



Early Exposure and Its Role in Developing Substance Dependence

Leona Kestrel*

Department of Developmental Psychology, West bridge University, Lymond, USA

DESCRIPTION

Substance dependence is a complex condition influenced by a combination of biological, psychological and environmental factors. One of the most significant contributors to the development of long-term addiction is early exposure to drugs. Individuals who begin using substances during childhood or adolescence are at higher risk of developing dependence due to the interplay between brain development, social influences and behavioral conditioning. Examining the effects of early exposure provides critical insights for prevention, intervention and public health strategies. During adolescence, the human brain undergoes extensive development, particularly in regions responsible for decision-making, impulse control and emotional regulation. The prefrontal cortex, which governs rational thinking and planning, continues maturing into the mid-twenties. Early exposure to drugs can interfere with this natural development, altering neural pathways involved in reward processing and emotional control. Substances such as alcohol, cannabis, opioids and stimulants can overstimulate the brain's reward system, creating strong associations between substance use and pleasure. This conditioning increases the likelihood of repeated use and makes abstaining more difficult as the brain becomes accustomed to artificial stimulation. [1-4]

Social factors play a central role in early exposure. Peer influence is particularly powerful during adolescence. Young people often seek acceptance, belonging and identity within their social groups. When peers use substances, it normalizes drug consumption and increases access, making experimentation more likely. Family dynamics also contribute significantly. Households characterized by conflict, neglect or parental substance use can inadvertently encourage early experimentation. Conversely, supportive family environments

that promote communication, supervision and healthy coping strategies reduce vulnerability to substance use during formative years. [5,6] Behavioral patterns established through early exposure often persist into adulthood. Initial experimentation may begin as casual use or curiosity but can quickly evolve into habitual behavior as the brain's reward system adapts. Individuals may develop routines or coping mechanisms that rely on substance use, making it more challenging to respond adaptively to stress, social challenges or emotional discomfort. The longer the exposure period and the younger the age of initiation, the greater the risk of developing chronic dependence. [7,8]

Early exposure is also associated with increased vulnerability to mental health challenges. Adolescents who experiment with substances are more likely to experience anxiety, depression or emotional instability, either as pre-existing vulnerabilities or as consequences of drug use. These psychological conditions often reinforce substance use, creating a cycle in which emotional distress and dependency sustain each other. In some cases, early substance use may contribute to the onset of psychiatric disorders, further complicating recovery and long-term well-being. Environmental factors such as neighborhood safety, socioeconomic status and community resources influence early exposure. Areas with high drug availability, limited recreational options or social instability can increase opportunities for experimentation. Economic hardship or exposure to crime and violence can heighten stress, prompting young people to use substances as a coping mechanism. Public policies that limit access to substances, provide safe spaces for youth and invest in prevention programs are critical in mitigating these environmental risks. Prevention strategies targeting early exposure are essential. Educational initiatives that provide accurate information about the risks of substance use, coping mechanisms for

Received: 26-May-2025; Manuscript No: IPJABT-25-23268; **Editor assigned:** 29-May-2025; PreQC No: IPJABT-25-23268 (PQ); **Reviewed:** 12-June-2025; QC No: IPJABT-25-23268; **Revised:** 19-June-2025; Manuscript No: IPJABT-25-23268 (R); **Published:** 26-June-2025 DOI: 10.35841/ipjabt-9.2.55

Corresponding author: Leona Kestrel, Department of Developmental Psychology, West bridge University, Lymond, USA; Email: leona.kestrel@westbridgeuni.us

Citation: Kestrel L (2025) Early Exposure and Its Role in Developing Substance Dependence. J Addict Behav Ther. 9:55.

Copyright: © 2025 Kestrel L. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

stress and strategies to resist peer pressure have proven effective in delaying or preventing experimentation. Family-based interventions that encourage supervision, open dialogue and emotional support can significantly reduce the likelihood of early substance use. Community programs offering recreational, mentorship and skill-building opportunities provide positive alternatives to drug experimentation. Intervention strategies for individuals who have already been exposed early must address both biological and behavioral aspects of addiction. Counselling, therapy and structured support systems help individuals modify routines, develop healthier coping mechanisms and strengthen decision-making skills. Cognitive-behavioral approaches can assist in identifying triggers, reframing distorted thought patterns and establishing adaptive responses. Recognizing the long-term impact of early exposure emphasizes the importance of timely intervention to prevent chronic dependency. [9,10]

CONCLUSION

In conclusion, early exposure to drugs plays a central role in the development of substance dependence. Brain development, social pressures, family dynamics and environmental factors interact to increase vulnerability during adolescence and young adulthood. Prevention and early intervention programs targeting these factors are important for reducing the risk of chronic addiction. By addressing early exposure comprehensively, society can support healthier developmental trajectories, reduce long-term dependence and improve outcomes for individuals, families and communities.

REFERENCE

1. Sussman S, Skara S, Ames SL. (2008) Substance abuse among adolescents. *SUD*. 43(12-13):1802-1828.
2. Gray KM, Squeglia LM. (2018) Research Review: What have we learned about adolescent substance use. *J Child Psychol Psychiatry*.59(6):618-627.
3. Leatherdale ST, Burkhalter R. (2012) The substance use profile of Canadian youth: Exploring the prevalence of alcohol, drug and tobacco use by gender and grade. *Addict Behav*.37(3):318-322.
4. Chadi N, Bagley SM, Hadland SE. (2018) Addressing adolescents' and young adults' substance use disorders. *Med Clin*. 102(4):603-620.
5. Herz V, Franzin N, Huemer J, Mairhofer D, Philipp J, et al. (2018) Substance use and misuse among children and youth with mental illness: A pilot study. *J Neuropsychiatry Clin Neurosci*. 32(1):18-25.
6. Bountress K, Chassin L, Lemery-Chalfant K. (2017) Parent and peer influences on emerging adult substance use disorder: A genetically informed study. *Dev Psychopathol*. 29(1):121-242.
7. Wilson JJ, Levin FR. (2001) Attention deficit hyperactivity disorder (ADHD) and substance use disorders. *Curr Psychiatry Rep*. 3(6):497-506.
8. Poorolajal J, Haghtalab T, Farhadi M, Darvishi N. (2016) Substance use disorder and risk of suicidal ideation, suicide attempt and suicide death: A meta-analysis. *J Public Health*. 38(3): 282-291.
9. Rush B, Urbanoski K, Bassani D, Castel S. (2008) Prevalence of co-occurring substance use and other mental disorders in the Canadian population. *Can J Psychiatry*. 53(12):800-809.
10. Wilens TE, Biederman J, Abrantes AM, Spencer TJ. (1997) Clinical characteristics of psychiatrically referred adolescent outpatients with substance use disorder. *J Am Acad Child Adolesc Psychiatry*. 36(7):941-947.