Revision and Validation of Self-Efficacy Towards Teaching Inventory for Nurse Educators (SETTI-NE) for International Audience

Erin Killingsworth, PhD, RN, CNE
Shelby L. Garner, PhD, RN, CNE
Martha Bradshaw, PhD, RN
Disclosure

Erin Killingsworth, PhD, RN, CNE
Shelby L. Garner, PhD, RN, CNE
Martha Bradshaw, PhD, RN
Baylor University
Dallas, Texas USA

Report no conflict of interest.
Self-Efficacy

- Self-Efficacy as defined by Bandura (1977)
  - Individual’s perception of one’s capacity to perform at various levels

- Teacher Self-Efficacy as defined by Nugent, Bradshaw & Kito (1999)
  - Ability to “select, use, and modify appropriate teaching strategies” (p. 231)

To successfully integrate new teaching strategies, nurse educators must be confident in their ability to implement new strategies.
Self-Efficacy Towards Teaching Inventory (SETTI)

- Nugent, Bradshaw & Kito (1999)
  - Modified to assess Self-Efficacy of four central aspects of teaching in new nurse educators in the United States (US)
    - Course Preparation
    - Instructor Behavior
    - Evaluation and Examination
    - Clinical Practice
  - 48 items 4-point Likert-type Scale
  - Reliability .95
  - SETTI used in the US to determine self-efficacy in nurse educators, but not been validated for use with international audiences (Crocetti, 2014; Nugent et al., 1999)
Three Phase Instrument Revision and Validation Study

Purpose

1. Modify the SETTI to fit current teaching practices, including nursing simulation, for international use
2. Determine content validity of the revised instrument
3. Compare the revised instrument’s internal consistency reliability and factor analysis with the original instrument when used internationally
Phase 1 SETTI Revision

- Revised the existing demographic section and clinical practice subscale
  - Demographic section- revisions made related to faculty rank, highest degree held, and professional development in nursing education
  - Clinical practice subscale- addition of items related to simulation based upon INACSL Standards of Best Practice: Simulation℠ (INACSL, 2016a-2016f)

- General update in terminology

- SETTI renamed the Self-Efficacy Towards Teaching Inventory for Nurse Educators (SETTI-NE)
Phase 2 Content Validity

- SETTI-NE (in English) was reviewed by 9 international expert nurse educators from the US (n=4), India (n=2), Iraq (n=1), Malaysia (n=1), and Sweden (n=1).

- Rated SETTI-NE on a 4-point Likert-type scale and provided written feedback (Waltz, Strickland & Lenz, 2010).

- Item and Scale Content Validity Indices (CVI) were calculated.

- Item CVI of .78 or higher and Scale CVI of .80 or higher were considered acceptable (Lynn, 1986).
### Phase 2 Results

<table>
<thead>
<tr>
<th>DEMOGRAPHICS (9 items)</th>
<th>SETTI-NE (54 items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale CVI= .89</td>
<td>Scale CVI= .96</td>
</tr>
<tr>
<td>Item CVI range= .75 – 1.00 (1 item less than .78)</td>
<td>Item CVI range= .66 – 1.00 (2 items less than .78)</td>
</tr>
</tbody>
</table>
Phase 3 Internal Consistency and Factor Analysis

- 87 nursing faculty attending an 8-hour development workshop on simulation in Bengaluru, India completed the SETTI-NE (in English) (Garner et al., 2018)

- Cronbach’s Coefficient Alpha and Principle Component Analysis (un-rotated and orthogonally rotated) were conducted to replicate methods used in original instrument (Nugent et al., 1999)
# Phase 3 Results

<table>
<thead>
<tr>
<th>SETTI (Nugent et al., 1999)</th>
<th>SETTI-NE (Garner et al., 2018)</th>
</tr>
</thead>
<tbody>
<tr>
<td>r= .95</td>
<td>r= .98</td>
</tr>
<tr>
<td>Eight factors with Eigenvalues greater than 1</td>
<td>Eight factors with Eigenvalues greater than 1</td>
</tr>
<tr>
<td>Majority of variance emerged in Factors 1 and 2</td>
<td>Majority of variance emerged in Factors 1 and 2*</td>
</tr>
</tbody>
</table>
Discussion

- Scale CVI of SETTI-NE was greater than benchmark of .80 (Lynn, 1986)

- Cronbach’s Coefficient Alpha of SETTI-NE was greater than benchmark of .70 (Nunnally, 1978) and comparable to SETTI (Nugent et al., 1999)

- Factor Analysis of SETTI-NE was consistent with SETTI (Nugent et al., 1999)
Conclusions

- Beginning evidence of applicability of the SETTI-NE with an international audience

- Future studies using the SETTI-NE with a variety of international audiences are needed to provide additional evidence of the use of this instrument to measure self-efficacy of nursing faculty internationally