

**Nursing Education Research Conference 2020**  
**Situational Awareness Development in Undergraduate Nursing Students Using**  
**Critical Care Simulations**

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**Purpose:**

Situational awareness (SA) is the perception of the elements in the environment within a volume of space and time, the comprehension of their meaning and the projection of their status in the near future (Endsley, 1988). SA is the first step in decision making as it provides understanding about what is happening and likely to occur next, and is a model for safe decision making (McKenna, 2014). The three levels of SA (perception, comprehension, and projection) can be measured in a simulated environment (Cooper, 2010). Greater understanding of SA in acute care nursing and identification of factors which influences SA could lead to the implementation of interventions which maximize nursing attention, potentially reducing errors in patient care (McKenna, 2014). Use of simulation can be such an environment in which these interventions can be practiced in a safe and controlled setting. Therefore, the purpose of this study is to determine if the use of critical care simulations can improve the situational awareness of final semester, final year nursing students.

**Methods:**

This descriptive study took place at a private Jesuit University School of Nursing in the Northeast. The sample consisted of 73 final-year, final semester student nurses enrolled in an elective critical care nursing course. Over the course of the semester, students practiced situational awareness by rotating through six critical care simulations. On the days students were scheduled to be an “active observers,” the Situation Awareness Global Assessment Technique (SAGAT) was used, which is an objective measure of SA and a reliable and valid assessment tool (Endsley, 2000). Data were analyzed to determine the change in percent of correctness between the first and last critical care simulation.

**Results:**

Sample size for the first simulation and the last simulation were 73 and 61, respectively. Among the three domains of SA, perception had the greatest improvement and projection had the largest decrease in correctness over the course of the semester. Perception improved approximately 90%. Comprehension correctness improved 31% on question one but decreased 8% on question two. Two questions addressed projection correctness and these scores did not improve.

**Conclusion:**

Situational awareness is a precursor to clinical decision making (Fore & Sculli, 2013). SA skills may not be well developed for final year nursing students when dealing with critical care situations. Nursing faculty should consider ways to fully cultivate this

attribute to assist students. Situational awareness is a part of undergraduate nursing education that requires noteworthy consideration by those nursing faculty that develop the curriculum.

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**Title:**

Situational Awareness Development in Undergraduate Nursing Students Using Critical Care Simulations

**Keywords:**

Critical Care, Simulation and Situational Awareness

**Abstract Summary:**

Situational awareness is a precursor to clinical decision making and is a quality nursing students may lack. This educational activity aims to inform the attendee of how using high fidelity simulations may help to develop situational awareness qualities in the senior-level nursing student.

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