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"Convergent Interactions of Post Traumatic Stress Disorder, Pain, and Alcohol Use in the New Orleans Alcohol Use in HIV Cohort"

Objective: Pain is a frequent comorbidity among people with HIV (PWH), and those with chronic pain are at increased risk of developing Post Traumatic Stress Disorder (PTSD). Pain and PTSD often work bidirectionally and exacerbate one another. Alcohol use disorder (AUD) is also prevalent among PWH, and PWH are twice as likely to misuse alcohol compared to the general population. Therefore, this study sought to investigate the relationship between pain symptoms, PTSD, and alcohol consumption in an underserved cohort of PWH.
Methods: All 364 participants in the baseline cohort of the New Orleans Alcohol Use in HIV (NOAH) study were utilized for this cross-sectional study. Pain was measured using the Pain Intensity and Pain Interference scales from the 36-item Short Form Survey (SF-36). PTSD symptoms were assessed using the Primary Care PTSD Screen for DSM-IV (PC-PTSD). Alcohol misuse was evaluated using the Alcohol Use Disorders Identification Test (AUDIT), a 10-item self-survey used for AUD screening, and the AUDIT-C, a 3-item questionnaire that screens for alcohol consumption. Data were analyzed with Pearson correlations, t-tests, and one- and two-way analysis of variances (ANOVAs) using GraphPad Prism 9.
Results: In the baseline NOAH cohort, 77 participants (21.2%) had PTSD scores of three or greater, indicating an increased risk of PTSD. Participants with PTSD scores of three or greater also reported more severe SF-36 pain interference scores ($p<0.0001$). These participants also displayed higher AUDIT scores ($p=0.0073$). Although PTSD scores did not differ by sex, females reported greater pain intensity ($p=0.0137$) and pain interference ($p=0.0042$) while males had higher AUDIT ($p=0.0010$) and AUDIT-C ($p=0.0016$) scores. PTSD scores also decreased with age ($p=0.0250$).
Conclusions: These findings suggest that HIV-positive individuals with increased PTSD symptoms have more pain interference and are at increased risk of developing an AUD. Although sex did not impact PTSD scores, females with HIV may be at increased risk of chronic pain, while males with HIV may be more likely to misuse alcohol. Finally, age may contribute to PTSD symptoms in PWH, with younger individuals at increased risk of PTSD. Future studies will examine the impact of Adverse Childhood Experiences (ACEs) on pain and alcohol consumption in the NOAH cohort.