

Paper Session A3: Methods and Measures in Nursing Research: Recent Innovative Advances

A New Predictive Screener for the Future Development of Post-Injury Depression & PTSD

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Aims: To develop a predictive screener that will accurately predict the future development of post-injury depression or post-traumatic stress disorder (PTSD).

Theoretical Framework: Study is grounded in Nagi's model of the disabling process and indicates that disability results from the interaction of physical illness/injury as well as psychological, environmental, and biological factors.

Methods: A prospective, longitudinal cohort study of subjects randomly selected from patients requiring an Emergency Department (ED) visit for injury. A theoretically and empirically derived 45-item risk survey was administered soon after injury. A psychiatric diagnostic interview was conducted at 3 and 6 months to determine emergence of depression or PTSD. Multiple logistic regression analyses were performed separately for depression and PTSD, using a best-subset approach to select models at each step by comparing log-likelihood estimates.

Results: Of 175 (of 192 enrolled) available for follow-up, 16% developed depression and 2.3% developed PTSD. A logistic model retaining 4 depression items and 5 PTSD items emerged. One item predicted both depression and PTSD; hence the final screener is 8 items. ROC for depression and PTSD was 0.81 each. Optimal cut-off scores were >2 (out of 4) for depression and >3 (out of 5) for PTSD. Depression findings: sensitivity 0.81, specificity 0.71, PPV 0.34, NPV 0.95. PTSD findings: sensitivity 1.00, specificity 0.66, PPV 0.07, NPV 1.00.

Conclusions and Implications: 30 million seek ED care annually for injury and a significant subset develop psychiatric disorders that impede recovery. The high NPV for both depression and PTSD supports the role of this new instrument as a short, clinical screener: those who screen negative can be screened out from further monitoring, allowing precious resources to be focused on those at highest risk for the development of depression and PTSD.