The Mismedicine of ADHD: Overdiagnosis of ADHD in Children

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Introduction

Medical errors can occur in a multitude of forms, ranging from treatment mistakes to failures in communication or even within diagnosis. One term that captures these diverse failures within healthcare is mismedicine. Dr. Pooya Beigi first coined this term to describe medical actions or systemic issues that result in harm, inefficiency, or care that does not meet accepted standards (Blissy, 2024). Mismedicine includes a wide spectrum of problems, such as misdiagnosis, delayed diagnosis, treatment errors, and systemic failures that would negatively affect patient outcomes. Understanding mismedicine allows healthcare professionals and researchers to analyze how complex factors within medical systems contribute to these errors and patient harm.

One important area where mismedicine may occur is in the diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD) in children. ADHD is one of the most commonly diagnosed neurodevelopmental disorders among children worldwide (Kazda et al., 2021). In the United States, approximately 10% of elementary school children are diagnosed with ADHD, making it one of the most prevalent pediatric psychiatric conditions (Morgan et al., 2023). While increased awareness has improved access to treatment and diagnosis for many individuals who genuinely need the support, many researchers and clinicians have also raised concerns that ADHD may sometimes be overdiagnosed (Kazda et al., 2021; Abdelnour et al., 2022). Overdiagnosis can occur when individuals receive a medical diagnosis despite not meeting the full clinical criteria or when normal variations in behaviour are interpreted as a condition (Morgan et al., 2023). This article aims to explore how the overdiagnosis of ADHD in children represents as a form of diagnostic mismedicine, examines the factors that contribute to this issue, and discusses prospective strategies to improve diagnostic accuracy and avoid patient harm.

What is ADHD, and What is Diagnostic Error?

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the attested guide published by the American Psychiatric Association (APA) for diagnosing mental illnesses, ADHD is a neurodevelopmental disorder characterized by a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning and/or development (American Psychiatric Association, 2013). For a diagnosis to be made, symptoms must persist for at least six months, occur in multiple settings, such as school and home, and begin before age twelve (American Psychiatric Association, 2013). Additionally, the described symptoms must significantly impair social, academic, or behavioural functioning.

Despite these established criteria, diagnosing ADHD can be challenging because, despite advances in neuroscience, ADHD remains a clinical diagnosis rather than a laboratory-confirmed condition. Physicians typically diagnose ADHD using behavioural questionnaires, interviews with parents and teachers, and sometimes neuropsychological assessments (Abdelnour et al., 2022). Because no biological marker currently exists for ADHD, clinicians must rely on subjective evaluations of behaviour. This diagnostic process can make it difficult to distinguish between

clinically significant symptoms and normal variations in childhood behaviour.

One form of diagnostic error is overdiagnosis, which occurs when a condition is identified in individuals who may not actually have clinically significant symptoms (Kazda et al., 2021). Overdiagnosis differs from misdiagnosis in that the diagnosis may technically fit some observed behaviours, but it may not represent a true disorder requiring medical intervention. In the context of mismedicine, overdiagnosis represents a failure to appropriately interpret symptoms within their developmental and environmental context (Blissy, 2024).

Prevalence and Rising ADHD Diagnoses

Several studies have identified patterns suggesting that ADHD may sometimes be diagnosed in children who are unlikely to meet strict diagnostic criteria. Research analyzing a sample of U.S. elementary schoolchildren found that some children were diagnosed with ADHD despite previously demonstrating above-average academic, behavioural, or executive functioning (Morgan et al., 2023). These studies indicate that ADHD prevalence among children has risen over a course of time, alongside increased use of prescription stimulant medications (Kazda et al., 2021). Some researchers argue that this rise may partially reflect improved awareness and better recognition of previously overlooked cases. However, others argue that diagnostic inflation may also be contributing to the trend (Kazda et al., 2021).

At the same time, the number of ADHD diagnoses has increased significantly in recent decades. National surveys indicate that ADHD prevalence among U.S. children increased from 6.1% to 10.2% between 1997 and 2016, contributing to ongoing debates about whether this rise reflects improved recognition or potential overdiagnosis (Abdelnour et al., 2022).

Dr. Pooya Beigi explains that mismedicine often occurs when complex systemic factors influence healthcare decisions and diagnostic practices (Blissy, 2024). In the case of overdiagnosis of ADHD, the key complex systemic factors influencing the diagnosis are the social, educational, and healthcare systems.

Contributing Factors to ADHD Overdiagnosis

Several factors may contribute to ADHD overdiagnosis. One important one is the evolution of diagnostic criteria. Changes in the Diagnostic and Statistical Manual of Mental Disorders (DSM) have broadened the definition of ADHD over time. For example, the DSM-5 increased the age at which symptoms must appear from seven to twelve years old and allowed ADHD to be diagnosed alongside autism spectrum disorder, expanding the number of individuals eligible for diagnosis (Abdelnour et al., 2022).

The Relative Age Effect

One well-documented phenomenon is the relative age effect, which refers to the tendency for younger children within a school grade to be diagnosed with ADHD more frequently than their older classmates (Kazda et al., 2021). Younger children may naturally display higher levels of impulsivity or shorter attention spans due to developmental milestone differences. Expected milestone impulsivity or shorter attention spans may easily be mistaken for irregular symptoms when compared to children who have reached the development milestone where they have outgrown these traits.

Sociodemographic Factors and Educational Pressures

Research has also identified sociodemographic differences in ADHD diagnosis and treatment. In one study of elementary school children who previously demonstrated strong academic or behavioural performance, White children were more likely than non-White children to later receive ADHD diagnoses or medication treatment (Morgan et al., 2023). Such findings suggest that disparities in healthcare access, parental advocacy, and provider perceptions may influence diagnostic patterns. Educational systems may also play a role. Increasing academic expectations, pressures, and structured classroom environments can lead teachers or parents to interpret normal childhood behaviour as symptoms of a disorder.

Additionally, the widespread use of stimulant medications has raised concerns about the over-medicalization of typical childhood behaviours (Morgan et al., 2023). While stimulant treatments are effective for many individuals with ADHD, prescribing them when the diagnosis is uncertain may expose children to unnecessary treatment. As Dr. Beigi emphasizes, mismedicine can occur when healthcare decisions are influenced by systemic pressures rather than careful clinical evaluation (Blissy, 2024).

Consequences of Overdiagnosis

Overdiagnosing ADHD can have several important consequences and impacts. From a medical perspective, children who are incorrectly diagnosed may receive medications they do not actually need. Stimulant medications can produce adverse side effects such as sleep disturbances, reduced appetite, and cardiovascular effects (Abdelnour et al., 2022). These symptoms may not present themselves immediately and can often be overlooked, causing more impactful harm to children's daily lives.

Overdiagnosis may also affect a child's psychological development. Being labelled with a psychiatric diagnosis can influence how children view themselves and how others perceive their behaviour. This may negatively impede their social behaviours (Morgan et al., 2023).

At a broader level, overdiagnosis may contribute to the maldistribution of healthcare resources. When diagnostic categories expand to include mild or borderline cases, services and resources may become limited for individuals with more severe forms of ADHD who may need more support

and resources (Kazda et al., 2021).

Prevention and Solutions

Addressing ADHD overdiagnosis requires improvements at both clinical and systemic levels. Clinicians should ensure that diagnoses are based on comprehensive clinical evaluations across multiple settings and developmental contexts (Abdelnour et al., 2022, Blissy, 2024). Second, greater emphasis should be placed on non-pharmacological interventions, including but not limited to behavioural therapy and classroom accommodations, before medication is prescribed or even considered. Finally, improving the overall communication between healthcare providers, educators, and families may help reduce misunderstandings (Blissy, 2024). Recognizing normal developmental variation is an important step in reducing mismedicine in pediatric health care.

Conclusion

The increasing diagnosis of ADHD in children has sparked important discussions about the potential for overdiagnosis within healthcare systems. Although ADHD is a legitimate and often impairing condition for many individuals, inaccurate diagnoses can represent a form of diagnostic mismedicine. Factors such as subjective diagnostic criteria, educational pressures, and developmental differences among children may contribute to inflated diagnosis rates. Improving diagnostic standards, increasing awareness of developmental variation, and strengthening collaboration between healthcare providers and educators may help reduce overdiagnosis. Ultimately, ensuring accurate diagnoses will help protect children from unnecessary treatment while ensuring that those who genuinely need support receive appropriate care.

Questions

How do changes in ADHD diagnostic criteria over time influence the increasing prev

Changes in diagnostic criteria have contributed to the increase in ADHD diagnoses. Over time, revisions to the Diagnostic and Statistical Manual of Mental Disorders (DSM) have broadened how ADHD is defined. For example, the DSM-5 increased the age at which symptoms must appear from 7 to 12 years and allowed ADHD to be diagnosed alongside autism spectrum disorder. These changes expanded the number of individuals who can meet the criteria for diagnosis, which has contributed to rising prevalence rates (Abdelnour et al., 2022).

How might social and demographic factors, such as race or socioeconomic status,

Studies indicate that sociodemographic factors may influence ADHD diagnosis and treatment patterns. For example, research found that White children were more likely than non-White children to receive ADHD diagnoses and medication treatment, even among children who previously displayed strong behavioural and academic functioning. These disparities may reflect differences in healthcare access, parental awareness of ADHD, and cultural attitudes toward mental health treatment (Morgan et al., 2023).

What are some potential consequences of ADHD overdiagnosis or treatment?

Overdiagnosis can lead to several negative consequences. Children may receive medications they do not need, exposing them to potential side effects such as decreased appetite, anxiety, headaches, and sleep disturbances (Abdelnour et al., 2022). Additionally, labelling children with a psychiatric diagnosis may affect their self-confidence and academic expectations. Overdiagnosis can also lead to inefficient use of healthcare resources by directing treatment and support services toward children with mild symptoms rather than those with more severe impairments.

How can healthcare providers improve the diagnostic accuracy to reduce the risk of

Healthcare providers can reduce diagnostic errors by conducting thorough and comprehensive assessments before diagnosing ADHD. This includes collecting information from multiple sources, such as parents, teachers, and behavioural evaluations. Clinicians should also carefully consider developmental factors and rule out other conditions that may mimic ADHD symptoms (Abdelnour et al., 2022).

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