Suicide prevention

0087 SUICIDE IN THE TIME OF COVID-19: A PERFECT STORM

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Statement of purpose Suicide is a leading cause of death in the United States and Kentucky. Precipitating suicide circumstances in Kentucky between 2005 and 2017 most often included depressed mood; mental health, intimate partner, and physical health problems; and substance misuse. These known risk factors will likely intensify as the risk of spreading the virus continues, indefinitely.

Methods/Approach Finkel’s I-cubed (I³) model, not previously applied to suicide, is a novel and validated meta-theoretical framework that can model multiple and interacting risk and protective factors. This theory allows for the incorporation of the pandemic dimension, in order to understand suicidal behaviors and guide future research in this new way [encompassing intrapersonal (eg, comorbid physical and psychiatric illnesses), interpersonal (eg, relationship), and extrapersonal (eg, community, cultural, geographical) determinants].

Results Preliminary data show that suicides in Kentucky during March were about 50% lower than the average of the previous four years. Overall, suicides have continued to be lower through August. The lower rate does not imply that the pandemic will not impact state and national suicide rates. Historically, suicide rates decrease during the early phase—or ‘honeymoon’ period—of a crisis and during periods of high community cohesion. Following the honeymoon period, however, rates will likely increase. According to the Substance Abuse and Mental Health Services Administration, the next phase in a disaster is disillusionment, as people realize the limits of assistance. As the crisis becomes chronic, increasing gaps between those that return to business as usual and those that have continued needs lead to feelings of abandonment. This phase can last months and even years.

Significance As we acclimate to a new way of life, we must be proactive and innovative in understanding the effects of the pandemic and then developing targeted pandemic suicide prevention efforts and messages aimed at our most vulnerable populations.

TBI/Concussion injuries

0088 BIDIRECTIONAL ASSOCIATION BETWEEN DAILY PHYSICAL ACTIVITY AND POSTCONCUSSION SYMPTOMS AMONG YOUTH

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Statement of purpose We investigated the longitudinal and bidirectional association between daily physical activity and postconcussion symptoms (PCS) among concussed youth aged 11–17 years.

Methods/Approach We prospectively enrolled youth aged 11–17 years with a physician-confirmed concussion within 72 hours of injury. We measured daily physical activity using an ActiGraph and daily PCS using the Postconcussion Symptom Scale from day 1 to day 7 postinjury. We grouped daily step count and PCS into three waves: days 1–3 (Wave 1), days 4–5 (Wave 2), and days 6–7 (Wave 3) postinjury. We examined the bidirectional associations between daily step counts and PCS in the 3-wave, longitudinal design using both a traditional cross-lagged panel model (CLPM) and a random-intercept cross-lagged panel model (RI-CLPM).

Results Participants included 83 concussed youth (54 boys [65%]; mean age 14.2 years; 59 White participants [72%]; and 70 sports-related concussions [84%]). The mean daily step counts were 9,167 at Wave 1, 10,143 at Wave 2, and 10,786 at Wave 3, while the mean daily PCS scores were 27.7, 21.0, and 15.9. In the CLPM, daily step counts and PCS scores showed significant positive autoregressive associations across all waves. In contrast, in the RI-CLPM, the only significant autoregressive association was the path for PCS scores from Wave 1 to Wave 2 (p=.002). In the CLPM, only one cross-lagged path was significant, with higher PCS scores at Wave 1 being associated with lower daily step counts at Wave 2 (p=.047). No cross-lagged paths were significant in the RI-CLPM.

Conclusion While youth who engaged in more physical activity reported fewer PCS, only one cross-lagged association was significant. Future randomized controlled trials are needed to better understand the effects of physical activity on PCS.

Significance This study is the first to assess the bidirectional association between physical activity and PCS using cross-lagged panel analyses.