

Opioid Use and Acute Suicide Risk: The Real-Time Influence of Trauma Context

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The ongoing opioid epidemic is among the worst public health crises in United States history, with over 200 people dying daily from opioid overdose. Opioid use and suicide co-occur at an alarmingly high rate, and despite large-scale efforts, this rate of co-occurrence continues to escalate. Moreover, the co-occurrence of opioid use and suicide is associated with a wide array of deleterious outcomes, most notably pre-mature death. Co-occurring opioid use and suicide is receiving growing attention as an increasingly urgent public health priority. However, empirical examinations in this area continue to lag behind, with no studies explicating the real-time longitudinal associations between opioid use and acute suicide risk; this information is needed to inform targeted intervention and policy. Furthermore, it remains unknown how an individualized trauma context—notably, proximal posttraumatic stress symptoms (PTSS)—may serve as a trigger for co-occurring opioid use and acute suicide risk. Understanding the momentary associations among PTSS, opioid use, and acute suicide risk is necessary for targeted and timely interventions for co-occurring opioid use and acute suicide risk. This study addresses a critical gap in knowledge by using an ecological momentary assessment (EMA) approach among 60 trauma-exposed adults who currently use opioids and report suicidal thoughts and behaviors (STBs). Specifically, this project will use a novel intensive longitudinal design to examine the unique influence of trauma context on immediate (acute) risk for co-occurring opioid use and suicide risk. Importantly, community-based participatory research (CBPR) methods will be implemented among a diverse sample from the community to refine EMA protocol. This project is **significant** in that the knowledge to be gained via ecologically valid EMA will specify proximal and context-dependent risk for co-occurring opioid use and suicidality to advance intervention efforts among this vulnerable trauma-exposed population. It is **innovative** because it utilizes a cutting-edge EMA methodology and advanced quantitative methods to delineate the context-dependent nature of the momentary relations among PTSS, opioid use, and suicide risk, with a focus on personalized statistical models (idiographic) that can inform individualized treatment. The Graduate Student Research Grant will provide the necessary funding for this project, which will serve as the Applicant's dissertation. This project will train the Applicant for successful independent research using novel intensive longitudinal designs to examine the time-sensitive associations among PTSS, opioid use, acute suicide risk, with the overarching aim of informing mechanistically driven, real-time cognitive behavioral interventions. Thus, this project will provide the Applicant imperative training and experience in repeated assessment research, sophisticated multi-level analyses, grantsmanship, dissemination of findings, networking, mentoring, and ethics. The Applicant's research environment provides the ideal setting and mentorship to successfully conduct the proposed project.

Keywords: opioid use; suicide; trauma; ecological momentary assessment; idiographic