Background and Significance

- Nursing students’ attitudes toward clinical research are generally positive.1-4
  - Nursing students see value in research for clinical practice.3,5
  - More favorable attitudes toward nursing research are significantly associated with prior research experience and interest in a specific research area.2,6
- Although, some nursing students have negative perceptions of clinical research, identifying it as complex, boring, and time-consuming.3,7
- Only one qualitative study to date has explored nursing students’ experiences as research participants in the United Kingdom.8
- Students’ positive perceptions of being research participants, identifying benefits both personally (i.e., self-growth and knowledge development) and professionally (i.e., clinical practice).8
- No instruments were found in the published literature that specifically measure students’ attitudes toward nursing education research.1

Purpose

The purpose of this study was to develop and test the validity and reliability of the Nursing Students’ Attitudes toward Nursing Education Research Questionnaire (NSANERQ).

Theoretical Framework

Katz’s Functional Attitudes Theory9

- An attitude is defined as the value that an individual places on something or someone.
- People generally act in a manner that benefits them.
- As such, people are more likely to act positively when they have favorable attitudes toward something or someone.

Design and Methods

NSANERQ Development

- Adapted with permission from the Nursing Students’ Attitudes and Awareness of Research and Development in Nursing (NSAARDN) scale.
  - The NSAARDN scale measures nursing students’ attitudes toward clinical research.
  - The NSAARDN scale has excellent internal consistency reliability (α = 0.92).
- Psychometric properties of the NSANERQ were assessed in three phases:
  - Content Validity
  - Internal Consistency Reliability & Construct Validity
  - Test-Retest Reliability

Phase One: Content Validity

Methods

- Three experts in nursing education and instrument development reviewed the original version of NSANERQ.
- Changes were made based on expert feedback.
- Five experts in nursing education and instrument development reviewed the final version of the NSANERQ.

NSANERQ Results

- The initial NSANERQ scale-content validity (S-CVI) was 0.76
- After revision, the final version of the NSANERQ demonstrated a S-CVI of 0.92 with all items demonstrating excellent item-content validity (0.8 - 1.0).

Phase Two: Internal Consistency Reliability and Construct Validity

Sample Size and Characteristics

<table>
<thead>
<tr>
<th>N = 156</th>
<th>Baccalaureate Nursing Students</th>
<th>Age:* M = 20.55 (19 - 37) years old</th>
<th>Gender:* Female N = 137 (95.8%)</th>
<th>Race:* White N = 128 (89.5%)</th>
<th>Ethnicity:* Non-Hispanic / Latino N = 132 (92.3%)</th>
<th>Year in Program:* Sophomore N = 48 (33.6%)</th>
<th>Junior N = 51 (35.7%)</th>
<th>Senior N = 44 (30.8%)</th>
</tr>
</thead>
</table>

Methods and Results

Internal Consistency Reliability

- Data were analyzed using Cronbach’s alpha.
- Good internal consistency reliability (α = 0.88).
- Deletion of any items did not improve the Cronbach’s alpha coefficient for the instrument.

Construct Validity

- Data were analyzed using factor analyses:
  - Exploratory Factor Analysis:
    - Extraction: Principal Components Analysis
    - Rotation: Varimax
    - Item Loadings: > 0.35
  - Confirmatory Factor Analysis:
    - Method: Maximum Likelihood Estimations

Phase Three: Test-Retest Reliability

Sample Size and Characteristics

<table>
<thead>
<tr>
<th>N = 49</th>
<th>Freshman Baccalaureate Nursing Students</th>
<th>Age: M = 18.35 (18 – 19) years old</th>
<th>Gender: Female N = 43 (89.6%)</th>
<th>Race: White N = 41 (85.4%)</th>
<th>Ethnicity: Non-Hispanic / Latino N = 44 (91.7%)</th>
</tr>
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</table>

Methods

- Data were collected two weeks apart.
- Data were analyzed using Pearson’s correlations.

NSANERQ Results

- Acceptable test-retest reliability (r = 0.71).

Nursing Implications

Nursing Education

- The NSANERQ is a valid and reliable instrument that may be used to:
  - facilitate the exploration of nursing students’ attitudes toward education research.
  - appreciate students’ attitudes toward nursing education research, which may be used to develop a student-driven framework for pedagogical research.
  - Refine current pedagogical research strategies.
  - Develop interventions to enhance students’ attitudes.

Future Research

- Additional psychometric testing of the NSANERQ with larger, more diverse samples.
- Studies using the NSANERQ are needed to determine nursing students’ attitudes toward education research.

Limitations

- Recruitment from a single university
- Relatively small sample size
- Lack of sample diversity
- Missing data

Conclusions

- Preliminary testing of the NSANERQ demonstrated adequate reliability and validity.
- NSANERQ can be used to describe and evaluate changes in baccalaureate nursing students’ attitudes toward nursing education research.
- Additional psychometric testing is warranted in larger, more diverse samples of nursing students.

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References