

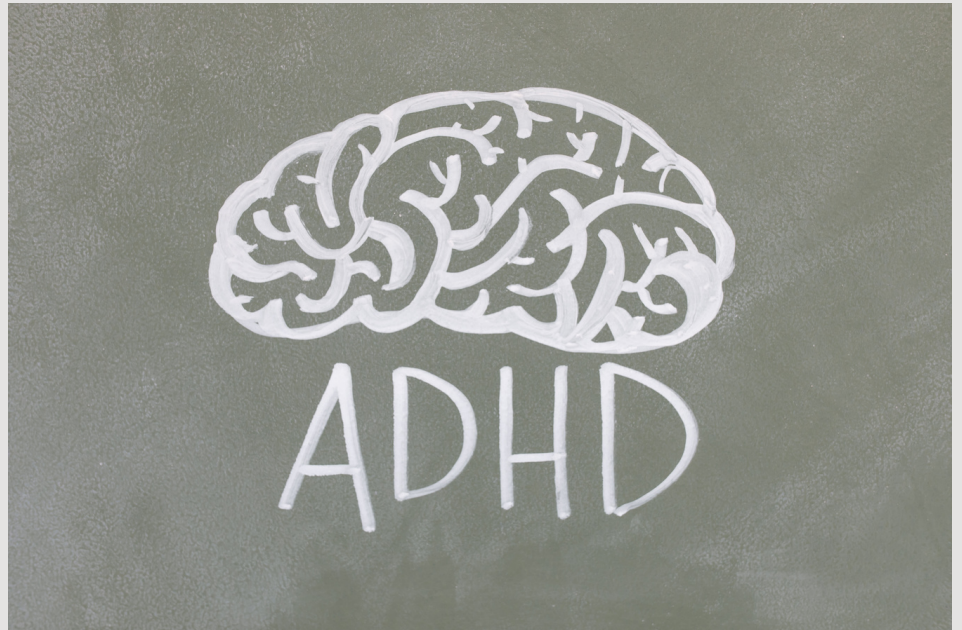
# ADHD

## THE IMPORTANCE OF DETERMINING WHETHER COGNITIVE DEFICITS PLAY A ROLE

By: Howard Eaton Ed.M.

I just finished reading an article on the BBC website written by Rory Carson (Carson, 2023) titled, "I don't have ADHD, but three private clinics say I do." In short, Mr. Carson went to various clinics about his difficulties with forgetfulness, fidgeting and losing focus during meetings. Three clinics in less than two hours of assessment, one lasting 45 minutes, stated he had ADHD and were offering him stimulant medications right away. A fourth clinic, National Health Services (NHS), offered an in-depth, over three-hour assessment, that included a prolonged life history interview. Due to Mr. Carson's trauma events in his life the NHS consultant, Dr. Mike Smith, stated that he did not have ADHD. Rather, the trauma events could have easily resulted in Mr. Carson's struggles with forgetfulness, fidgeting and occasional inattentiveness. Dr. Smith noted that he had not met any of the 18 symptoms associated with ADHD. The other clinics had noted up to 15 of the 18 symptoms, and that he had a life-long ADHD diagnosis with no expiration date.

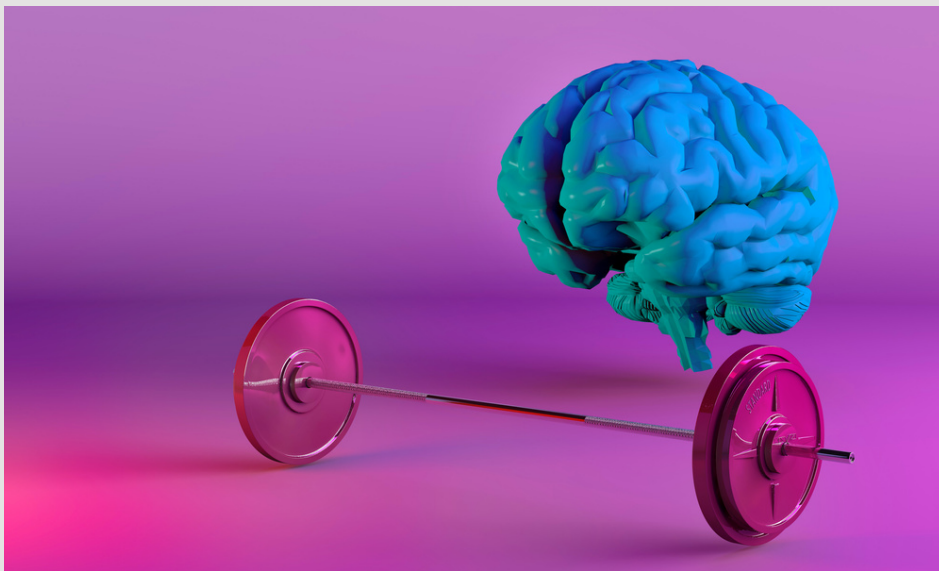
I also see this occurring in Vancouver, BC, Canada where I work and live. Several months ago, I got a call from someone I had conducted a psycho-educational assessment on over twenty years ago. He was now married and doing well in his career. However, his wife had been



experiencing difficulties with attention and focus. These difficulties had been getting worse, and raising three young children complicated the matter. She had seen Instagram posts on ADHD and felt that this could be her problem. She went to a local psychologist who after meeting with her felt that she met the criteria for ADHD and stated that this was a life-long disability and medications were the best form of treatment, along with therapy. I chatted with her husband and stated that one should look at other causes such as weaknesses with executive functioning in the brain. These cognitive deficits can be a result of learning challenges one is born with or come from undiagnosed concussions or even past trauma. If cognitive deficits were the cause they can be

improved, and medication is not required. His wife decided to take the medication and therapy path.

It is certainly the case that stimulant medications can have a positive impact on the lives of those dealing with ADHD. I do not question benefits that many are feeling, such as improved attention or overall mental wellness. In fact, some of our students with ADHD Inattentive type start on our cognitive program on the medications and continue their as they combine cognitive intervention with their academic course work. Nevertheless, I have several concerns regarding the process of assessment, and how professionals involved in diagnosis may not be considering how multiple cognitive deficits impact attention capacities in the brain.



First, as noted above, the assessment for ADHD can be very quick and medication prescribed easily without looking into other critical factors that impact quality of life. For example, cognitive functions or past trauma events need to be addressed. Second, medication, based on research articles I have read, does not dramatically improve academic achievement, if that is a primary reason a parent is seeking pharmacological treatment. Medication can actually decrease aspects of cognitive functioning, yes, an individual does focus or attend better, but improving grades in school or mastering specific subject matter are still a struggle for some.

In one of the first experimentally controlled studies researchers at the Center for Children and Families at Florida International University (FIU) found that there was “preliminary evidence failing to support the expectations that medication will improve academic achievement in children with ADHD”. These children were between the ages of 7 and 12 who were attending an 8-week summer camp that included academic instruction. The medication being studied was Concerta and extended-release methylphenidate (Pelham, et al., 2022).

As to university students taking ADHD medications, researchers Dr. Lisa Weyandt from University of Rhode Island’s George and Anne Ryan Institute for Neuroscience and Dr. Tara White from Brown University discovered that the medication Adderall worsened cognitive functioning in otherwise healthy students. In a July 19, 2018 article they wrote, “We hypothesized that Adderall would enhance cognition in healthy students, but instead, the medication did not improve reading comprehension or fluency, and it impaired working memory...Not only are they not benefitting from it academically, but it could be negatively affecting performance” (Study: ADHD drugs do not improve cognition in healthy college students, 2018). This study was published in the journal, *Pharmacy* (Weyandt, et al., 2018).

This research highlights why it is important to determine if a child, teenager, or adult who is struggling with attention, memory, processing speed and reasoning might have specific cognitive deficits as the underlying reason for their struggles whether it be academic or social. It is not a neurotransmitter problem with dopamine and norepinephrine for which the stimulant medication is the target.

If one goes to a family doctor, psychologist or psychiatrist and is given an interview and questionnaires to fill out about specific problematic behaviours like ability to sustain focus or forgetfulness as the sole source of assessment there is no insight into the internal or brain-based cognitive functioning. Rather, just the behaviours that these brain-based cognitive weaknesses would produce. For example, if you struggle to process language and determine the main idea of what you are hearing it is likely you struggle with oral comprehension. As well, if you struggle to see relationships between concepts it will feel like you are not understanding what you are learning and need to re-read passages in textbooks or novels. This will appear to you like you are not paying attention and thus have a problem with attention or focus. Instead, what is occurring is that your weakness with executive functioning (cognitive abilities) is resulting in learning challenges.

Medication often will not improve these cognitive deficits, and in fact as the research above notes, could in fact make cognitive functioning worse. Medication often will not improve one’s grades as the need for strengths in cognitive functioning is required to grasp academic material and performance on tests. Ironically, in research that states medication helps with academic performance it must be combined with educational resource support. That is, take the medication, but to do better in school a student would need more educational intervention outside of the classroom. Again, this is often due to undiagnosed cognitive weaknesses.

(continued. pg. 3)

At Eaton Arrowsmith Center for Neuroeducation we understand this reality. In fact, over the years a percentage of children on stimulant medication for ADHD prior to starting their program with us have eventually come off the stimulant as their cognitive capacities improved. This is especially the case for Inattentive Type ADHD. Why is this the case? Again, the reason for their ADHD-like behaviours was not the neurotransmitter deficit that the drug is targeting, but rather a cognitive deficit related to brain networks and connectivity. This is neuroplasticity at work. Improve cognitive capacity, change behavior.

My hope is that psychologists, psychiatrists, and family doctors begin to look at the cognitive deficit model for ADHD, rather than move quickly to stimulant medications combined with some form of therapy as the sole source of gold standard treatment. By not looking at cognitive deficits in their clients they can be missing the primary cause of that individual's academic and social frustrations. As well, the research is not always positive on the academic benefits of taking stimulants like Concerta and Adderall. Research has noted negative impact of medications like Adderall on overall cognitive functioning. So, what might already be a cognitive deficit prior to being prescribed the medication could be worsened with the very same medication. The health care professional needs to pay closer attention to these issues. This is especially the case when parents report that the stimulant medication is not resulting in improved academic achievement.

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