allow the student to work in a study carrel.
   4. Double or triple space handouts so materials will not look cluttered.
   5. Provide the student with an outline so he can follow along with a lecture rather than concentrate on getting the outline copied.

(Note: Initially there will be some flexibility in the student's program. However, once adaptations have been made and rules have been established, be consistent in enforcing the rules established for the student.)

E. Positive Reinforcement
   1. Catch the student doing right and praise him.
   2. Set up a system to reward appropriate behavior.
   3. Place notes in the child's books or on his desk to provide encouragement.
   4. Unless a wrong behavior is witnessed personally, resist the urge to accuse the child of wrongdoing. Ask questions to determine whether suspected actions occurred.

F. Personal Accountability
   1. Challenge the student to do a personal Bible study.
      a. Have him locate verses dealing with one or two problem areas.

b. Have him write out the verses along with a short summary indicating what they mean and how they apply to his particular situation.
c. Meet with the student on a weekly or biweekly basis to discuss how the Bible study is progressing.

2. Enter into a contract with the student to work on problem behaviors.
3. Speak rationally to the student. Be objective when carrying through with consequences.
4. Pray for the student and for wisdom in dealing with him.

G. Medication
1. Medication, in some cases, will temporarily moderate the effects of ADHD, **but it will not cure ADHD**.
2. Medication, if used, should be used only after all other attempts to correct the problem have proved unsuccessful.
3. Medication **should not** be used as the sole method of helping the child. If used, it should be used to reinforce other methods of remediation.
4. Medication will not cure a child of rebellious behavior if the child is given to rebellious behavior.

Conclusion

The diagnosis of ADHD or being suspected of having ADHD is not a license to do wrong. God never puts any of us in situations where the only alternative is to sin. We all have weaknesses that we deal with on a daily basis. There are certain preparations we must make, certain situations we must avoid, and certain people we must agree to be accountable to if we are to be successful. There must also be a willingness to accept the consequences that come our way when we fail.

Young people with ADHD have significant difficulties in areas where they are expected to be able to exhibit a reasonable degree of control. With the proper encouragement they can control their behavior. They need people in their lives who are supportive, understanding, and knowledgeable in the ways that will help them have victory in those areas. They also need reasonable and consistent consequences placed on them by people whom they trust to chasten them out of a heart of love. May God grant those of us in Christian education the grace to accept the responsibilities we have for these young people and the wisdom to deal with them in a way that will honor and glorify our Lord Jesus Christ.

References

American Psychiatric Association. (1994). *Diagnostic Statistical Manual for Mental Disorders* (4th ed.). Washington, DC: Author.

Hallahan, D. P. & Kauffman, J. M. (1994*). Exceptional Children: Introduction to Special Education*. Boston: Allyn and Bacon.

Hallowell, E. M., & Ratey, J. J. (1994). *Answers to Distraction*. New York: Pantheon Books.

U.S. Department of Education. (1994). *Attention Deficit Disorder: Beyond the Myths.* Washington, DC: Author.

Diagnostic Criteria for Attention Deficit/Hyperactivity Disorder (DSM-IV)

A. Either (1) or (2):

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

Inattention

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

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

Hyperactivity

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

Impulsivity

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

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