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Introduction:

Increased states of anxiety or depression may lead to increased occurrences of dissociative behavior, justifying the need to validate pre-traumatic cognitive states as a predictor of dissociation post-trauma. Early prediction can lead to medical intervention for high-risk patients and prevent potential adverse sequalae. The AURORA Study evaluates biomarkers and neuropsychological sequelae in patients immediately following traumatic events. We predict patients who suffered from depressive symptoms and anxiety prior to the traumatic event will experience increased dissociative symptoms post-trauma.

Methods:

This study includes survey data collected at ED's from survivors (n = 666) of traumatic motorized vehicle collisions (MVC) at time points 30 days pre-collision, and 2- and 8-weeks post-collision. Inclusion criteria included those enrolled until the closure of the week 8 survey window and completed at least 90% of follow up surveys at weeks 2 and 8. Our primary outcomes were dissociative symptoms at 2- and 8- weeks post-

MVC. We adjusted for sex at birth, age, race/ethnicity, and overall mental health prior to the MVA. Simple and multiple linear regression models were utilized for analysis, along with ANOVA.

Results:

Anxiety was not a significant predictor for dissociative symptoms at 2- (0.042, 95% CI -0.11-0.096, P=0.12) and 8- weeks (0.030, 95% CI -0.11-0.096, P=0.275). Depressive symptoms were a significant predictor at 2- (0.032, 95% CI 0.006-0.058, P=0.016) and 8- weeks (0.042, 95% CI 0.016-0.069, P=0.002). Additionally, overall mental health was a significant predictor at 2 weeks (-0.027, 95% CI -0.047- -0.008, P=0.006), and white ethnicity was significant at 8 weeks (-0.418, 95% CI -0/757- -79, P=0.016).

Discussion:

Symptoms of anxiety prior to traumatic events are reliable predictors of post-traumatic stress, while depressive symptoms are not. Additional long-term data points are needed, but preliminary analysis justifies the potential use of pre-traumatic anxiety for early medical intervention before deterioration of neurocognitive functioning.