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Effects of Deliberate Practice Debriefing During a Response to Rescue Simulation With Undergraduate Nursing Students
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Purpose:
Registered Nurses are in a unique position to save lives and recognize complications because they are often the first professionals present when patients' conditions deteriorate. Studies have found novice nurses are inadequately prepared to respond to these types of complex patient situations because they have limited clinical experience and few opportunities to participate in response to rescue events while in clinical rotations in school. The purpose of this multi-site randomized pre-test, post-test experimental design study was to compare student nurse competency, learning retention and perceived student support after exposure to a deliberate practice debriefing model versus standardized debriefing during a complex response to rescue scenario.

Methods:
A convenience sample of senior BSN undergraduate nursing students in traditional nursing programs at four different schools in the United States and Canada were invited to participate in the study. The study used a patient care simulation package designed to mimic a response to rescue event that commonly occurs in acute care settings in which a patient with heart failure suddenly deteriorates. Students in the comparison group were given 40 minutes to complete the Heart Failure Simulation (HFS), and were debriefed at the conclusion of the simulation. By contrast, students in the intervention group were stopped after 20 minutes in the HFS for a 20 minute debrief. This debrief was focused on specific performance expectations. Then students returned to the simulation room for another 20 minutes of the scenario so that they could repeat and correct their behaviors. At the conclusion of the second 20 minute simulation the final 20 minute debriefing again focused on the desired behaviors. Two tools were used to evaluate students. The Heart Failure Simulations Competency Evaluation Tool (HFSCEET) has been tested with more than 400 senior level students from two baccalaureate nursing programs and has acceptable levels of inter-rater reliability ($r =$
.89-.98) and user-friendliness. The Simulation Design Scale (student version) reliability was tested using Cronbach’s alpha and was 0.92 for the presence of features, and 0.96 for the importance of features.

**Results:**
Fifty students consented to participate in the study. For the initial encounter, students in the intervention group had significantly higher total mean scores on the HFSCET than the comparison ($p = .003$) as well as higher mean scores in these subscales: patient safety ($p = .005$), assessment ($p = .001$) and communication ($p = .002$). There were no significant differences in mean scores for the subscales of intervention and core measures. Differences in retention were not significantly different between groups. The data from the Simulation Design Scale (SDS) were analyzed using a MANOVA and independent samples t testing with bootstrapping. Eleven variables were analyzed in the model, with no significant differences observed by group.

**Conclusion:**
Students who participated in deliberate practice debriefing scored better in the majority of the categories in the HFSCET as compared to the students who participated in standard debriefing. However, deliberate practice debriefing did not help students retain this learning over time.

**Title:**
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**Keywords:**
deliberate practice, response to rescue and simulation

**Abstract Summary:**
Studies have found novice nurses are inadequately prepared to respond to deteriorating patients, due to limited clinical experience. The purpose of this multi-site randomized pre/post-test experimental design study was to compare student nurse competency, learning retention and perceived support after exposure to a deliberate practice debriefing model versus standardized debriefing.

**References:**

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