

EDITORIAL**SUBSTANCE ABUSE: NEED FOR STEPPING UP RESPONSE TO THE AGELESS CHALLENGE**Sileshi Lulseged, MD, MMed^{1*}, Eyasu Makonnen, PhD²³

As substances have been abused for hundreds of years all over the world, the bevy of their side effects have been felt for just as long (1). The epidemiology and analysis of substance use and abuse are complex, due in part to variations in type and definitions used, degree of secrecy, health challenges and different legal connotations surrounding their use and abuse globally, and more so in developing countries like Ethiopia. Recent trends show that the problem has become one of the growing public health and socioeconomic challenges worldwide (2). The increase in substance abuse is more dramatic in developing countries and, in sub-Saharan Africa, the use of alcohol, tobacco and heroin among adolescents is an epidemic on the rise (1,3).

Substance use and abuse are variably defined in medical, public health, and criminal justice contexts. The World Health Organization (WHO) defines substance abuse as "...the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs" (1). Health officials consider substance abuse as crossing the line if repeated use causes significant impairment, such as health issues, disabilities and failure to meet responsibilities, impaired control, risky use, and social issues (4). These definitions as well as others in much of the published literature on the subject refer to excessive use of a substance in a way that is detrimental to self, society, or both. One of the key impacts of illicit drug abuse on society is the negative health consequences experienced by its members. Drug abuse also puts a heavy financial burden on individuals, families and society (1-3).

It is well-recognized that the broad range of substance abuse in today's society is not that simple. The abuse of a long list of substances puts a heavy burden and exerts very serious problems on individuals, families and society at large. Consequences include sexual violence (e.g. rape), physical violence, criminal activity, neglect of social responsibilities, disease, injury and loss of life (1). Substances used and abused may be legal, illegal, or controlled for use by licensed prescribers for medical purposes (2,3). The list includes an array of substances with varying pharmacological and behavioral effects, including, but not limited to, nicotine, alcohol, cannabinoids, opioids, hypnotics and sedatives, depressants, stimulants, and hallucinogens.

The exact cause underlying substance abuse is not clearly established. Current theories hold that genetic predisposition to abuse or addiction and habit, which if addiction develops, manifests itself as a chronic debilitating disease have major roles (5). As is the case with most other chronic illnesses, 40-70% of a person's risk for developing a substance use disorder is considered to be genetic (6). However, a complex web of environmental risk factors interact with a person's genes to modify and increase the risk for substance abuse and addiction (7,8). Specific groups like immigrants and refugees (9) and street children (10) have additional contextual risk that require special attention.

In Ethiopia, the magnitude and the challenges posed by substance abuse, among the young in particular, is substantial (11). The systematic review by Abajobir A, et al. (12) published in this Issue of the Ethiopian Medical Journal (EMJ) shows that about one-third of high school and university students, most prominently males, use different substances in their lifetime. In the last decade, substance use, especially alcohol, tobacco and khat, has been rampant among students in higher learning institutions (13-17). Community norms favorable to substance use, family history of alcohol and substance use, siblings' substance use, poor academic performance, low perceived risk of substances and friends' use of substances had positive association with adolescent substance use while religiosity and social skills were found to have negative association with adolescent substance use (11-18).

In Ethiopia, as in elsewhere in developing and developed countries, substance use is a multi-etiological universal phenomenon with significant adverse impacts on public health (11). The victims are affected by complex factors at individual, family, school, social, and environmental factors (17,18). Available evidence on substance abuse in

¹Department of Pediatrics and Child Health, Faculty of Medicine, College of Health Sciences, Addis Ababa University.

²Department of Pharmacology, and Clinical Pharmacy, College of Health Sciences, Addis Ababa, University.

³Center for Innovative Drug development and Therapeutic Trials for Africa (CDT Africa).

* Corresponding author e-mail address: sileshilulseged@gmail.com

Ethiopia highlights the magnitude, clinical and functional impact and the ongoing efforts to curb the impact of the problem, particularly among the youth. However, there is much that remains to be understood about the occurrence of substance abuse among the general population and some risk groups. Although Ethiopia has adopted the necessary legislation and a policy for control and proper use of narcotic drugs and psychotropic substances, their enforcement has remained weak, requiring further work and strengthening (19).

The severity of the problem associated with substance abuse demands immediate and effective action from the Government of Ethiopia and the society at large by way of dedicating resources to prevention, education and interventions, including treatment and rehabilitation. Strengthening the current substance abuse education program and further revision of strategies for substance abuse risk reduction among university students should be seriously considered. Developing multi-sectoral, integrated, culture friendly, gender, and adolescent and family-based programs are recommended to decrease substance use by adolescents and youth. Service delivery and education programs should make use of the available body of knowledge, while well-designed, epidemiological research should be pursued systematically to unravel information gaps related to substance use and abuse in Ethiopia.

REFERENCES

1. Opportunities in Drug Abuse Research. Washington (DC): National Academies Press (US); 1996. B, Drug Abuse Research in Historical Perspective. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK232965/>.
2. World Health Organization (WHO). Substance Use in South Africa: Knowledge, Attitudes, Practices, and Opportunities for Intervention. Geneva: World Health Organization; 2003. http://www.who.int/mental_health/media/en/707.pdf (accessed September 29, 2019).
3. Substance use among adolescents in sub-Saharan Africa: A systematic review and meta-analysis A Olawole-Isaac,1 PhD; O Ogundipe,2 PhD; E O Amoo,1 PhD; D Adeloye,3 PhD, S Afr J Child Health 2018;12(2 Suppl 1):S79-S84. DOI:10.7196/SAJCH.2018.v12i2.1524).
4. Griffin JB. JR. Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd edition. Substance Abuse, Chapter 206. <https://www.ncbi.nlm.nih.gov/books/NBK319/>.
5. Bevilacqua L, Goldman D. Genes and Addictions. Clin Pharmacol Ther 2009;85(4):359-361. doi: 10.1038/clpt.2009.6.
6. Goldman D, Oroszi G, Ducci F. The genetics of addictions: uncovering the genes. Nat Rev Gen 2005;6(7):521-32).
7. DerSimonian R, Laird N. Meta-analysis in clinical trials. Controlled Clinical Trials 1986;7(3):177-188)
8. Marschall-Lévesque S, Castellanos-Ryan N, Vitaro F, Séguin JR. Moderators of the association between peer and target adolescent substance use. Addictive Beh 2014;39(1):48-70..
9. Pumariaga AJ, Rothe E, Pumariaga JB. Mental health of immigrants and refugees. Community Mental Health Journal 2005;41(5):581
10. Cottrell-Boyce J. The role of solvents in the lives of street children". African Journal of Drug & Alcohol Studies 2010;9(2):93-102.
11. Ethiopia Demographic and Health Survey 2011. Central Statistical Agency, Addis Ababa, Ethiopia and ICF International, Calverton, Maryland, USA; March 2016.
12. Abajobir A, Kassa G. Magnitude of Substance Use among Young People in Ethiopia: A Meta-Analytic Review. Ethiop Med J 2019; 57 (4):295-305.
13. Teferra S. Substance use among university students in Ethiopia: A systematic review and meta-analysis. Ethiop J Health Dev 2018;32(4):265-277.
14. Gebriel A, Alebel A, Zegeye A, Tesfaye B. Prevalence and predictors of khat chewing among Ethiopian university students: A systematic review and meta-analysis. April 12, 2018 <https://doi.org/10.1371/journal.pone.0195718>, Gebremedhin H, Gebreegziabiher G. Desalegn B. Prevalence of substance abuse and associated factors among university students, Tigray, Ethiopia, 2016. Intern J Develop Resea 2016;06(11):10066-10071.
15. Tesfaye G, Derese A, Teshome M. Substance Use and Associated Factors among University Students in Ethiopia: A Cross-Sectional Study. J Addict 2014. DOI:10.1155/2014/969837 (accessed September 39, 2019).
16. Messele A, Azale T, Meseret S. High prevalence of substance use and associated factors among high school adolescents in Woreta Town, Northwest Ethiopia: multi-domain factor Analysis. BMC Public Health. 2014 Nov 20;14:1186. doi: 10.1186/1471-2458-14-1186 (Accessed September 29, 2019).
17. Birhane T, Birhane K, Kutaye Y. Substance use and associated factors among Debre Berhan University students, Central Ethiopia. Substance Abuse Treatment, Prevention, and Policy 2018;13:2-8.
18. World Health Organization. Country profiles: Resources for the Prevention and Treatment of Substance Use Disorders. WHO 2010. https://www.who.int/substance_abuse/publications/atlas_report/profiles/en/.