

Causes, Symptoms and Characters' Of Attention Deficit Hyperactivity Disorder (Adhd)

Vinu.J.R

Research Scholar, Bharathiyar University, Coimbatore

Abstract: Attention deficit hyperactivity disorder (ADHD) is one of many labels for one of the most prevalent condition in child psychiatry and undoubtedly the most controversial. ADHD is conservatively estimated to occur in 3-7.50 %of school age children, but more permissive criteria yield estimates of up to 17% and up to 20 %of boys in some school system receive psycho stimulants for the treatment of ADHD. Despite the absence of controlled studies in preschool age children and concern about potential long term advice effects, stimulant medications are increasingly being administrated to children as young as two years of age. The initial phase of research in to ADHD has been descriptive by design, but it has also been driven by adult based model from psychiatry, psychology and neuroscience.

I. Introduction

Attention deficit hyperactivity disorder (ADHD), is a psychiatric disorder of the neurodevelopment type in which there are significant problems of attention and/or hyperactivity and acting impulsively that are not appropriate for a person's age. These symptoms must begin by age six to twelve and be present for more than six months for a diagnosis to be made. In school-aged individuals the lack of focus may result in poor school performance.

Despite being the most commonly studied and diagnosed psychiatric disorder in children and adolescents, the cause in the majority of cases is unknown. It affects about 6 to 7 percent of children when diagnosed via the DSM-IV criteria and 1 to 2 percent when diagnosed via the ICD-10 criteria. Rates are similar between countries and depend mostly on how it is diagnosed. ADHD is diagnosed approximately three times more frequent in boys than in girls. About 30 to 50 percent of people diagnosed in childhood continue to have symptoms into adulthood and between 2 and 5 percent of adults have the condition. The condition can be difficult to tell apart from other disorders as well as that of high normal activity.

HISTORY

Hyperactivity has long been part of the human condition. Sir Alexander Crichton describes "mental restlessness" in his book *An inquiry into the nature and origin of mental derangement* written in 1798. ADHD was first clearly described by George Still in 1902. The terminology used to describe the condition has changed over time and has included: in the DSM-I (1952) "minimal brain dysfunction", in the DSM-II (1968) "hyperkinetic reaction of childhood", in the DSM-III (1980) "attention-deficit disorder (ADD) with or without hyperactivity". In 1987 this was changed to ADHD in the DSM-III-R and the DSM-IV in 1994 split the diagnosis into three subtypes, ADHD inattentive type, ADHD hyperactive-impulsive type and ADHD combined type. Other terms have included "minimal brain damage" used in the 1930s.

The use of stimulants to treat ADHD was first described in 1937. In the 1930s, the amphetamine mixture Benzedrine was the first medication approved for use in the United States. Methylphenidate was introduced in the 1950s, and dextroamphetamine in the 1970s.

CAUSE

The cause of most cases of ADHD is unknown; however, it is believed to involve interactions between genetic and environmental factors. Certain cases are related to previous infection of or trauma to the brain.

Genetics factor

Some studies indicate that the disorder is often inherited from one's parents with genetics determining about 75% of cases. Genetic factors are also believed to be involved in determining whether or not ADHD persists into adulthood. Typically a number of genes are involved, many of which affect dopamine transporters. A common variant of a gene called LPHN3 is estimated to be responsible for about 9% of cases and when this gene is present people are particularly responsive to stimulant medication.

Environment

Environmental factors are believed to play a lesser role. Alcohol intake during pregnancy can cause fetal alcohol spectrum disorder which can include symptoms similar to ADHD. Exposure to tobacco smoke during pregnancy can cause problems with central nervous system development and can increase the risk of ADHD. Many children exposed to tobacco do not develop ADHD or only have mild symptoms which do not reach the threshold for a diagnosis. A combination of a genetic predisposition with tobacco exposure may explain why some children exposed during pregnancy may develop ADHD and others do not. Children exposed to lead, even low levels, or polychlorinated biphenyls may develop problems which resemble ADHD and fulfill the diagnosis. Exposure to the organophosphate insecticides chlorpyrifos and dialkyl phosphate is associated with an increased risk; however, the evidence is not conclusive.

Very low birth weight, premature birth and early adversity also increase the risk as do infections during pregnancy, at birth, and in early childhood. These infections include among others: various viruses (measles, varicella, rubella, enterovirus71) and streptococcal bacterial infection. At least 30 percent of children with a traumatic brain injury later develop ADHD and about 5 percent of cases are due to brain damage.

A small number of children may react negatively to food dyes or preservatives. It is possible that certain food coloring may act as a trigger in those who are genetically predisposed. Dietary sugar and the artificial sweetener aspartame appears to have little to no effect; except, possibly in children under six years of age where sugar may increase inattention.

CHARACTERISTICS OF ADD / ADHD

When many people think of attention deficit disorder, they picture an out-of-control kid in constant motion, bouncing off the walls and disrupting everyone around. But this is not the only possible picture. Some children with ADD/ADHD are hyperactive, while others sit quietly—with their attention miles away. Some put too much focus on a task and have trouble shifting it to something else. Others are only mildly inattentive, but overly impulsive.

Three primary characteristics of ADD / ADHD

The three characteristics of ADD/ADHD are inattention, hyperactivity, and impulsivity. The signs and symptoms a child with attention deficit disorder has depends on which characteristics predominate.

Children with ADD/ADHD may be:

- Inattentive, but not hyperactive or impulsive.
- Hyperactive and impulsive, but able to pay attention.
- Inattentive, hyperactive, and impulsive (the most common form of ADD/ADHD).

Just because a child has symptoms of inattention, impulsivity, or hyperactivity does not mean that he or she has ADD or ADHD. Certain medical conditions, psychological disorders, and stressful life events can cause symptoms that look like ADD / ADHD.

Before an accurate diagnosis of ADD / ADHD can be made, it is important that you see a mental health professional to explore and rule out the following possibilities:

- **Learning disabilities** or problems with reading, writing, motor skills, or language.
- **Major life events** or traumatic experiences (e.g. a recent move, death of a loved one, bullying, divorce).
- **Psychological disorders** including anxiety, depression, and bipolar disorder.
- **Behavioral disorders** such as conduct disorder and oppositional defiant disorder.
- **Medical conditions**, including thyroid problems, neurological conditions, epilepsy, and sleep disorders.

A Inattentive signs and symptoms of ADD/ADHD

It isn't that children with ADD/ADHD can't pay attention: when they're doing things they enjoy or hearing about topics in which they're interested, they have no trouble focusing and staying on task. But when the task is repetitive or boring, they quickly tune out.

Staying on track is another common problem. Children with ADD/ADHD often bounce from task to task without completing any of them, or skip necessary steps in procedures. Organizing their schoolwork and their time is harder for them than it is for most children.

Kids with ADD/ADHD also have trouble concentrating if there are things going on around them; they usually need a calm, quiet environment in order to stay focused.

Symptoms of inattention in children

- Doesn't pay attention to details
- Makes careless mistakes
- Has trouble staying focused; is easily distracted

- Appears not to listen when spoken to
- Has difficulty remembering things and following instructions
- Has trouble staying organized, planning ahead, and finishing projects
- Gets bored with a task before it's completed
- Frequently loses or misplaces homework, books, toys, or other items

B Hyperactive signs and symptoms of ADD/ADHD

The most obvious sign of ADD/ADHD is hyperactivity. While many children are naturally quite active, kids with hyperactive symptoms of attention deficit disorder are always moving.

They may try to do several things at once, bouncing around from one activity to the next. Even when forced to sit still which can be very difficult for them their foot is tapping, their leg is shaking, or their fingers are drumming.

Symptoms of hyperactivity in children

- Constantly fidgets and squirms
- Often leaves his or her seat in situations where sitting quietly is expected
- Moves around constantly, often runs or climbs inappropriately
- Talks excessively
- Has difficulty playing quietly or relaxing
- Is always “on the go,” as if driven by a motor
- May have a quick temper or a “short fuse”

C Impulsive signs and symptoms of ADD/ADHD

The impulsivity of children with ADD/ADHD can cause problems with self-control. Because they censor themselves less than other kids do, they'll interrupt conversations, invade other people's space, ask irrelevant questions in class, make tactless observations, and ask overly personal questions.

Instructions like “Be patient” and “Just wait a little while” are twice as hard for children with ADD/ADHD to follow as they are for other youngsters.

Children with impulsive signs and symptoms of ADD/ADHD also tend to be moody and to overreact emotionally. As a result, others may start to view the child as disrespectful, weird, or needy.

Symptoms of impulsivity in children

- Acts without thinking
- Blurts out answers in class without waiting to be called on or hear the whole question
- Can't wait for his or her turn in line or in games
- Says the wrong thing at the wrong time
- Often interrupts others
- Intrudes on other people's conversations or games
- Inability to keep powerful emotions in check, resulting in angry outbursts or temper tantrums
- Guesses, rather than taking time to solve a problem

POSITIVE EFFECTS OF ADD / ADHD IN CHILDREN

In addition to the challenges, there are also positive traits associated with people who have attention deficit disorder:

- **Creativity** – Children who have ADD/ADHD can be marvelously creative and imaginative. The child who daydreams and has ten different thoughts at once can become a master problem-solver, a fountain of ideas, or an inventive artist. Children with ADD/ADHD may be easily distracted, but sometimes they notice what others don't see.
- **Flexibility** – Because children with ADD/ADHD consider a lot of options at once, they don't become set on one alternative early on and are more open to different ideas.
- **Enthusiasm and spontaneity** – Children with ADD/ADHD are rarely boring! They're interested in a lot of different things and have lively personalities. In short, if they're not exasperating you (and sometimes even when they are), they're a lot of fun to be with.
- **Energy and drive** – When kids with ADD/ADHD are motivated, they work or play hard and strive to succeed. It actually may be difficult to distract them from a task that interests them, especially if the activity is interactive or hands-on.

Keep in mind, too, that ADD/ADHD has nothing to do with intelligence or talent. Many children with ADD/ADHD are intellectually or artistically gifted.

HELPING CHILDREN WITH ADD / ADHD

Whether or not your child's symptoms of inattention, hyperactivity, and impulsivity are due to ADD/ADHD, they can cause many problems if left untreated. Children who can't focus and control themselves may struggle in school, get into frequent trouble, and find it hard to get along with others or make friends. These frustrations and difficulties can lead to low self-esteem as well as friction and stress for the whole family.

But treatment can make a dramatic difference in your child's symptoms. With the right support, your child can get on track for success in all areas of life. You can treat your child's symptoms of hyperactivity, inattention, and impulsivity without having a diagnosis of attention deficit disorder.

Parenting tips for children with ADD / ADHD

If your child is hyperactive, inattentive, or impulsive, it may take a lot of energy to get him or her to listen, finish a task, or sit still. The constant monitoring can be frustrating and exhausting. Sometimes you may feel like your child is running the show. But there are steps you can take to regain control of the situation, while simultaneously helping your child make the most of his or her abilities.

While attention deficit disorder is not caused by bad parenting, there are effective parenting strategies that can go a long way to correct problem behaviors.

Children with ADD/ADHD need structure, consistency, clear communication, and rewards and consequences for their behavior. They also need lots of love, support, and encouragement.

There are many things parents can do to reduce the signs and symptoms of ADD/ADHD without sacrificing the natural energy, playfulness, and sense of wonder unique in every child.

School tips for children with ADD / ADHD

ADD/ADHD, obviously, gets in the way of learning. You can't absorb information or get your work done if you're running around the classroom or zoning out on what you're supposed to be reading or listening to.

Think of what the school setting requires children to do: Sit still. Listen quietly. Pay attention. Follow instructions. Concentrate. These are the very things kids with ADD/ADHD have a hard time doing—not because they aren't willing, but because their brains won't let them.

But that doesn't mean kids with ADD/ADHD can't succeed at school. There are many things both parents and teachers can do to help children with ADD/ADHD thrive in the classroom. It starts with evaluating each child's individual weaknesses and strengths, then coming up with creative strategies for helping the child focus, stay on task, and learn to his or her full capability.

Teachers tips for children with ADD/ADHD

Remember that your child's teacher has a full plate: in addition to managing a group of children with distinct personalities and learning styles, he or she can also expect to have at least one student with ADD/ADHD. Teachers can do their best to help your child with attention deficit disorder learn effectively, but parental involvement can dramatically improve your child's education. You have the power to optimize your child's chances for success by supporting the work done in the classroom.

There are a number of ways you can work with teachers to keep your child on track at school. Together you can help your child with ADD/ADHD learn to find his or her feet in the classroom and work effectively through the challenges of the school day.

SOME SUPPORTING STRATEGY:

Communicate with school and teachers

As a parent, you are your child's advocate. For your child to succeed in the classroom, it is vital that you communicate his or her needs to the adults at school. It is equally important for you to listen to what the teachers and other school officials have to say.

You can make communication with your child's school constructive and productive. Try to keep in mind that your mutual purpose is finding out how to best help your child succeed in school. Whether you talk over the phone, email, or meet in person, make an effort to be calm, specific, and above all positive—a good attitude can go a long way in communication with school.

- **Plan ahead.** You can arrange to speak with school officials or teachers before the school year even begins. If the year has started, plan to speak with a teacher or counselor on at least a monthly basis.
- **Make meetings happen.** Agree on a time that works for both you and your child's teacher and stick to it. Avoid cancelling. If it is convenient, meet in your child's classroom so you can get a sense of your child's physical learning environment.
- **Create goals together.** Discuss your hopes for your child's school success. Together, write down specific and realistic goals and talk about how they can be reached.

- **Listen carefully.** Like you, your child's teacher wants to see your child succeed at school. Listen to what he or she has to say—even if it is sometimes hard to hear. Avoid interrupting. Understanding your child's challenges in school is the key to finding solutions that work.
- **Share information.** You know your child's history, and your child's teacher sees him or her every day: together you have a lot of information that can lead to better understanding of your child's hardships. Share your observations freely, and encourage your child's teachers to do the same.
- **Ask the hard questions and give a complete picture.** Communication can only work effectively if it is honest. Be sure to list any medications your child takes and explain any other treatments. Share with your child's teacher what tactics work well—and which don't—for your child at home. Ask if your child is having any problems in school, including on the playground. Find out if your child can get any special services to help with learning.

To making learning fun

One positive way to keep your child's attention focused on learning is to make the process fun. Using physical motion in a lesson, connecting dry facts to interesting trivia, or inventing silly songs that make details easier to remember can help your child enjoy learning and even reduce the symptoms of ADD/ADHD.

To making mathematical games

Children who have attention deficit disorder tend to be “concrete” thinkers. They often like to hold, touch, or take part in an experience in order to learn something new. By using games and objects to demonstrate mathematical concepts, you can show your child that math can be meaningful—and fun.

- **Play games.** Use memory cards, dice, or dominoes to make numbers fun. Or simply use your fingers and toes, tucking them in or wiggling them when you add or subtract.
- **Draw pictures.** Especially for word problems, illustrations can help kids better understand mathematical concepts. If the word problem says there are twelve cars, help your child draw them from steering wheel to trunk.
- **Invent silly acronyms.** In order to remember order of operations, for example, make up a song or phrase that uses the first letter of each operation in the correct order.

To making reading environment

There are many ways to make reading exciting, even if the skill itself tends to be a struggle for children with ADD/ADHD. Keep in mind that reading at its most basic level made up of stories and interesting information—things that all children enjoy.

- **Read to children.** Read with children. Make reading cozy, quality time with you.
- **Make predictions or “bets.”** Constantly ask the child what they think might happen next. Model prediction: “The girl in the story seems pretty brave—I bet she's going to try to save her family.”
- **Act out the story.** Let the child choose his or her character and assign you one, too. Use funny voices and costumes to bring it to life.

To develop the learning environment

When children are given information in a way that makes it easy for them to absorb, learning is a lot more fun. If you understand how your child with ADD/ADHD learns best, you can create enjoyable lessons that pack an informational punch.

- **Auditory learners** learn best by talking and listening. Have these kids recite facts to a favorite song. Let them pretend they are on a radio show and work with others often.
- **Visual learners** learn best through reading or observation. Let them have fun with different fonts on the computer and use colored flash cards to study. Allow them to write or draw their ideas on paper.
- **Tactile learners** learn best by physically touching something or moving as part of a lesson. For these students, provide jellybeans for counters and costumes for acting out parts of literature or history. Let them use clay and make collages.

It's tough to enjoy learning when there is something undiagnosed standing in the way. In addition to ADD/ADHD, children may also be affected by learning disabilities. These issues make even the most exciting lessons extremely difficult for students. Like children with attention deficit disorder, children with learning disabilities can succeed in the classroom, and there are many ways you can help.

COMPREHENSIVE TREATMENT PROGRAM

- A professional evaluation for ADHD and co-occurring addiction.
- Continued involvement in addiction recovery groups or Twelve Step programs.
- Education on how ADHD impacts each individual's life, and the lives of those who love them.

- Building social, organization, communication, and work or school skills.
- ADHD coaching and support groups.
- Closely monitored medication when medication is indicated.
- Supporting individuals decisions to take medication or not (in time they may realize on their own that medication is an essential part of their recovery).
- Stages of Recovery

It is important to treat people with ADHD and addiction according to their stage of recovery. Recovery is a process that can be divided into four stages, pre-recovery, early recovery, middle recovery, and long term recovery.

PRE-RECOVERY: Is the period before a person enters treatment for their addictions. It can be difficult to sort out ADHD symptoms from addictive behavior and intoxication. The focus at this point is to get the person into treatment for their chemical and/or behavioral addiction. This is NOT the time to treat ADHD with psycho stimulant medication.

EARLY RECOVERY: During this period it is also difficult, but not impossible to sort out ADHD from the symptoms of abstinence which include, distractibility, restlessness, mood swings, confusions, and impulsivity. Much of what looks like ADHD can disappear with time in recovery. The key is in the life long history of ADHD symptoms dating back to childhood. In most cases early recovery is NOT the time to use psycho stimulant medication, unless the individual's ADHD is impacting his or her ability to attain sobriety.

MIDDLE RECOVERY: By now addicts, and alcoholics, are settling into recovery. This is usually the time when they seek therapy for problems that did not disappear with recovery. It is much easier to diagnose ADHD at this stage; and medication can be very effective when indicated.

LONG TERM RECOVERY: This is an excellent time to treat ADHD with medications when warranted. By now most people in recovery have lives that have expanded beyond intense focus on staying clean and sober. Their recovery is an important part of their life, and they also have the flexibility to deal with other problems

II. Conclusion

Finally, younger generation mainly affected with this type of disorder/ disease, because current environment mostly affected some difficult mental stress like over punishment from parents, teachers and school curriculum. We have speculated that treatment reduce classic symptom associated with ADHD such as poor self esteem, demoralization, and school failure.

Such treatment reduces the risk of substance disorders. It may also be that be reducing conduct disorder behavior, treatment indirectly reduces the risk of substance use disorder. The close supervision accorded most treated patients may directly intervene in their risk of developing substance use disorder. Furthermore, it may be that parents who seek treatment for their children's academic success and therefore more involved in their children's live.

Reference

- [1]. http://www.helpguide.org/mental/adhd_add_signs_symptoms.htm
- [2]. <http://www.natuer.com/reviews/neuro>
- [3]. http://en.wikipedia.org/wiki/Attention_deficit_hyperactivity_disorder
- [4]. <http://www.cdc.gov/ncbddd/adhd/pubs.html>
- [5]. <http://www.ub.unimaas.nl/ucm/e-readers/SS229/whalen>
- [6]. Stephen V. Faraone and Timothy Wilens(2003), Does stimulation Treatment lead to substance Use Disorders?" Journal ofclinical Psychiatry, (64)(suppl11)