

A Systematic Review on Effects and Impact of ADHD in Children

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Abstract

The neuro developmental illness known as attention-deficit/hyperactivity disorder (ADHD) is characterized by impulsivity, hyperactivity, and inattention. Three subtypes of ADHD are recognized and assessed using a combination of objective and subjective measures. The etiology of the illness is multifaceted and includes environmental, neurological, and genetic components. It is common for anxiety and sadness to coexist with ADHD, which makes emotional and social functioning more difficult. Behavioral therapy and stimulant drugs are usually used in treatment; multimodal approaches produce the best outcomes. The key to reducing long-term effects on social interactions, mental health, and academic achievement is early identification and intervention.

Keywords: Attention Deficit Hyperactivity Disorder, Children, Mental Health, Social Impact

Introduction

ADHD is a common mental disorder affecting 5–8% of children, mostly boys, and often continues into adulthood. Symptoms include inattention, hyperactivity, and impulsiveness, leading to challenges in education and daily activities. Though not curable, treatment with medication and behavioral therapies can greatly reduce symptoms, especially with early diagnosis. There are three types of ADHD: hyperactive-impulsive, inattentive, and combined. Boys are more frequently diagnosed, while girls may be under diagnosed. Many children with ADHD also have other mental or emotional disorders.

Daily tasks and education that are affected by ADHD in children are as follows

1. being unable to maintain concentrate due to inattention
2. hyperactivity, which is excessive movement extravagant or out of place in the context twitching, tapping, or speaking
3. Impatience - rushing without careful thought, and in a manner that could be very beneficial for injury.

As per surveys about 1 in 10 children in the U.S. have been diagnosed with ADHD. Six in 10 children with ADHD also have another mental, emotional, or behaviour disorder.

The three main types of ADHD are:

1. Hyperactive-Impulsive Type: Characterized by hyperactive and impulsive behaviors.

2. Inattentive Type (formerly ADD): Marked by difficulty paying attention, with symptoms often less noticeable.
3. Combined Type: The most common form, featuring symptoms of both inattention and hyperactivity/impulsivity.

Methodology

The present study includes topical assessments of objective data and is based on secondary data sources. The majority of searches for literature were conducted using the Google Scholar search engine. Several other scholarly databases, including Sage, Academia, and Research Gate, were utilized.

Diagnosis and Symptoms

ADHD diagnosis relies on the guidelines provided by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), which outlines three subtypes: primarily inattentive, primarily hyperactive-impulsive, and combined. Children presenting with symptoms such as distractibility, poor academic performance, and behavioural problems in multiple settings (e.g., home, school) should be evaluated using validated behavioural rating scales. Although boys are more commonly diagnosed, girls are more likely to exhibit inattentive symptoms (BARBARA T. FELT et al. 2014). The etiology of ADHD is multifactorial, with evidence pointing to genetic, neurological, and environmental factors. Twin and family studies have identified ADHD as a highly heritable condition, with genetic variants influencing neurotransmitter pathways implicated in brain development. Environmental factors such as prenatal exposure to tobacco, alcohol, and low birth weight also contribute to the disorder. (Stacey A Bélanger et al. 2018). Neuro psychological tasks are used in objective assessments like the Quantified Behavior Test (QbTest) and Test Battery of Attention (TAP) to directly assess key symptoms of ADHD, such as impulsivity and inattention. In contrast to objective tests, which can only predict ADHD in children with 78% accuracy, subjective assessments such as clinical interviews and behavioral rating scales completed by parents and teachers—are a major component of traditional methods of diagnosing ADHD. When subjective and objective measures are combined, diagnostic accuracy rises to 86.7%. (Emser et al. 2021). As a whole, girls receive less diagnoses than boys. A typical interpretation is that girls are less disruptive and less likely to be referred for a diagnosis since they are more likely to show with inattentive symptoms rather than hyperactive or impulsive ones. Girls with ADHD are more likely to have emotional and behavioral issues, which suggests that coexisting issues amplify their symptoms and facilitate diagnosis. Boys are less likely to exhibit this as their hyperactive and impulsive actions are the main cause of their diagnoses. (Florence Mowlema et al. 2019) The immaturity of younger students is often misinterpreted as ADHD symptoms, leading to over diagnosis and over treatment, especially with stimulant medications (Richard L et al. 2012).

Mental Health

Children diagnosed with ADHD often present with comorbid conditions such as oppositional defiant disorder (ODD), conduct disorder (CD), anxiety, and depression. Adolescents and adults with ADHD have higher rates of substance use disorders, mood disorders, and personality disorders. (Berit Hjelde Hansen et al. 2018) Children with ADHD may feel “different” from their peers, contributing to low self-esteem and compounding their mental health challenges, ADHD impacts children’s academic performance due to their difficulties with focus, organization, and task completion. Academic struggles often lead to frustration, feelings of inadequacy, and a lowered self-concept (Larry Scahill et al. 2000) Emotional dys regulation in ADHD is often linked to

executive dysfunction, including difficulties with inhibitory control and working memory, which exacerbates mental health issues like anxiety, it can further contribute to feelings of loneliness and low self-esteem, impacting their overall mental health (Sima Dastamooz et al. 2023). Children with ADHD often face difficulties in managing social interactions and maintaining relationships, which may lead to feelings of loneliness and social isolation. During critical developmental stages, such as adolescence, these challenges can lead to a higher incidence of mental health issues like depression and anxiety (Emma Sciberras et al. 2021)

Social Impact

Children with ADHD often exhibit lower frustration tolerance and struggle with interpersonal skills, which can exacerbate social conflicts, ADHD symptoms, particularly hyperactivity and impulsivity, are closely linked to peer rejection and fewer positive social interactions. This affects their relationships with family members, often creating stress and conflict in the home environment. (Aniket A. Kawatkar et al, 2014) They negatively connoted strategies, such as blasting (aggressive or confrontational self-presentation), as more effective than their typically developing peers. This suggests that children with ADHD may be more inclined to use socially inappropriate strategies, which can further alienate them from their peers. (Daniela Kloo et al.2015) Children with ADHD may also have comorbidities with other psychiatric disorders and somatic conditions, leading to an increased risk of accidents and injuries. (L. Hakkaart-van Roijen et al,2006)

Therapy & Treatment

Parents are trained in behavioral management techniques to help their child with structure, organization, and discipline. Teachers may use strategies like a reward system or breaks during tasks to help the child focus and manage behavior. Cognitive-behavioral therapy (CBT): helps individuals develop skills to manage their attention and behavior.(Peter Classi et al,2012) The most commonly prescribed medications for ADHD are stimulants, which help increase focus and reduce impulsivity by balancing neurotransmitters in the brain. Methylphenidate (e.g., Ritalin, Concerta) Amphetamines (e.g., Adderall, Vyvanse) According to research, around 70-80% of children with ADHD experience improvement with stimulants(Andrew S. Rowland et al,2002) For some patients, non-stimulant medications like atomoxetine (a norepinephrine reuptake inhibitor) and guanfacine (an alpha-2 adrenergic receptor agonist) are prescribed. These medications tend to have fewer side effects compared to stimulants and are often used for children who do not respond well to stimulants or have co-occurring conditions such as anxiety.(Martina Miklós et al,2019) Combining pharmacological and non-pharmacological treatments often yields the best outcomes. The Multimodal Treatment Study of ADHD (MTA) showed that combining medication with intensive behavioral treatment provided the best improvement in overall functioning (WILLIAM D. SMUCKER et al, 2001).

Without treatment, the symptoms of ADHD can result in school failure, dropout, and an overall reduced quality of educational experience, may also exhibit impulsive and risk-taking behaviors, increasing their vulnerability to accidents, substance abuse, and other harmful behaviors. These behaviors can also result in legal problems, further compounding the challenges they face. (Simone Vibert, 2018).

Recommendation & Suggestions

Public awareness campaigns play a crucial role in educating parents, educators, and healthcare providers about ADHD and the importance of early intervention. Training pediatricians to improve the referral process from primary care providers to mental health specialists can ensure timely and accurate support. In schools, strengthening the role of teachers in identifying and referring children

with ADHD symptoms is vital. Additionally, addressing mental health stigma through initiatives can encourage families to seek psychiatric help early, as noted by Hisham Ahmed Ramy et al. (2021). Social skills training programs are recommended to help children with ADHD interact with peers, manage frustration, and improve communication skills, reducing feelings of isolation. Regular physical exercise is also encouraged, as it has been shown to reduce hyperactivity and enhance focus. Adolescents with ADHD require additional support to navigate social, academic, and potential mental health challenges during puberty. These strategies emphasize a holistic approach to addressing the academic, emotional, social, and behavioral needs of children with ADHD.

Conclusion

To address ADHD effectively, several key strategies should be implemented. Public awareness campaigns are essential for educating parents, educators, and healthcare providers about ADHD and the critical importance of early intervention. Enhancing the training for paediatricians can improve the referral process from primary care providers to mental health specialists. School-based interventions should focus on empowering teachers to identify and refer children with ADHD symptoms promptly. Additionally, addressing mental health stigma through targeted initiatives can encourage families to seek timely psychiatric help. Social skills training programs can assist children with ADHD in interacting with others, managing frustration, and improving communication skills, which can alleviate feelings of isolation. Regular physical exercise is also beneficial, as it helps children with ADHD become less hyperactive and more attentive, with sports and other physical activities aiding in impulse control and serving as an energy outlet. Furthermore, adolescents with ADHD require additional support as they navigate social situations, academic pressures, and potential mental health issues during puberty. These approaches aim to address the academic, emotional, social, and behavioral aspects of ADHD, providing a comprehensive strategy for managing the condition effectively.

Reference

1. Tsai, C. J., Lee, C. T. C., Liang, S. H. Y., Tsai, P. J., Chen, V. C. H., & Gossop, M. (2018). Risk of ADHD after multiple exposures to general anesthesia: a nationwide retrospective cohort study. *Journal of attention disorders*, 22(3), 229-239.
2. Goldman, L. S., Genel, M., Bezman, R. J., & Slanetz, P. J. (1998). Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Jama*, 279(14), 1100-1107.
3. Felt, B. T., Biermann, B., Christner, J. G., Kochhar, P., & Van Harrison, R. (2014). Diagnosis and management of ADHD in children. *American Family Physician*, 90(7), 456-464.
4. Bélanger, S. A., Andrews, D., Gray, C., & Korczak, D. (2018). ADHD in children and youth: Part 1—Etiology, diagnosis, and comorbidity. *Paediatrics & child health*, 23(7), 447-453.
5. Emser, T. S., Johnston, B. A., Steele, J. D., Kooij, S., Thorell, L., & Christiansen, H. (2018). Assessing ADHD symptoms in children and adults: evaluating the role of objective measures. *Behavioral and Brain Functions*, 14, 1-14.
6. Dastamooz, S., Sadeghi-Bahmani, D., Farahani, M. H., Wong, S. H., Yam, J. C., Tham, C. C., & Sit, C. H. (2023). The efficacy of physical exercise interventions on mental health, cognitive function, and ADHD symptoms in children and adolescents with ADHD: an umbrella review. *EClinicalMedicine*, 62.
7. Sciberras, E., Patel, P., Stokes, M. A., Coghill, D., Middeldorp, C. M., Bellgrove, M. A., ... & Westrupp, E. (2022). Physical health, media use, and mental health in children and adolescents with ADHD during the COVID-19 pandemic in Australia. *Journal of attention disorders*, 26(4), 549-562.

8. Kawatkar, A. A., Knight, T. K., Moss, R. A., Sikirica, V., Chu, L. H., Hodgkins, P., ... & Nichol, M. B. (2014). Impact of mental health comorbidities on health care utilization and expenditure in a large US managed care adult population with ADHD. *Value in Health*, 17(6), 661-668.
9. Ramy, H. A., Hashem, R. E., Khamis, M. E., & Abdelaziz, A. A. S. (2021). Pathway to Service and Duration of Untreated Attention Deficit, Hyperactivity Disorder among Children Presented to a Governmental, Mental Health Hospital in Egypt. *QJM: An International Journal of Medicine*, 114(Supplement_1), hcab102-005.