

Commentary on Zolopa *et al.*: Trauma as an impediment to successful aging and a precipitant of opioid and stimulant use among older adults

Trauma is a key factor in conceptual models that link aging to opioid and stimulant use disorders. Early-life trauma can be a driving factor in people who use opioids and stimulants throughout their life, and later-life trauma might explain why some individuals develop new onset opioid and/or stimulant use disorders as older adults.

The scoping review by Zolopa and colleagues highlights that the majority of research on opioid and/or stimulant use in older adults is gleaned from medical records or national surveys to assess clinical correlates and trends in older adults seeking treatment over time [1–3]. While these studies are informative and necessary, Zolopa *et al.* [3] note that very few studies apply conceptual frameworks that seek to explain why older individuals might have opioid use disorder (OUD) and/or stimulant use disorder (StimUD) that persists throughout the life-span (sometimes termed ‘drug use careers’) [4], and why some older individuals develop OUD/StimUD later in life. Trauma and adverse experiences might be core factors among conceptual models of substance use that give context to, and provide a mechanistic basis for, understanding substance use in older adults. The field of substance use research could also learn from the field of gerontology to understand substance use in the context of successful aging, which can be defined by physical and mental health, positive social contacts, and decision-making processes that optimize long-term goals [5, 6]. Here, we discuss how trauma experienced at different points across the life-span can affect successful aging and ultimately lead to opioid/stimulant use among older adults.

Early life trauma can impact neurotransmitter and neurohormonal stress signaling that increases the risk of developing a substance use disorder [7]. Moreover, early life trauma is often a precipitant of dysregulated stress response and persistent anhedonia later in life, both of which can increase the risk of developing OUD and/or StimUD and contribute to the relapsing and remitting nature of these conditions [8–10]. In the context of drug use careers, early life trauma can contribute to allostatic load (e.g. a cumulative burden of chronic stress) that makes it harder for people with OUD and/or StimUD to quit over time, thus creating an impediment to successful aging [11, 12]. Social

determinants of health also play a role in the link between early life trauma and substance use throughout the life-span; income inequality, marginalization, and lack of family and educational support can accelerate drug use problems when transitioning between phases of development (e.g. from adolescence to adulthood; middle to older age) [13].

Further, older adults are at higher risk than the younger population for experiencing certain traumatic events, including serious accidents [14]. Older adults also accumulate multiple adverse experiences that can be extremely distressing but are often not conceptualized as ‘trauma’ by the Diagnostic and Statistical Manual of Mental Disorders 5 (e.g. deaths of loved ones, receiving a terminal diagnosis). Cumulative traumatic and adverse experiences that occur in older adulthood can increase risk factors for new-onset OUD/StimUD, namely chronic stress and anhedonia [15, 16]. Older adults are also more likely to experience chronic pain and have the highest exposure to prescription opioid analgesics compared with any other age group [17], and thus may be at increased risk to misuse opioid medications when faced with later life trauma [18]. Similarly, the prevalence rate of prescription stimulant misuse is similar to the prevalence rate of prescription opioid misuse among older adults, and serious psychological distress is associated with higher odds of misusing stimulants in this population [19]. Although trauma experienced in early life or later life might confer unique risk for developing OUD or StimUD, ongoing opioid and/or stimulant use can, in turn, increase the risk of trauma and adverse experiences (e.g. overdose, financial instability), thereby creating a vicious cycle that could begin at any point across the life-span.

There is a clear role for trauma in conceptual models that explain why older adults might develop OUD and/or StimUD later in life, and understanding how trauma disrupts successful aging might identify malleable targets for treatment. Accordingly, future mechanistic research on older adults who use opioids and/or stimulants might seek to understand biological, psychological, and social pathways that link trauma to drug use by impeding successful aging. Clinical research might examine novel interventions that directly address trauma and adverse events as part of treatment for older adults with OUD/StimUD. Further, it is essential that providers working with older adults routinely assess traumatic experiences, adverse life

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events, and substance use in order to ensure rapid identification and treatment. Interdisciplinary research and treatment is especially important in light of the twin opioid and stimulant overdose epidemics, as well as the growing need to effectively address substance use disorders in an older population that can be clinically challenging to treat.

KEYWORDS

Aging, cocaine, methamphetamine, older adults, opioids, trauma

ACKNOWLEDGEMENTS

The authors would like to thank Justin Strickland for his helpful feedback during the writing process.

DECLARATION OF INTERESTS

A.H. is funded by the National Institute on Drug Abuse, National Heart, Lung and Blood Institute and Ashley Addiction Treatment. The authors report no financial or other relevant links to companies with an interest in the topic of this article.

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How to cite this article: Huhn AS, Ellis JD. Commentary on Zolopa *et al.*: Trauma as an impediment to successful aging and a precipitant of opioid and stimulant use among older adults. *Addiction*. 2022;117:2189–90. <https://doi.org/10.1111/add.15877>