

Review Article

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The Relationship Between ADHD and Addictive Behaviours: Implications for Economic and Health Outcomes

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ABSTRACT

Attention-deficit/hyperactivity disorder (ADHD) is a highly prevalent neurodevelopmental disorder that often continues into adulthood, resulting in corresponding adverse social, occupational, and economic costs. Addictive behaviours, substance use disorders (SUDs), or behavioural addictions are some of the most serious comorbidities with ADHD. This narrative review explores how ADHD is interconnected with addictive behaviours, focusing on prevalence, underlying psychological/neurobiological factors, and overall implications with regard to healthcare and economic productivity. Data from available scientific evidence suggests that this phenomenon is grounded in a bidirectional relationship wherein core symptoms of ADHD, especially impulsivity and regulatory dysfunction, create higher vulnerability to addictive behaviours, but concurrent addictive behaviour exacerbates functional deficits in ADHD.

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Received: December 31, 2025; Accepted: January 05, 2026; Published: January 17, 2026

Keywords: Attention-Deficit/Hyperactivity Disorder, Addictive Behaviours, Substance Use Disorder, Behavioural Addiction, Impulsivity, Economic Burden

Introduction

Attention Deficit/Hyperactivity Disorder (ADHD), traditionally seen as a childhood disorder, often persists into adulthood and is associated with functional impairment and increased risk of psychiatric illnesses, such as substance use disorder. Given these significant consequences, a comprehensive understanding of the link between ADHD and addiction is essential.

Literature Review

There is substantial evidence that links ADHD not only to substance addictions but to behavioural addictions as well. Population-based studies have found high levels of alcohol use disorder, nicotine use disorder, stimulant use disorder, and opioid use disorder in people suffering from ADHD. Additionally, other forms of behavioural addictions like internet addiction problems, gaming disorder problems, and compulsive buying problems occur at high rates in these individuals.

Some research has found common risk factors between ADHD and addictive behaviours that include impulsivity, emotional regulation, and executive functioning deficits. More emphasis has been placed on the neurobiological model that sees the dysfunction of reward pathways and dopamine as the underlying cause that results in reward hypersensitivity and the inability to suppress impulses in ADHD, as well as addictive behaviour. Of course, the process between the symptoms of ADHD and the beginnings of substance use has also been seen to be bidirectional, with the persistent use of substances affecting the attentional deficits as well as the control of impulses that are present in ADHD.

Table 1: Summary of Key Studies on ADHD and Addictive Behaviours

Author (Year)	Study Population	Type of Addiction	Key Findings
Simon et al. [1]	Adults (meta-analysis)	Substance use	Higher prevalence of SUD in adults with ADHD
Grassi et al. [2]	Adults with ADHD	Behavioural addictions	Distinct clinical phenotypes with high impulsivity
Bielefeld et al. [3]	Adult case-control	Internet use disorder	Significant comorbidity between ADHD and IUD
Davis et al. [4]	Adult population	Multiple addictions	ADHD associated with personality-related addiction risk

Methodology / Materials and Methods

The research will employ a narrative review approach, combine the viewpoints of the scientific and socioeconomic domains. The search will involve the selection of peer-reviewed articles from the existing body of research in the fields of psychiatry and addiction, primarily focused on the topic of chronic adult ADHD, substance use disorder, behavioural addiction, and treatment outcomes. The preferences will include meta-analyses, longitudinal studies, and international consensus guidelines.

The inclusion of studies was done based on relevance regarding issues of comorbidity, functional impairment, treatment complexity, and possible implications in terms of cost-effectiveness and productivity. Although a systematic review protocol was not used formally in this review, it was done in a structured manner consistent with principles found within PRISMA.

Results / Findings

Throughout the literature, ADHD has been found to be an important risk factor for both the development and severity of addictive behaviours. The prevalence rate of lifetime substance use disorders and addictive behaviours tends to be significantly higher in persons suffering from ADHD than in those without the disorder. Comorbidity tends to be associated with early onset of substance use of substances, severity of symptoms, and co-occurrence of mental health problems. Moreover, research has pointed out the existence of a relationship between untreated ADHD and the use of addictive treatment services.

Table 2: Clinical Implications of ADHD - Addiction Comorbidity

Domain	Observed Impact
Age of onset	Earlier initiation of substance use
Severity	Faster progression to dependence
Treatment response	Reduced retention and poorer outcomes
Psychiatric burden	Higher rates of mood and personality disorders

Discussion

The results of this review shed light on the multifaceted association between ADHD and addictive behaviour. The neurobiological convergence, specifically the dysfunctionality of the dopaminergic reward pathways, provides a possible underlying mechanism that may contribute to a predisposition to developing addictive behaviour among people with ADHD. From a psychological perspective, the aspect of impulsivity and reduced executive function is closely associated with poor decision-making, poor compliance, and poor occupational performance.

From a managerial point of view, co-existing ADHD is a diagnostic and treatment challenge, especially where substance abuse clouds the presenting symptoms of ADHD. Medication management is not straightforward, given concerns about the misuse of stimulant drugs. However, evidence suggests that long-acting stimulant medications and non-stimulant alternatives used cautiously within carefully structured monitoring programs are effective. Combining pharmacological management with psychological and behavioural approaches would seem crucial in improving not only the stability but also the employment retention outcomes.

Conclusion

There is ample evidence to suggest a link between ADHD and addictive behaviour. This not only poses high clinical, societal, and economic costs but also brings an onset of the disorder earlier in life, with more severe symptoms. With the simultaneous occurrence of two disorders, the responsiveness to treatments also diminishes. This increases health care costs and impacts productivity. It is high time that screenings be conducted as a norm in mental health care as well as addiction treatment setups. Moreover, treatment strategies need to be more personalized. By addressing ADHD symptoms as well as addictive behaviours simultaneously, it is possible to enhance your own as well as overall economic outcomes [5-8].

References

1. Simon V, Czobor P, Balint S, Meszaros A, Bitter I (2009) Prevalence and correlates of adult attention-deficit hyperactivity disorder: a meta-analysis. *British Journal of Psychiatry* 194: 204-211.
2. Grassi G, Moradei C, Cecchelli C (2024) Prevalence and clinical phenotypes of adult patients with attention-deficit hyperactivity disorder and comorbid behavioural addictions. *Journal of Behavioural Addictions* 13: 473-481.
3. Bielefeld M, Drews M, Putzig I, Böttel L, Steinbüchel T, et al. (2017) Comorbidity of internet use disorder and attention-deficit hyperactivity disorder: two adult case-control studies. *Journal of Behavioural Addictions* 6: 490-504.
4. Davis C, Cohen A, Davids M, Rabindranath A (2015) Attention-deficit/hyperactivity disorder in relation to addictive behaviours: a moderated mediation analysis of personality-risk factors and sex. *Frontiers in Psychiatry* 6.
5. Barbuti M, Maiello M, Spera V, Pallucchini A, Brancati G, et al. (2023) Challenges of treating ADHD with comorbid substance use disorder: considerations for the clinician. *Journal of Clinical Medicine* 12: 3096.
6. Crunelle CL, van den Brink W, Moggi F, Konstenius M, Franck J, et al. (2018) International consensus statement on screening, diagnosis and treatment of substance use disorder patients with comorbid ADHD. *European Addiction Research* 24: 43-51.
7. Ozgen H, Spijkerman R, Noack M, Holtmann M, Schellekens A, et al. (2020) International consensus statement for the screening, diagnosis, and treatment of adolescents with concurrent ADHD and substance use disorder. *European Addiction Research* 26: 223-232.
8. Carpentier PJ, Levin FR (2017) Pharmacological treatment of ADHD in addicted patients: what does the literature tell us? *Harvard Review of Psychiatry* 25: 50-64.

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