The Effectiveness of Simulation Education on Improving Self-Efficacy Towards Teaching Among Nurse Educators in India

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While simulation is a growing concept globally, limited research exists on the translation of simulation as a teaching strategy across cultures and in countries with emerging economies, such as India (Garner et al. 2017).

In order for nursing faculty new to simulation to be successful in adapting simulation as a new teaching technique, they need to be confident in their abilities (Garner et al., 2018).
Self-efficacy as described in Bandura’s (1977) seminal work is a person’s perception of one’s ability to perform at various levels.

It is imperative for nurse educators to have a high level of self-efficacy when embedding simulation into nursing curricula.
Purpose

- Our overarching aim for this study was to examine the impact of a simulation education workshop intervention on improving self-efficacy towards teaching among nurse educators in India (Garner et al., 2018).

- Specifically, the Self-Efficacy Towards Teaching Inventory for Nurse Educators (SETTI-NE) was used to evaluate four subscales related to self-efficacy including:
  - course preparation
  - instructor behavior and delivery
  - evaluation and examination
  - clinical practice
Methods

- A quantitative pre-test/post-test design was used and the study was approved by IRBs in the US and India.

- Non parametric sampling methods were used to recruit N=87 nursing faculty from 20 nursing schools across South India to a workshop which focused on best practices in simulation standards (INACSL, 2016), simulation use in a variety of settings, and intraprofessional collaborative practice.
The simulation workshop provided hands-on interactive breakout sessions using both high and low fidelity simulators and attendees participated in scenarios including:

- pediatric fluid and electrolyte imbalance in an urban hospital setting
- nursing and midwifery care during the second stage of labor in a hospital setting
- Helping Babies Breathe® in a rural healthcare setting
- cardiopulmonary resuscitation and use of an automatic external defibrillator in a community setting.
Methods

- The workshop was conducted and data were collected in March of 2017 by a cross-cultural team of nursing faculty from both India and the US.

- A paired t-test was conducted to measure pre and post-test self-efficacy scores using the SETTI-NE ($r=0.98$).
Results

Sociodemographic Results

Gender: 89.7% Female, 10.3% Male

Age: 9.2% ≤25, 60.9% 26-35, 21.9% 36-45, 4.6% 46-55, 3.4% ≥61

Education: 23% BSN, 74.4% MSN, 2.3% PhD
# Results

<table>
<thead>
<tr>
<th>SETTI-NE Scale/Subscale</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$t(86) = -10.36, p&lt;.0001$</td>
</tr>
<tr>
<td>Course Preparation</td>
<td>$t(86) = -10.03, p&lt;.0001$</td>
</tr>
<tr>
<td>Instructor Delivery</td>
<td>$t(86) = -8.96, p&lt;.0001$</td>
</tr>
<tr>
<td>Evaluation and Examination</td>
<td>$t(86) = -7.47, p&lt;.0001$</td>
</tr>
<tr>
<td>Clinical Practice Subscale</td>
<td>$t(86) = -10.77, p&lt;.0001$</td>
</tr>
<tr>
<td>Variable</td>
<td>Mean ± SD</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Total Pre-Course Score</td>
<td>175 ± 29</td>
</tr>
<tr>
<td>Total Post-Course Score</td>
<td>200 ± 19</td>
</tr>
<tr>
<td>Total Score Percent Change</td>
<td>17 ± 20</td>
</tr>
<tr>
<td>Clinical Practice Pre-Course Score</td>
<td>50 ± 10</td>
</tr>
<tr>
<td>Clinical Practice Post-Course Score</td>
<td>59 ± 6</td>
</tr>
<tr>
<td>Clinical Practice Percent Change</td>
<td>22 ± 24</td>
</tr>
<tr>
<td>Course Preparation Pre-Course Score</td>
<td>32 ± 6</td>
</tr>
<tr>
<td>Course Preparation Post-Course Score</td>
<td>37 ± 4</td>
</tr>
<tr>
<td>Course Preparation Percent Change</td>
<td>18 ± 23</td>
</tr>
<tr>
<td>Evaluation and Examination Pre-Course Score</td>
<td>46 ± 8</td>
</tr>
<tr>
<td>Evaluation and Examination Post-Course Score</td>
<td>52 ± 5</td>
</tr>
<tr>
<td>Evaluation and Examination Percent Change</td>
<td>16 ± 25</td>
</tr>
<tr>
<td>Instructor Delivery Pre-Course Score</td>
<td>46 ± 7</td>
</tr>
<tr>
<td>Instructor Delivery Post-Course Score</td>
<td>52 ± 5</td>
</tr>
<tr>
<td>Instructor Delivery Percent Change</td>
<td>14 ± 17</td>
</tr>
</tbody>
</table>
Limitations

- Sampling methods limited geographical location of participants to one state in South India.

- Ideally, the simulation workshop would have been longer in length, however feedback from potential participants indicated it was difficult to take time from educational settings for more than one day.

- The practice of Izzat
Implications

- According to the National Health Policy for India, the Ministry of Health (2017) recently recognized how nurses are crucial to improving health in India and made an appeal to establish centers of nursing excellence in all of its member states to address the quality of nursing education in India.

- Simulation is an emerging concept in India and findings from this study can be used to model simulation education programs around the nation and in similar emerging economies where simulation is on the rise.
Implications

- A cross-cultural international team of researchers was successful in collaborating to improve teaching self-efficacy among nurse educators and establish a simulation program in India (Garner et al., 2018).

- This international research collaboration resulted in a grant awarded by the US Agency for International Development American Schools and Hospitals Abroad (USAID ASHA) for a $652,000 Grant awarded to Baylor University to build a Simulation Education and Research Centre for Nursing Excellence in Bengaluru, India.
Simulation Education and Research Centre at Bangalore Baptist Hospital Grand Opening
Thank You To:

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Questions?

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