G3.3: Spielberger’s State Anxiety Inventory: The Development of a Shortened Version for the Critically Ill

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Abstract:

Introduction: Purpose: To develop a psychometrically sound shortened version of Spielberger’s State Anxiety Inventory (SAI) for use with critically ill. Specific aims were to: 1) assess the internal consistency and dimensionality of the original SAI, 2) shorten the SAI using factor analysis and reliability indicators; and 3) evaluate the construct validity of the shortened SAI. Tested hypotheses were: 1) the shortened version is positively correlated with the original SAI and the anxiety subscale of the Brief Symptom Inventory (A-BSI); 2) anxiety as measured by the short version is predicted by low perceived control and predicts in-hospital complications. Significance: Lengthy anxiety instruments are burdensome to critically ill and hinder clinicians from evaluating anxiety.

Method(s): Anxiety (SAI, A-BSI), in-hospital complications (arrhythmias, pulmonary edema, and death) and perceived control (Control Attitude Scale) were measured in 530 acute myocardial infarction patients recruited from CCUs. Cronbach’s α then factor analysis was used to examine the internal consistency and dimensionality of the original SAI. The sample was randomly divided into two subsamples. A series of factor analyses were run to eliminate items with double and no primary loadings. Construct validity was tested using correlational analysis, and hierarchical logistic, and multiple regression.

Results: Cronbach’s alpha for the original SAI was .93. The SAI factored into two dimensions that explained 58% of the variance in the items. In both subsamples, the SAI was unidimensional and was composed of the same six items, with one exception. This solution accounted for 74% to 79% of the variance in the two subsamples. The alphas were .82 and .84. Construct validity was supported by strong correlations with the original SAI ($r = .96, p < .001$), the original SAI minus the items shared with the short SAI ($r = .90, p < .001$), and the A-BSI ($r = .67, p < .001$). Anxiety as measured by the short version was predicted by low perceived control [adjusted $R^2 = .13, F(6, 447) = 12.53$] and predicted in-hospital complications (OR = 1.07, 95% CI = 1.02, 1.12), after controlling for covariates.
**Discussion & Conclusions:** The shortened SAI demonstrated excellent internal consistency and promising construct validity.

**Abstract History:**
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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No, I (or a member of my immediate family) have not received something of value* from or own stock (or stock options) in a commercial company or institution related directly or indirectly to the subject of my presentation.

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