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Using a Disaster-Based Simulation With Senior Nursing Students to Impact Self-Efficacy in Clinical Decision-Making

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Introduction/Background: Nursing programs are unable to meet the demands of the nursing shortage due to financial constraints, lack of faculty, and limited clinical space. These issues result in the inability of programs to provide students with essential learning opportunities to meet course outcomes, especially the development of clinical decision-making skills. There is a need for innovative strategies to meet these demands. The literature shows that simulation is effective in promoting clinical decision-making, however, the use of a disaster-based simulation to impact the skill was not examined in previous studies.

Research Objectives: The purpose of this project was to examine the impact on self-efficacy pre and post disaster simulation among senior nursing students at a large nursing college.

Methods: The project design was a descriptive study with a quantitative, non-experimental, retrospective, and pre- and posttest design. A retrospective methodology examined the data obtained from a quality improvement project. The target population included nursing students who participated in the disaster simulation. The sample included N = 23 students who participated in the project: senior level students in their senior course, Community Health Nursing. The majority of students were adult learners, different ethnicities, pursuing a second career in nursing, low-to-middle income homes, and ranged from single parents to married. Some students brought prior experiences in healthcare to the program. These experiences included Emergency Medical Technician, Licensed Professional Nurse, and Certified Nurse Assistant. Eligibility for inclusion included first time enrollment in the Community Health Nursing course and no previous experience in healthcare as an Emergency Medical Technician (EMT), Certified Nurse's Aide (CNA), Patient Care Technician (PCT) or Licensed Practical Nurse (LPN) working in a critical care setting such as the Emergency Department or Intensive Care Unit. Students who were repeating the course and had previous experience in healthcare as an EMT, CNA, PCT, or LPN in a critical care setting were excluded from the project. By surveying this population, this author identified the perception of the students' self-efficacy in decision-making after participation in the scenario. The goal was for the student to feel more empowered and self-confident in their decision-making skills while caring for their patients. The General Nursing Self-Efficacy Scale consisting of a 5-point Likert Scale was used to survey the students enrolled in the Community Health Nursing course and to collect data to determine the effect participation in this simulation had on their self-efficacy. A proxy, the lab manager, administered the survey via an online link; she did not have any interaction with students or impact on their grades. The pretest was administered two weeks prior to the simulation experience. The posttest was administered two weeks after the simulation. Comparisons between pre- and post-simulation survey scores were made using the Wilcoxon signed-rank test

Results: Nine of the pre-simulation survey responses were "Uncertain" or "Strongly Agree," which left little room for measurable improvement following the simulation training. Statistical significance noted to Question 12 following training-"In a general patient context, when facing a difficult case, I am certain I can make the right management decisions" (p=0.008). The intervention and study results indicate the significance of utilizing a disaster-based scenario simulation to improve senior nursing students' self-efficacy in making the correct management decision in difficult situations. The experience which required them to make quick decisions and manage the care of injured patients, led them to feel more empowered and confident in making the right decisions. The repetition of experiences contributes to the mastery of making clinical decisions so when the graduate is presented with a similar case, he or she will be confident that they are making the right decisions for their patients.

Conclusions: The findings show that like traditional clinical experiences, simulation can be used in nursing education to give students adequate experiences needed to foster self-efficacy in clinical decision-making skills. A disaster-based simulation can be used to improve the senior nursing student's self-efficacy in making the right management decisions in a critical situation.

Title:

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Clinical decision-making, Disaster based simulation and Self-efficacy

References:

Curl, E., Smith, S, Chisholm, L., McGee, L., & Das, K. (2016). Effectiveness of integrated simulation and clinical experiences compared to traditional clinical experiences for nursing students. *Nursing Education Perspectives*, 37(2), 72–77. doi:10.5480/15-1647

Dicle, A., & Ezeer, A. (2013). Examination of clinical decision making perceptions of nursing students. *The New Educational Review*, 13 (3), 132–142. Retrieved from <http://www.educationalrev.us.edu.pl/e33/a11.pdf>

Dunn, K., Osbourne, C., & Link, H. (2014). High-Fidelity simulation and nursing student self-efficacy: Does training help the little engines know they can? *Nursing Education Perspectives*, 35(6), 403–404. <http://dx.doi.org/10.5480/12-1041.1>

Fletcher, L., Justice, S., & Rohrig, L. (2015). Designing a disaster. *Journal of Trauma Nursing*, 22(1), 35–40. doi:10.1097/JTN.0000000000000098

Franklin, A., Gubrud-Howe, P., Sideras, S., & Lee, C. (2015). Effectiveness of simulation preparation on novice nurses' competence and self-efficacy in a multiple-patient simulation. *Nursing Education Perspectives*, 36(5), 324–325. doi:10.5480/14-1546

Hart, P. L., Brannan, J. D., Long, J. M., Brooks, B. K., Maguire, M. R., Robley, L. R., & Kill, S. R. (2015). Using combined teaching modalities to enhance nursing students' recognition and response to clinical deterioration. *Nursing Education Perspectives*, 36(3), 194–196. doi:10.5480/13-1083.1

Hassankhani, H., Aghdam, A., Rahmani, A., Mohammadpoorfard, Z. (2015). The relationship between learning motivation and self efficacy among nursing

students. *Research and Development in Medical Education*, 4(1), 97–101. doi:10.15171/rdme.2015.016

Hayden, J., Smiley, R., Alexander, M., Kardong-Edgren, S., & Jeffries, P. (2014). The NCSBN national simulation study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *The Journal of Nursing Regulation*, 5(2), S3. <http://www.journalofnursingregulation.com>.

Philips, B. (2015). *Clinical decision-making in last semester senior baccalaureate nursing students (Doctoral Dissertation)*. Retrieved from ProQuest Dissertation and Theses. (Accession Order No. AAT 10006343).

Purling, A., & King, L. (2012). A literature review: graduate nurses' preparedness for recognizing and responding to the deteriorating patient. *Journal of Clinical Nursing*, 21, 3451–3465. doi:10.1111/j.1365-2702.2012.04348.x.

Shelestak, D., Meyers, T., Jarzembak, J., & Bradley, E. (2015). A process to assess clinical decision-making during human patient simulation: A pilot study. *Nursing Education Perspective*, 36(3), 185–187. doi:10.5480/13-1107.1.

Squillace, J., Williams, J., Wells, L., Chumley, B., & Berent, G. (2016). Interdisciplinary collaboration and training through a disaster simulation. *New Social Worker*, 30–31.

Yiu, T., Cheung, S., & Siu, L. (2012). Application of Bandura's self-efficacy theory to examining the choice of tactics in construction dispute negotiation. *Journal of Construction Engineering and Management*, 138(3), 331–340. doi:10.1061/(ASCE)CO.1943-7862.0000403

Abstract Summary:

Clinical decision-making is crucial for nurses in today's complex healthcare system. New graduates must be prepared to make the right management decisions for patients. Learn how a disaster based live patient simulation improved senior nursing students' self efficacy in making the right management decisions when faced with a difficult situation

Content Outline:

I. Introduction

Nursing graduates feel unprepared to enter the real world of nursing. There are ways to utilize simulation, such as a disaster based simulation to improve senior nursing students' self- efficacy in making right management decisions when faced with a difficult case.

II. Body

1. The new graduate feels ill equipped to handle challenges, deal with other disciplines, and take total responsibility for patients' care
 1. Nursing students perception of their clinical decision- making skills is low prior to graduation
 2. Nursing students lack confidence and avoid decision making as they feel incompetent as responsibilities and the number of patients increased
2. Simulation alleviates pressure on nursing facilities
 1. Repetitive exposure to simulation in the lab aids in the development of self-efficacy in clinical decision- making skills
 2. The use of simulation can help with the nursing shortage as nursing programs will be able to meet the requirements for clinical hours
3. Disaster based simulation can be used to improve self- efficacy in making right management decisions when faced with a difficult case.
 1. Post simulation ($N=23$), a statistically significant increase ($p<0.008$) was noted in the students' self-efficacy.
 2. One's level of self-efficacy is dependent on observations and experience
 3. Disaster based simulations allows students to translate theory into practice when utilizing decision making skills
 4. General Nursing Self Efficacy Scale can be utilized to measure senior nursing students' self-efficacy in making the right management decisions when faced with a difficult case.

III. Conclusion

Like traditional clinical experiences, simulation can be used in nursing education to give students adequate experiences needed to foster self-efficacy in clinical decision-making skills. The significant increase in self-efficacy in making right management decisions when faced with a difficult case, such as a disaster, supports the use of this type of scenario in nursing education to foster clinical decision- making skills. Repetitive exposure to simulation in the lab aids in the development of self-efficacy in clinical decision- making skills. Educators are encouraged to develop and incorporate trainings or courses into the program that include high acuity simulation scenarios which challenge students to make difficult decisions in a safe environment. In addition, nursing leaders are encouraged to advocate for changes to regulations on the amount of simulation used in each state

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Author Summary: Jacqueline Savory has been a nurse for 17 years. She currently resides in North
Carolina where she serves as the Dean of Academic Affairs at Chamberlain College of Nursing in North
Carolina. She began her career as an RN in the Pediatric ICU at New York Presbyterian Hospital. She is
passionate about the use of simulation and technology to facilitate learning. She believes it's use should
be increased throughout the field of nursing.