

ADHD in Children and Adolescents: Barriers to Ethical and Successful Treatment

Katherine T. Smith

School of Health Professions, Texas Tech University Health Sciences Center, Lubbock, TX, USA

Email: kat.smith@ttuhsc.edu

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Abstract

This review provides a comprehensive analysis of attention deficit hyperactivity disorder (ADHD), a neurodevelopmental disorder characterized by inattention, hyperactivity, or impulsivity. The global prevalence of the disorder ranges from 2% to 7%, with an average of around 5%. ADHD affects individuals of all ages, with symptoms typically becoming visible as early as 3 years. The symptoms range from mild to severe and may persist into adulthood. The disorder affects a variety of demographic groups, including differences in age, gender, race, and ethnicity, with varying effects, prevalence, and treatment options among these groups. Treatment options for ADHD range from behavioral interventions to prescription medication, with a number of medications available on the market for treating ADHD. The review also highlights the issues of relapse and safety concerns associated with the use of medication, as well as the challenges associated with diversity and socioeconomic barriers in the diagnosis and treatment of the disorder.

Keywords

ADHD, Neurodevelopmental Disorder, Medication Safety, Socioeconomic, Attention Deficit Hyperactivity Disorder

1. ADHD in Children and Adolescents: Barriers to Ethical and Successful Treatment

This paper offers a thorough examination of Attention Deficit Hyperactivity Disorder (ADHD). The review highlights the global prevalence of the disorder, the range of treatment options available, and the issues of relapse and safety concerns associated with the use of medication, as well as the challenges associated with diversity and socioeconomic barriers in the diagnosis and treatment of the disorder.

2. Disorder Description

Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder that is characterized by a persistent pattern of inattention, hyperactivity, or impulsivity. This disorder negatively impacts social, academic, and occupational functioning throughout an individual's life. ADHD typically presents in three forms: predominantly inattentive, predominantly hyperactive, and a combination of the two [1]. Children and adolescents suffering from ADHD experience low self-esteem, troubled relationships, and poor performance in schoolwork.

3. Global Prevalence Attention

The global prevalence of ADHD is substantial, affecting a significant number of individuals. Comprehensive analysis shows that the global prevalence of the disorder ranges from 2% to 7%, with an average of around 5% [2].

4. Population

Symptoms of ADHD are noticeable as early as three years old and become visible by age nine, continuing into late adolescence. The symptoms can be mild, moderate, or severe and may sometimes develop into adulthood.

5. Diversity Information

ADHD affects diverse groups of individuals, including differences in age, gender, and race/ethnicity. In each category, the effects, prevalence, and treatment differ. For example, it is argued that ADHD occurs more frequently in males than in females, and symptoms tend to manifest differently; boys tend to be more hyperactive, while girls tend to be more quietly inattentive [3]. Additionally, there is a pre-existing disparity in diagnosis and medication for individuals of different races and ethnicities, as symptoms may present differently, and different types of medications may work differently for different ethnicities.

6. Prevalence in Children and Adolescents

The prevalence of ADHD is particularly high among children and adolescents, with estimates suggesting that the disorder affects 3% - 5% of children and 2% - 7% of adolescents.

7. Levels of Treatment

While ADHD does not have a specific cure, there are several ways to manage the disorder. Treatment options range from behavioral interventions to prescription medication and include the use of non-stimulant and stimulant medications, therapeutic interventions, home and school-based interventions, and consultation with a physician.

8. Relapse Issues

Current medical procedures for treating severe symptoms of ADHD include the

use of stimulant medications, such as methylphenidate and amphetamines, as well as non-stimulant medications, such as atomoxetine and Focalin. While research suggests that these interventions are effective in the short term, they may also pose safety concerns for children, adolescents, and adults.

Over the past two decades, the global prescription rate of these medications has risen significantly [1]. However, the efficiency and safety of these medications remain contentious issue. A significant number of individuals who receive ADHD medication report negative effects on their quality of life, particularly among young people and children.

In response to these concerns, clinical procedures and standards have proposed yearly treatment evaluations and medication breaks, during which patients temporarily stop taking their medication in order to determine if continued treatment is necessary. However, research studies indicate that cessation of medication carries the risk of symptom exacerbation. The question of whether clinicians should implement treatment holidays and the potential psychological and physical effects on patients is a topic of ongoing debate.

9. Top 5 Medications for Attention Deficit Hyperactive Disorder

Name of Drug	Classification Availability	Indication	Side Effects/Cautions	Contraindications	Dosage
atomoxetine (Strattera) <i>Generics Available</i>	Non-Stimulant Readily available in both brand and generic forms.	Used to treat ADHD Generally, well tolerated in children.	constipation, insomnia, decreased appetite, and xerostomia	Should be taken in low doses alongside Celexa, Lexapro, and Prozac	Administered orally daily. Once or twice a day depending on the prescription.
guanfacine (Intuniv) <i>Generics Available</i>	Non-Stimulant Readily available in both brand and generic forms.	Used to treat ADHD in children over 6. Generally, well tolerated in children.	drowsiness, fatigue, decreased blood pressure, hypotension, and sedated state	not approved for use by anyone younger than 6 years old	1 mg orally once a day, either in the morning or evening, at approximately the same time each day; may adjust in increments of no more than 1 mg/week In children with ADHD who are 6 - 12 years of age and are either starting treatment for the first time or switching from another medication, start with 10 mg once daily in the morning; daily dosage may be adjusted in increments of 5 mg or 10 mg at weekly intervals.
amphetamine sulfate (Adderall XR) <i>Generics Available</i>	Stimulant Readily available in both brand and generic forms.	Used to treat Narcolepsy and ADHD Generally well tolerated, most side effects appear within the first month and diminish over time.	headache, insomnia, weight loss, anorexia, and xerostomia	Cardiovascular Disease, Hyperthyroidism, arteriosclerosis, moderate to severe hypertension, glaucoma, history of drug abuse, use of MAOIs	

Continued

dexamethylphenidate (Focalin) <i>Generics Available</i>	Stimulant Readily available in both brand and generic forms.	Used to treat ADHD Similar to Adderall with some studies claiming the superiority of Focalin for tolerability	fever, anxiety, loss of appetite, stomach pain, irritability, insomnia	hypersensitivity to methylphenidate, use of MAOIs	5 mg daily (2.5 mg twice daily) with or without food.
methylphenidate (Ritalin) <i>Generics Available</i>	Stimulant Readily available in both brand and generic forms.	Used to treat ADD, ADHD, and Narcolepsy Generally well tolerated, most side effects appear within the first month and diminish over time.	fast heartbeat, chest pain, fever, joint pain, skin rash, hives, trouble sleeping, headache	hypersensitivity to methylphenidate, use of MAOIs	Start with 5 mg orally twice daily (before breakfast and lunch). Increase dosage gradually, in increments of 5- to 10-mg weekly. A daily dosage above 60 mg is not recommended.

10. Discussion

Research conducted on ADHD has revealed a significant gap in understanding certain aspects of the disorder, particularly concerning the advancement and readiness of pharmacological treatment. There is a lack of emphasis and level of awareness on the advancement and readiness of pharmacological treatments [4]. Close attention and evaluation of symptoms by parents, teachers, and healthcare professionals must continue to be encouraged for both diagnostic and treatment purposes. The disorder remains difficult to differentiate from behavior influenced by environmental factors and may lead to impulsive diagnoses when other non-invasive strategies should be considered first.

In cases of a definitive diagnosis, despite the availability of medication to manage the disorder, many parents are unaware of or do not have access to professionals who can educate them about treatment options. The plethora of false information circulating about the drugs and their potential effects has resulted in an aversive reaction toward medication by caregivers [5]. This, along with widespread recreational abuse of the medication, has made it increasingly difficult for children and adolescents to receive the help they need. Developing a pharmacological brief on this disorder would have a significant impact on sensitization and the education of caregivers concerning the spectrum of treatment options available.

Initially, the primary goal of the research was to understand how the disorder presents and affects children and adolescents and shed light on the often overlooked issues of diversity, socioeconomic barriers, and misconceptions surrounding the medication of the disorder (Sciutto, 2015) [3]. Focusing on recent

studies and research conducted on ADHD sheds light on many unaddressed issues on both the treatment and diagnostic sides of the disorder.

A number of medications are available on the market for patients with ADHD, and treatment outcomes vary from patient to patient. Although all medications come with the risk of side effects, some may present greater concerns than others. It is therefore important to consider both effectiveness and side effects as factors when prescribing medication [4]. The list of medications is a comprehensive combination of FDA-approved drugs that have undergone rigorous testing and continued research to ensure overall effectiveness and the safety of the patient.

Focusing on diversity, issues of racial and ethnic differences have briefly appeared in the research literature but have not been discussed in detail. Despite this, it is crucial to understand these differences and barriers to access for effective diagnosis and treatment. In a study by Polanczyk *et al.* [5], it was found that Latino and African American children had fewer chances of being diagnosed with ADHD and being treated with medication as compared to Caucasian children. These children also exhibited fewer symptoms and suffered less commonly from comorbidities often associated with the disorder. The data shows that African American children exhibited a low incidence of taking ADHD medication at the 5th and 7th grades, and Latino children exhibited very little use of medication at the 5th and 10th grades. Differences in race and ethnicity in medication use as reported by parents also show a significant difference. These findings raise the question of whether these differences are inherent to race or related to the current issue of under-treatment and under-diagnosis of Latino and African American children as compared to the potential over-treatment and over-diagnosis of Caucasian children.

ADHD is often portrayed by the misinformed public as simply irrational behavior that can be corrected by dedicated parents and teachers. Many parents believe that they are responsible for molding their children's behavior without taking into account innate brain chemistry or cultural, biological, and genetic factors that also play a key role in a child's physical and mental development. Additionally, the misuse of medication by young people and adults who may sell or abuse their prescriptions leads to fear and skepticism of ADHD medication, resulting in increasing public doubt and the designation of many treatment options as dangerous [2]. These assumptions continue to place children with ADHD further at risk of falling through the cracks.

11. Conclusion

This paper sheds light on the complexities of the debate surrounding the treatment of children with ADHD. On one hand, there is the concern of potential negative side effects and complications from the use of medications, as well as the risk of abuse and recreational use. On the other hand, there is the reality that leaving children with ADHD untreated can have detrimental effects on their

ability to function in society and fulfill their ultimate potential. Further research is needed, as well as increased efforts by healthcare professionals to educate the general population and parents from diverse backgrounds on the seriousness of childhood ADHD. In order to effectively treat this disorder, it is essential for counselors, psychiatrists, primary care physicians, pharmacists, and those closest to the patient to work together to develop comprehensive treatment plans that address all aspects of the clinical and therapeutic picture.

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Conflicts of Interest

The author declares that there is no conflict of interest.

References

- [1] Giacobini, M., Medin, E., Ahnemark, E., Russo, L.J. and Carlqvist, P. (2018) Prevalence, Patient Characteristics, and Pharmacological Treatment of Children, Adolescents, and Adults Diagnosed with ADHD in Sweden. *Journal of Attention Disorders*, **22**, 3-13. <https://doi.org/10.1177/1087054714554617>
- [2] Coker, T.R., Elliott, M.N., Toomey, S.L., Schwebel, D.C., Cuccaro, P., Tortolero Emery, S., Davies, S.L., Visser, S.N. and Schuster, M.A. (2016) Racial and Ethnic Disparities in ADHD Diagnosis and Treatment. *Pediatrics*, **138**, e20160407. <https://doi.org/10.1542/peds.2016-0407>
- [3] Sciotto, M.J. (2015) ADHD Knowledge, Misconceptions, and Treatment Acceptability. *Journal of Attention Disorders*, **19**, 91-98. <https://doi.org/10.1177/1087054713493316>
- [4] Weyandt, L.L., Oster, D.R., Marraccini, M.E., Gudmundsdottir, B.G., Munro, B.A., Zavras, B.M. and Kuhar, B. (2014) Pharmacological Interventions for Adolescents and Adults with ADHD: Stimulant and Nonstimulant Medications and Misuse of Prescription Stimulants. *Psychology Research and Behavior Management*, **7**, 223-249. <https://doi.org/10.2147/PRBM.S47013>
- [5] Polanczyk, G., De Lima, M.S., Horta, B.L., Biederman, J. and Rohde, L.A. (2007) The Worldwide Prevalence of ADHD: A Systematic Review and Meta-regression Analysis. *American Journal of Psychiatry*, **164**, 942-948. <https://doi.org/10.1176/ajp.2007.164.6.942>