

Patient Education: Evaluation of the Nursing Attachment Styles Questionnaire to Assess Changes in Learning Across Three Timed Measurements

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Background

Bowlby's (1951, 1958) attachment theory observations and insights were set forth in 1951. Mikulincer and Shaver (2016, p. 7) provide an excellent summary of Bowlby's work.

In subsequent decades, each of these foundational articles was developed into a major book, forming a trilogy that is now widely recognized as a major contribution to modern psychology, psychiatry, and social science. The first volume was published in 1969 and revised in 1982: *Attachment and Loss: Volume 1, Attachment*. The second volume, *Attachment and Loss: Volume 2, Separation: Anxiety and Anger*, was published in 1973. The third volume, *Attachment and Loss: Volume 3, Loss: Sadness and Depression*, was published in 1980. These books were accompanied in 1979 by a collection of Bowlby's lectures, *The Making and Breaking of Affectional Bonds*, which is a good place for readers unfamiliar with Bowlby's work to begin, and were capped in 1988 by Bowlby's book about psychotherapy, *A Secure Base*.

Mary Ainsworth, Bowlby's research assistant, continued testing his theory while living in Uganda with her family. She proposed the Strange Situation to measure secure, anxious, and avoidant attachment styles. Mikulincer and Shaver (2016, p. 8) summarized Ainsworth's significant contributions.

The three main patterns of attachment delineated in 1978 were derived from studies of middle-class white infants in Baltimore that involved extensive home observations during the infants' first year of life, supplemented by a laboratory assessment procedure, the "Strange Situation" (now typically capitalized in writings about attachment theory and research, to help readers remember that it is a formal measure, not simply an "odd" situation). Ainsworth et al.'s 1978 book explained how to code an infant's behavior toward the mother in the Strange Situation, and also showed how the three major categories of infant attachment behavior were associated with particular patterns of maternal behavior in the home.

Hilty & Bumgardner (2018) used the Nursing Attachment Styles Questionnaire (NASQ) designed with 33 items with 11 items measuring secure, anxious, and avoidant attachment styles with an undergraduate nursing student sample (N=247). Using principle axis factor analysis with an oblimin rotation, three common factors (secure, anxious, avoidant) accounted for 64% of the variance (eigenvalues = 12.455, 5.71, 2.963). Coefficient alpha reliability estimates were .93 (secure), .933 (anxious), and .947 (avoidant).

Aim

The purpose of this educational intervention was to determine if the NASQ would assess changes in learning across three timed measurements. The participants were senior level students in a Bachelor of Science Nursing (BSN) program enrolled in an Acute Nursing Care course.

Methods

The purpose was to create a patient education intervention for senior level students in a BSN program based on faculty lectures, faculty laboratory demonstration, and student demonstration of skill in a simulation laboratory. Based on the patient education curriculum, students were assigned to small groups and could choose from the following topics: heart failure, MI/stent, open heart surgery-equipment lines, sepsis/shock/mods, ventilators/ARDS, traumatic brain injury, and burns. Prior to the skill demonstration in the simulation laboratory, students selected one of the eight topics and submitted a term paper summarizing the topic and created a communication script describing how the information would be presented to the patient.

Timed Measurements

1st Assessment: Pre-test

Intervention 1: Faculty lectures, faculty laboratory demonstration, assignment of small group research paper and communication script.

2nd Assessment:

Intervention 2: Students assumed the role of a Registered Nurse in a simulation including the patient and family members. Faculty members spoke via a microphone as the voice for patient.

3rd Assessment:

Instrumentation

NASQ was used to monitor the student education experiences (5-point Likert Scale, Strongly agree to Strongly Disagree). The Competitive Greatness scale (Hilty, 2017) measures being the best you can be when your best is needed, continuous self-improvement, and welcoming difficult challenges (5-point Likert Scale, Strongly agree to Strongly disagree).

Findings

During the patient education intervention, the repeated measures ANOVA on the NASQ-Secure and NASQ-Avoidant common factors did not produce significant results. A significant result ($F(2,34) = 7.738, p=.001$) was found on the NASQ-Anxious common factor. The data in the Pair-Wise Comparison tables revealed significant differences between Time 1 and Time 2 ($p=.006$), and Time 1 and Time 3 ($p=.003$). The means scores decreased during the three timed assessments. The repeated measure ANOVA on the Competitive Greatness scale produced a significant result ($f(2,34) = 11.603, p=.001$) with the Pair-Wise Comparison table revealing significant differences Time 1 and Time 2 ($p=.001$), and Time 1 and Time 3 ($p=.001$).

Coefficient alpha reliability estimates for NASQ-Secure and Time 1 was .845, for Time 2 was .960, and for Time 3 was .953. Reliability estimates for NASQ-Anxious and Time 1 was .904, for Time 2 was .929, for Time 1 was .950. Reliability estimates for NASQ-Avoidant and Time 1 was .927, for Time 2 was .946, and for Time 3 was .957.

Using SPSS 25 regression analysis, the ANOVA table reported a significant effect ($F = 20.773, p=.001$). The overall regression was significant ($r = .697, r\text{-squared} = .486$). Competitive Greatness was the dependent variable, and the NASQ common factors were the predictor variables.

Discussion

The NASQ instrument provides an assessment of the attachment constructs (i.e., secure, anxious, avoidant). The NASQ reliability estimates range from .854 to .960 in this educational intervention. The NASQ-Anxious common factor recorded significant changes throughout the patient education intervention.

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