



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Blast Injury Outcomes

Two Independent Predictors of Nightmares in Posttraumatic Stress Disorder

Experiences of nightmares and disturbing dreams (NM/DD) are frequently reported symptoms of TBI and PTSD in U.S. military Veterans; however, due to their subjective nature, it is exceedingly difficult to document and/or quantify precisely. This leads to complications in assessing symptom severity and testing the efficacy of new or existing treatments for NM/DD. Researchers with the Veterans Administration (VA) and the Stanford University School of Medicine (Stanford, CA) used subjective morning reports along with mattress actigraphy in a U.S. military Veteran cohort over a longitudinal time frame to develop a predictive model of NM/DD endorsement.

The researchers recruited 31 male U.S. military Veterans currently enrolled as in-patients for treatment of PTSD. Participants received alerts seven times daily, pushed to mobile devices, to assess momentary mood and NM/DD reports, and slept on mattresses equipped with sensors measuring heart rate, respiratory sinus arrhythmia (RSA), sleep efficiency, and apnea-hypopnea index (AHI).

The researchers collected 468 morning reports, 60 percent of which indicated endorsement of NM/DD during the previous night. Multiple logistic regression models were computed with the behavioral and actigraphic parameters; only elevated AHI and low prior-night sleep RSA independently predicted morning NM/DD endorsement. These results confirm prior findings linking disturbed dreaming with sleep-disordered breathing and provide further autonomic correlates of NM/DD that may guide future treatment avenues.

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