Risk Assessment and Surveillance

Factors Influencing Postconcussion and Posttraumatic Stress Symptom Reporting Following Military-related Concurrent Polytrauma and TBI

This study, sponsored by DoD and CNRM at USUHS, aimed to identify factors that predict or are associated with high endorsement of postconcussion and posttraumatic stress symptoms following military-related TBI. Participants were Service Members who sustained a mild to moderate TBI and had been evaluated by DVBIC at one of six military medical centers (*n* = 1,600). Twenty-two factors, including demographic, injury circumstances/severity, treatment/evaluation, and psychological/physical variables were examined. Four factors were statistically and meaningfully associated with clinically elevated postconcussion symptoms: low bodily injury severity, posttraumatic stress, depression, and military operation where wounded. The combination of depression and posttraumatic stress symptoms accounted for the vast majority of unique variance (41.5%) and were strongly associated with, and predictive of, clinically elevated postconcussion symptoms. Five factors were statistically and meaningfully associated with clinically elevated posttraumatic stress symptoms: low bodily injury severity, depression, a longer time from injury to evaluation, military operation where wounded, and current auditory deficits. Depression alone accounted for the vast majority of unique variance (60.0%) and was strongly associated with, and predictive of, clinically elevated posttraumatic stress symptoms. There was a very clear, strong, and clinically meaningful association between depression, posttraumatic stress, and postconcussion symptoms in this sample. Brain injury severity, however, was not associated with symptom reporting following TBI. This study advances understanding of factors that are predictive of, or associated with postconcussion and posttraumatic stress symptoms and may help identify individuals who are at high risk for these conditions.