Risk Assessment and Surveillance

Neuropsychological Outcome from Military-related TBI: Preliminary Analyses of the Role of Resilience, TBI Severity, and Blast Exposure

In a study sponsored by NICoE, researchers at the TBI Clinic at WRNMMC examined the unique contributions of resilience, brain injury severity, and blast exposure on neuropsychological outcome following TBI. Participants were US Service Members who had sustained a mild to severe TBI (*n* = 60). When analyzed by TBI severity, there were medium effect sizes on 37.5% of neurocognitive and 41.0% of neurobehavioral measures. When analyzed by blast exposure (blast vs non-blast), there were medium effect sizes on 34.4% of neurocognitive and 25.6% of neurobehavioral measures. When analyzed by resilience (low vs high), there were medium to large effect sizes on 68.8% of neurocognitive measures, and medium to very large effect sizes on 89.7% of neurobehavioral measures. Using a series of linear regression analyses, resilience was a significant predictor for 53.8% of neurobehavioral measures (accounting for 10–63% of variance), and 34.4% of neurocognitive measures (8–15% of variance). These findings advance knowledge of specific risk factors for neuropsychological outcome following TBI. Blast and TBI severity were rarely significant predictors of outcome measures. Resilience was strongly associated with neuropsychological outcome following TBI, but blast exposure and TBI severity were not. More information on the role of resilience on outcome following TBI can inform its utility as an indicator for clinical care.