

Adhd: Myths, Misunderstandings and Misconceptions

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Dear Editor,

since 1775, when the first Attention-Deficit Hyperactivity Disorder (ADHD) case was described, over 28,000 scientific papers have been published [1], yet some myths, misunderstandings, and misconceptions persist. Below are some of the most frequent ones.

ADHD IS NOT A REAL DISORDER

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) [2] defines ADHD as a neurodevelopmental disorder that involves inattention, hyperactivity, and impulsivity. People with ADHD struggle to focus their attention on one thing, their minds and/or bodies are always active, and they feel strong urges to do something right now. Research studies show numerous differences between those with and without ADHD [3]. Particularly, brain scan studies show reduced volume in the inferior frontal gyrus and reduced gray matter in the parietal, temporal, and occipital cortices [4].

ADHD IS JUST A DISORDER OF CHILDHOOD.

ADHD is a lifespan disorder. Indeed, recent follow-up studies show that ADHD persists from childhood to adolescence in 50%–80% of cases, and into adulthood in 35%–65% of cases [5]. According to a 2023 study, an estimated 15.5 million American adults (6.0% - equivalent to one in 16) have a current diagnosis of ADHD [6]. ADHD symptoms in adulthood can lead to persistent problems in various areas of life, such as academic and work functioning, social relationships, and major daily activities.

ADHD MEDICATIONS ARE ADDICTIVE AND INCREASE THE RISK FOR SUBSTANCE ABUSE

To date, there is no evidence to suggest that ADHD medications are addictive. Furthermore, there is no evidence to suggest that such medications increase the risk of substance abuse [7]. On the other hand, a recent study showed a protective effect on suicidal behaviours, substance misuse, accidental injuries, transport accidents, and criminality [8]. Clinicians should still monitor patients

for misuse and diversion of stimulant medication, as the potential for abuse exists with any powerful drug.

ADHD MEDICATIONS ARE GOING TO CHANGE SOMEONE'S PERSONALITY

This aspect may be somewhat true, as the use of effective medications can improve core aspects of ADHD, such as better focus, increased motivation, less impulsive behaviors, and often being more able to manage emotions. The ADHD medications do, in that sense, change who you are. But they do this by improving these aspects of functioning that have previously been challenging and that actually contribute to the diagnosis [9,10]. This topic is often a fear of parents of children with ADHD who are approaching the use of a psychostimulant for the first time [11]. Some psychopharmacological treatment side effects include irritability, moodiness, tearfulness, or a “zombie-like” or “dazed” state, but they are not a permanent change in personality and typically stop once the medication is adjusted or changed. These symptoms are often signs that the medication dosage is too high or not the right fit [12].

ADHD MEDICATIONS ARE GOING TO CHANGE THE STRUCTURE OF THE BRAIN

This theme is quite interesting. Indeed, some evidence suggests that there are differences between the brains of children and adolescents with ADHD who have taken medication and those who have not taken medication. The brains of children who have taken medications appear to be more like the brains of typically developing children and adolescents than the brains of those with ADHD who have never taken ADHD medications [13,14]. This effect is linked to the medication potentially normalizing structural differences in the brain, such as smaller volumes in areas like the cerebellum and basal ganglia, which are often associated with ADHD.

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MEDICATIONS FOR ADHD ARE THE SIMPLEST SOLUTION

Medications can help regulate hyperactivity and impulsivity, but they don't "fix" ADHD or make it an "easy way out." Medication is just one form of treatment. Some critics of medications for ADHD argue that the fact that ADHD medications reduce symptoms but don't change the course of the disorder is an argument for why we should not be prescribing them. This perspective suggests a need for medication to be paired with other treatments like behavioral therapy and that its role in a person's life is limited to symptom management, coping strategies, and communication techniques, which is a valid concern when considering a disorder's long-term impact on an individual's life [15].

ADHD DRUGS ARE OVER-PRESCRIBED.

The suggestion that ADHD is overtreated, an argument often popularized in the media, is not supported by scientific literature. Data from the National Comorbidity Survey Adolescent Supplement showed that only 20.4% of youth with ADHD used stimulants in the past 12 months [16]. The National Institute of Mental Health indicates that only 13% of children diagnosed with ADHD were treated for their symptoms [17]. Data from the National Health and Nutrition Examination Survey report that only about 48% of children with ADHD were receiving treatment in the past 12 months [18]. A significant portion of diagnosed adults with ADHD do not receive any treatment. Indeed, less than 25% of adults with ADHD still get no treatment at all [19]. A recent systematic review indicates both overtreatment/misuse of medications in individuals without ADHD and pharmacological undertreatment in youths with the disorder, suggesting the need for public health policies improving education on ADHD and discussions on the benefits and limitations of ADHD medications [20].

ADHD IS OVERDIAGNOSED.

The claim that ADHD is overdiagnosed is another topic of debate. Some evidence suggests an overdiagnosis of ADHD, particularly in children, with a prevalence that has grown from 6.1% to over 10% in 20 years [21]. Other experts argue it is still underdiagnosed, especially in women and adults [22]. Studies suggest that girls and women are likely to be diagnosed with ADHD significantly later than boys and men [23]. Women are more likely than men to be diagnosed with ADHD for the first time in adulthood [24]. Another misconception is that minority children have the highest prevalence of ADHD, but data show that non-Hispanic white children have the highest rates [25].

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