

Preliminary Evaluation of a Nursing Student Attachment Questionnaire: Reliability & Validity

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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.

Simpson and colleagues (Simpson, 1990; Simpson, Rholes, & Phillips, 1996) developed the Adult Attachment Questionnaire (AAQ) which was one of the first quantitative instruments. Exploratory factor analysis found support for two common factors (attachment anxiety, attachment avoidance). AAQ used 17 items. Graham and Uterschute (2015) reported .78 coefficient alpha reliability estimates for both common factors.

Carver and colleagues (Carver, 1997; Kim & Carver, 2007) developed a quantitative instrument named the Measure of Attachment Quality (MAQ) which consisted of 13 items designed to measure significant other relationships. Exploratory factor analysis found support for three common factors: secure, anxious, and avoidant (Kim & Carver, 2007).

Aim

The purpose of this educational intervention was to design a questionnaire that would measure attachment styles, that could be applied to the professional relationships between nursing students and their patients.

Methods

A quantitative instrument (i.e., Nursing Attachment Styles Questionnaire; NASQ) was designed with 33 items with 11 items measuring secure, anxious, and avoidant attachment styles. The participants (N=247) were BSN nursing students. Hypothesis 1: Determine whether attachment measured with the NASQ items would be a multi-dimensional construct (i.e., two or more common factors). This hypothesis would be tested by using exploratory principal axis factor analysis (EPAFA). Hypothesis 2: Determine if the reliability estimate(s) would be greater than .80 for engagement common factors. Hypothesis 3: Evaluate the correlation coefficients among the NAQ, AAQ, and MAQ attachment styles.

Findings

Hypothesis 1: Undergraduate BSN nursing students (N=247) responses were analyzed via principle axis factor analysis with a oblimin rotation. Three common factors (secure, anxious, avoidant) accounted for 64% of the variance (eigenvalues = 12.455, 5.71, 2.963). Hypothesis 2: Each of the theoretically designed items loaded on the respective common factors. Coefficient alpha reliability estimates were .93 (secure), .933 (anxious), and .947 (avoidant). Hypothesis 3: Correlations coefficients among the NAQ, AAQ, and MAQ common factors are presented in the table below.

	Correlation Coefficients		
	NASQ, Secure	NASQ, Anxious	NASQ, Avoidant
Simpson, AAQ, Anxious	-.306**	.584**	.362**
Simpson, AAQ, Avoidant	-.561**	.351**	.553**
Carver, MAQ, Secure	.678**	-.130	-.579**
Carver, MAQ, Anxious	-.424**	.523**	.309**
Carver, MAQ, Avoidant	-.218**	.177	.411**

** Correlation is significant at the 0.01 level (2 tailed)

Discussion

The factor analysis findings of three common factors offer initial construct validity support for the NASQ. Reliability estimates were greater than .80. Correlation coefficients between NASQ and MAQ *secure* were .678, among NASQ, AAQ, and MAQ *anxious* were .584 and .523, and among NASQ, AAQ, and MAQ *avoidant* were .362 and .411.

Conclusions

The statistical analysis of the questionnaire designed to measure the secure, anxious, and avoidant attachment styles for nursing students resulted in some promising findings. Previous instrumentation (Carver, 1997; Simpson, 1990) measured attachment style in significant other relationships. The 33 items (i.e., 11 questions per attachment style) may allow researchers to assess attachment style in professional relationships.

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