We Must Understand Youth Adversity to Address Adolescent Substance Use

February 10, 2021

Editor's note: *The following op-ed was prepared by Renee M. Johnson, PhD, MPH, Associate Professor at Johns Hopkins Bloomberg School of Public Health. This op-ed is part of our Black History Month Special Series.*



Epidemiologic research about adolescent substance use historically has focused on monitoring the prevalence of use over time, so as to guide program planning and policy development. In this essay, I propose a shift in how we do business. Specifically, I recommend expanding our approach to include: (1) monitoring the adversity that children and youth face, and (2) assessing how adverse experiences impact risk for substance use and problems associated with use. My recommendation stems from decades of research showing that trauma and adversity greatly increase risk for adolescent behavioral problems, including early initiation of substance use and escalation toward unhealthy substance use.

As noted by CDC, adverse childhood experiences – or "ACEs" – are shockingly common. In my home state of Maryland, survey data indicate that 30% of high school students have a parent with a mental illness, 24% have a parent with unhealthy substance use or gambling, 24% have had a family member go to prison or jail, 20% experienced verbal abuse from their caregiver, and 17%

experience food insecurity. Adversity is even more common among youth in my home city of Baltimore, where more than 85% of public high school students are Black and/or Latinx and 84% qualify for subsidized lunch. Data from 9th-12th graders in Baltimore city show that 28% have a parent with a mental illness, 25% have a parent with unhealthy substance use or gambling, 46% have had a family member go to prison or jail, 20% experienced verbal abuse from a caregiver, and 27% experienced not having enough to eat. Fifty-six percent of high school students in Maryland reported at least one of these five ACEs, compared to 72% in Baltimore City.

Youth who experience adversity are more likely to report substance use. Baltimore high school students who reported just one ACE were 80% more likely to report past 30-day alcohol use, 78% more likely to report past 30-day marijuana use, 137% more likely to report lifetime heroin use, and 231% more likely to report non-medical use of prescription opioids. Importantly, adolescent substance use that occurs within the context of trauma and suffering puts young people on a path toward unhealthy substance use. Therefore, making progress toward preventing substance use disorders and harms associated with substance use requires that we characterize adversity as a key focus in investigations of adolescent substance use. A shift toward considering adversity in relation to early substance use is particularly critical for Black and Latinx youth in low-income urban areas, who experience unique forms of social disadvantage that affect their patterns of substance use and threaten their health and well-being in adolescence and throughout their lifetime.

Expanding the scope of substance use epidemiology to incorporate youth adversity offers new opportunities for meaningful interventions. For example, trauma-responsive services represent a promising approach for primary prevention of substance use. Trauma-responsive services seek to address emotional and behavioral problems by attending to the adversity that gives rise to those problems; they acknowledge adversity and support emotional well-being, thereby maximizing the effectiveness of services and programs and enabling children and youth to thrive. One example of trauma-responsive strategy in Baltimore City could be to foster a school climate that nurtures the 4-in-10 students with incarcerated family members by reducing the stigma that comes with incarceration or providing extra needed support to young people. Understanding adverse experiences also provides clues about how structural changes that could serve to prevent adolescent substance use. Continuing with

the example of criminal justice, data from Baltimore city adolescents tell us that advancing policy reform to address race-based disparities in the criminal justice system could result in decreases in adolescent substance use.

Whether we include it in our scientific models or not, adversity in childhood and adolescence is a key determinant of substance use disorders. Incorporating adversity into substance use epidemiology acknowledges this reality and will improve our science. Acting on the new discoveries we make – through programs and policy development – will improve the health and well-being of generations to come.

Renee M. Johnson, PhD, MPH
Associate Professor
Johns Hopkins Bloomberg School of Public Health

Funding Statement
In writing this editorial, I have no conflicts of interest to disclose that could be influenced by considerations of personal gain, financial or otherwise.

Note:
For this essay, I analyzed data from the 2018 Maryland Youth Risk Behavior Survey/Youth Tobacco Survey, a survey of high school students (n=41,091) to assess risks and health behaviors. MD YRBS/YTS is a statewide, school-based survey of public school students; data are available upon reasonable request. Each county in Maryland participates, and representative county-level data can be generated. It is administered on a biennial basis by the Maryland State Department of Education and Department of Health in conjunction with two Centers for Disease Control and Prevention (CDC) programs.

For more information:
1. Centers for Disease Control and Prevention [CDC] (2019). Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf
2. National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Division of Behavioral and Social Sciences and Education, Board on Children, Youth, and Families, Committee on the Neurobiological and Socio-behavioral Science of Adolescent Development and Its Applications. The Promise of Adolescence: Realizing Opportunity for All Youth. National Academies

Press; 2019.
3. Leza L, Siria S, López-Goñi JJ, Fernández-Montalvo J. Adverse Childhood Experiences (ACEs) and Substance Use Disorder (SUD): A Scoping Review. Drug Alcohol Depend. Published online January 29, 2021:108563.
4. Hughes K, Bellis MA, Hardcastle KA, Sethi D, Butchart A, Mikton C, et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. Lancet Public Health. 2017;2: e356–e366.