Situational Awareness Development in Undergraduate Nursing Students Using Critical Care Simulations

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Disclosure

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Background

• Situational awareness (SA) is the *perception* of the elements in the environment, the *comprehension* of their meaning, and the *projection* of their status in the near future (Endsley, 1995).

• The Situational Awareness Global Assessment Technique (SAGAT) is an objective measure of SA.

• In times of difficult clinical placement, bringing the ICU to the classroom is an innovative and pragmatic approach to undergraduate education for those interested in pursuing critical care (Bautista & Bartos, 2019).


The purpose of this study was to use high-fidelity and best practices in simulation to develop situational awareness in undergraduate nursing students.
Methods

• Descriptive design
• Jesuit University
  – New England
• Sample: Final semester, senior undergraduate BSN student
• Elective critical care course
• First and last simulation SAGAT scores were used for comparison
  – Students participated in a total of 5 simulations
  – Situational Awareness language was enforced throughout the course
Intervention
Situational Awareness as measured by the SAGAT
SAGAT example questions

• Perception – What do you see?
  – “What is the HR at the moment?”

• Comprehension - What do you understand about the situation?
  – “Is the patient adequately oxygenating?”

• Projection - What will happen if the conditions continue?
  – “If the condition does not improve, what will happen to the HR?”
## Results

<table>
<thead>
<tr>
<th></th>
<th>Sim 1 Correctness ($n=73$)</th>
<th>Sim 5 Correctness ($n=61$)</th>
<th>% increase improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>2</td>
<td>40</td>
<td>1900%</td>
</tr>
<tr>
<td>Comprehension</td>
<td>53</td>
<td>60</td>
<td>13%</td>
</tr>
<tr>
<td>Projection</td>
<td>58</td>
<td>32</td>
<td>-45%</td>
</tr>
</tbody>
</table>
Conclusions

- High-fidelity simulations are a novel and innovative pedagogical approach to develop SA.

- SA is a precursor to clinical decision making and faculty should consider ways to cultivate this attribute.

- Faculty should consider ways of enhancing student projection and anticipating what may happen.