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# ADHD: A MEDICAL DIAGNOSIS OR A CHILD INSURGENCY?

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Fall 2021



*“Everyone is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.” Albert Einstein.*

### **Introduction:**

Once there was a fish. The fish was forced to live in the jungle. The fish tried very hard to survive. It didn't know how to climb trees nor how to run, fly, or slither like everyone in the jungle does. The other creatures looked at the fish as a useless creature, a pain in the neck. No one was able to see how hard the fish was trying to fit in. no one noticed how different the fish is from everyone else. And the fish couldn't understand the connection between its willingness and its struggle to fit in the box and everyone's frustration by its behavior. consequently, the fish blamed itself. felt shamed incompetent and useless. And lived its whole life believing that it is incompetent.

Our society is filled with people with differently wired brains who share the same story as this fish, A society that praises conformity and stigmatizes differences. A society that decided to put children with ADHD under medication so they can sit still for six hours listening to a lesson that doesn't support their interest in any way, to have fewer trips to the principal's office, to stop driving their parents crazy, and most importantly to score high in the standardized tests. Aims don't always justify means. “ADHD is a powerful force of pain and needless suffering in too many lives. But if mastered it brings out talents you can neither teach nor buy.” (Hallowed & Ratey, 2021, p. xvii)

### **What is ADHD?**

According to the Diagnostic and Statistical Manual, people with ADHD are people who “show a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with

functioning or development.” According to The Centers for Disease Control and Prevention ADHD is classified into three types:

***Predominantly Inattentive Presentation:*** *It is hard for the individual to organize or finish a task, to pay attention to details, or to follow instructions or conversations. The person is easily distracted or forgets details of daily routines.*

***Predominantly Hyperactive-Impulsive Presentation:*** *The person fidgets and talks a lot. It is hard to sit still for long (e.g., for a meal or while doing homework). Smaller children may run, jump, or climb constantly. The individual feels restless and has trouble with impulsivity. Someone who is impulsive may interrupt others a lot, grab things from people, or speak at inappropriate times. It is hard for the person to wait their turn or listen to directions. A person with impulsiveness may have more accidents and injuries than others.*

***Combined Presentation:*** *Symptoms of the above two types are equally present in the person.*

Based on this definition and classifications one can assume that ADHD is about being hyper, inattentive, and lacking self-control. And that is what most people believe including those who are diagnosed with ADHD.

A more recent perspective suggests that: “ADHA is a term that describes a way of being in the world. it is neither entirely a disorder nor entirely an asset. It is an array of traits specific to a unique kind of mind. It can become a distinct advantage or an abiding curse, depending on how a person manages it. (Hallowed & Ratey, 2021, Pg. 5).

### **The iceberg theory**

It all starts from the neurons, the submerged part of the iceberg. Our behaviors, thoughts, and feelings are coordinated by the activity of our brain cells. They are the results of information processing in our brain. Neurotransmitters are the chemicals that transmit information across the synapse to a receiving neuron's dendrites. (Psychology, Pg. 83). There are about 60 chemicals responsible for transmitting information throughout the brain and body. Research has shown that an abnormal level of Dopamine, "the neurotransmitter that regulates motor behavior, motivation, pleasure, and emotional arousal," (Psychology, Pg. 84). and norepinephrine, "the neurotransmitter involved in states of vigilance, or a heightened awareness of dangers in the environment." (Psychology, Pg. 84). are responsible for the behaviors observed in ADHD brains. Causing disruption in the activation of various brain functions (Frank,2020 – Tran 2021), and executive functioning challenges (see Figure 1). Moreover, research-based on MRI studies have shown that there is a slight difference in the size of the vermis among people with ADHD. ADHD brains have smaller vermis. The tip of the iceberg, however, shows a troublemaker, a kid struggling to pay attention, easily distracted, fidget and unable to sit still, and overly energetic. The invisibility of ADHD symptoms and the stigma people with ADHD face for not fitting in the box has resulted in misunderstanding, and misinterpretation of people with ADHD and therefore address their problems and needs incorrectly. And so rather than tailoring children with ADHD's learning environment to fit their information processing style, it is the other way around. "When needs are not met, the impact hinder learning and cognition, in addition to having a pervasive and significant effect on the emotional wellbeing of children and young people resulting in social frustration unmet potential and perpetual anxiety." (Gagnon-Roy et al., 2016 – Hannant, 2021). Furthermore, comorbidity and overlapping with other conditions have made ADHD diagnosis complicated. In

their recent book, Hallowed and Ratey explain how ADHD is a “complex set of contradictory or paradoxical tendencies.”

*A lack of focus combined with an ability to super focus; a lack of direction combined with highly directed entrepreneurialism; a tendency to procrastinate combined with a knack for getting a week’s worth of work done in two hours; impulsive, wrongheaded decision making combined with inventive, out-of-the-blue problem solving; interpersonal cluelessness combined with uncanny intuition and empathy; the list goes on. (Hallowed & Ratey, 2021, pg.7).*

## Executive Functions Impaired in ADD/ADHD

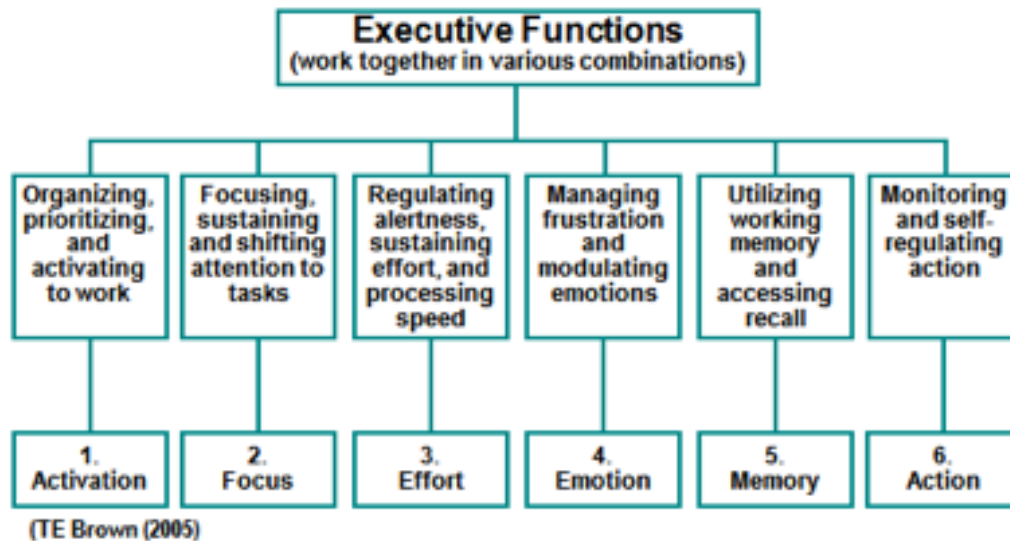


Figure 1. The executive functioning difficulties associated with ADHD. (TE Brown, 2005)

**ADHD diagnosis**

ADHD can be observed in children as early as four-year-old. Symptoms such as “inattention and/or hyperactivity/impulsivity or have complaints that are often associated with ADHD, such as poor or lagging academic performance, difficulty making and keeping friends, or difficulty participating in team sports.” (Tran, 2021) usually initiate an evaluation. As we mentioned before it is very hard to diagnose ADHD due to coexisting conditions such as “learning disability, language disorder, sleep disorder, depression.” To differentiate ADHD from other conditions, health care professionals must take into consideration further evaluations and testing to avoid misdiagnosis. Other conditions that overlap ADHD symptoms such as “intellectual disability, autism spectrum disorder, neurodevelopmental syndromes, anxiety disorder mood disorder, conduct disorder, lead poisoning, tics, “can be easily mistaken for ADHD symptoms.

Managing ADHD symptoms relay heavily on accurate diagnosis and the support and collaboration of parents, educators, and healthcare professionals. Untreated or misdiagnosed ADHD in young children may lead to more complex difficulties in adulthood. Challenging and disruptive behaviors poor social skills and learning delays are some of the consequences of low self-esteem that may result from untreated ADHD.

*When needs are not met, significantly affects learning and cognition. And impacts needlessly on the emotional wellbeing of a child, resulting in possible exclusion (Ofsted, 2018), a life of crime (Coates, 2016), and considerable mental health challenges. (Hannant, 2021, Pg. 376)*

In her book, Dr. Sharon Saline suggests three pathways to an accurate ADHD diagnosis. (Figure 2).

Figure 2 The three pathways to ADHD diagnosis (Saline, 2018, Pg.53)



ADHD is not clearly understood by educational and medical professionals. In her article “Ineffective pathway and the price of conjecture 2021” Penelope Hannant gives a detailed description and analysis of a study conducted to “explore cross-professional understanding that can severely affect children’s learning emotional wellbeing and the difference in recommended support for the neurodiversity between the educational and the medical sector.” (Hannant, 2021, pg. 373). The result of the study shows a significant “Gap in awareness in neurodiversity by both the medical and educational sector.” (Pg. 375). Leading to different pathways and different support. The table below (fig. 3) shows the percentage of themed symptoms identified by professionals.

**Table 3.** Percentage of themed symptoms identified by professionals

% of symptomology identified		Professional						Total (n = 1,000)
		SENCO (30)	Trainee teacher (18)	Teaching assistant (11)	Teacher (58)	General practitioner (44)	Paediatrician (28)	
ADHD	Inattention	73	67	64	91	82	86	81
	Overactive	43	56	73	48	52	61	52
	Disorganised	23	0	0	9	0	0	6
	Impulsivity	47	11	0	28	18	46	53
	Behavioural difficulties	13	0	36	21	20	7	16

Figure. 3

According to the study and Hannant’s analysis, these results mean that:

*“81% of professionals questioned identified inattention as a symptom of ADHD, whilst 52% and 53%, respectively related ADHD to overactivity and impulsivity. 6% were more specific with symptomology, associating disorganization with ADHD, and 16% noted behavioral difficulties. Moreover, many professionals did not expand on the terminology*



*of inattention and overactivity, essentially restating the name of the condition. None of the professionals intimated the three subtypes that ADHD can present. (Hannant, 2021, Pg. 370).*

The study also shows how these differences in understanding ADHD have led to different supports by the different professionals who participated in this study. The graph below (Fig. 4) shows the percentage of themed support suggested by professionals.

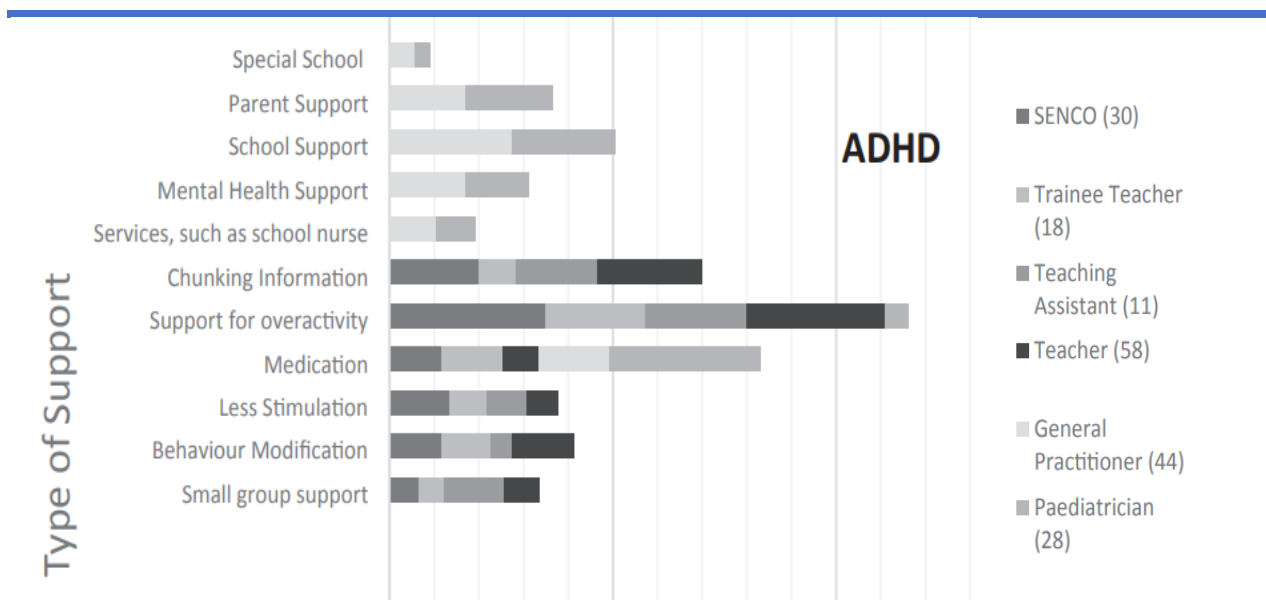


Figure 4

We can see the difference between the type of supports suggested by the professionals and conclude that ADHD as a neurodivergence is not clearly understood by the educational and medical professionals. “Breaking the pathway before it begins, leaving parents and children not knowing where to turn to and in desperate need of support.” (Hannant, 2021, Pg. 375).

**ADHD and the education system**

*We are all born with immense natural talents, but by the time we have been through education far too many of us have lost touch with them. Many highly talented, brilliant people think they are not because the thing they were good at in school, wasn't valued or was actually stigmatized. The consequences are disastrous for individuals and for the health of our communities. (Robinson, 2015, p. xviii).*

The education system has failed to respond to children's creativity and natural talent. Children are labeled with all sorts of disabilities and dysfunctionalities just because they don't fit into the standards. A pre-cut set of information that all children must master. Regardless of their natural talent, strengths, or needs. And children with ADHD who are struggling with their executive functioning are the most impacted by the standards. Math, Reading, and writing are the three main areas in early education that value the child's cognitive development. The child's performance in these areas determines whether or not the child has learning disabilities. Leaving behind children who are artists, dancers, musicians, or athletes and children who have different thinking and different learning styles and different learning pace. Below are some of what kids with ADHD have to say about Math, reading, and writing.

*"Math is definitely my least favorite subject because I am not good with dividing or subtracting numbers. Or fractions. Fractions take a long time, and I get bored."-Jade age 12.*

*"I do well in math. Math is usually cake for me. It's how my brain works...but it doesn't really matter because I always feel stupid because I can't write." Anthony, age 16. (Saline, 2018, Pg.112).*

*“Writing is like I am trapped inside the page and there are no words. I have good ideas and I write some of it down, but then my brain wanders off.” -Jack, age 8.*

*“I like writing. Yesterday, I did a story in school really fast called ‘when the teacher didn’t come to school.’ ”- Liam, age 9. (Saline, 2018, Pg.113).*

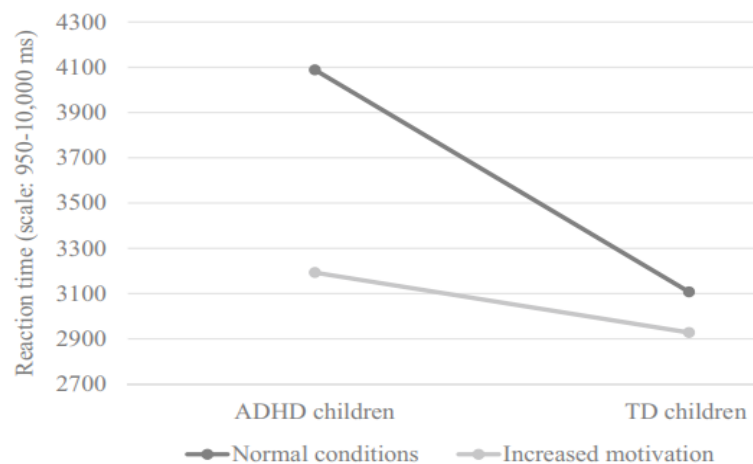
*“I am interested in a lot of books, but I don’t have the patience to read them... I love when my dad reads to me, but not lame books like Pat Sat on Mat. Harry Potter and Percy Jackson are my favorites.” -Jayden, age 8.*

*“You know I don’t like reading out loud, right? I’m a slow reader, and I don’t want to do it in front of everyone. Last week Mr. Brady kicked me out of class because I refused to read out loud.”- Destiny, age 15*

There is no pattern here. But we can see the diversity of the human brain. The problem is not how good or bad children are doing in these subjects. The problem is how we can teach children with ADHD “to accept their feelings, curb inappropriate behavior, and handle emotions more adeptly.” (Saline, 2018, Pg.156) and I believe we all need to learn how to manage our emotions and behaviors in a way or another.

Moreover, during my research, I came across a very interesting study. The study included thirty children with ADHD and thirty nondisabled children. The data obtained show that there are no significant differences in terms of intellectual ability between children with ADHD and nondisabled children. and the “Cognitive deficits in children with ADHD are not permanent neuropsychological impairments. Cognitive capacity may be modulated by means of motivation. Evoking interest and more frequent strengthening help reduce cognitive deficits in children with ADHD.” (Skalski, 2020, p. 593). In other terms, the study confirmed the “Positive impact of motivation on selected aspects of attention in children with ADHD.” (p. 586).

With motivation children with ADHD achieved better results compared to nondisabled children where the increased motivation didn't impact their performance. (fig. 5). Therefore, "it seems that motivation, especially in simple cognitive tasks, can increase perceptual sensitivity in children with ADHD." (Skalski, 2020, p. 592).



*Figure 5: differences in visual search of 5-20 elements on screen between ADHD and nondisabled children in normal and increased motivation conditions (reaction time in ms.)*

As I mentioned earlier, the anger, anxiety, depression, and any other challenging behavior expressed by children with ADHD is the result of the stigma of others. Thus, I believe that the focus should be on how to reduce negative feelings, foster self-esteem, find what really motivates children to perform better, and celebrate their strengths, and support their needs. not on how to reshape their brains to fit the standards.

**Conclusion:**

ADHD is one of the many different neurology we know of. ADHD brains perform the same functions as anyone else but differently. When embraced, neurodiversity can be a source of creativity and power. Our planet is large enough to fit other alternative thinking styles and everyone's potential must be valued. The "stigmatized" behavior of children with ADHD has led to the insurgency against a society that is trying to change their brains and unique way of perceiving the world to fit everyone else's typical thinking. ADHD brains are not broken and need to be fixed; they are wired differently and need to be understood and listened to. I think the most important support ADHD children need is to adjust their environment to fit their potential not the other way around. Just like the fish, blamed for not knowing how to climb the tree. The fish needs water to unleash its swimming power.

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