

Evaluating the Use of Simulation with Beginning Nursing Students

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The purpose of this quasi-experimental study was to evaluate and compare the effectiveness of simulation versus a traditional skills laboratory method in promoting self-confidence and satisfaction with learning among beginning nursing students. A single convenience sample of 63 first-semester baccalaureate nursing students learning effective comfort care measures were recruited to compare the two teaching methods. Students participating in the simulation experience were statistically more confident than students participating in the traditional group. There was a slight, nonsignificant difference in satisfaction with learning between the two groups. Bivariate analysis revealed a significant positive relationship between self-confidence and satisfaction. Students in both groups reported higher levels of self-confidence following the learning experiences. Findings may influence the development of simulation experiences for beginning nursing students and encourage the implementation of simulation as a strand from beginning to end in nursing curricula.

Technological advances in health care are revolutionizing the design, delivery, and evaluation of nursing education (Jeffries, 2007). New graduates are expected to quickly adopt information systems, evidence-based practices, and emerging technologies (Fetter, 2009). As a result, faculty are encouraged to include interactive, student-centered approaches to learning while incorporating opportunities to experience realistic clinical scenarios.

With a paradigm shift toward student-centered learning, traditional teaching methods such as lecture and PowerPoint® presentations are no longer desirable (Hawkins, Todd, & Manz, 2008). Nurse educators must develop realistic learning experiences that support student transition to the clinical setting while ensuring safe and competent graduates who are prepared for the technological advances in nursing practice (Oermann & Gaberson, 2006).

The use of simulation in a simulation laboratory setting is one solution to the challenges of incorporating innovative and interactive teaching strategies. Numerous studies document the efficacy of simulation for highly technical and advanced clinical skills with more experienced, more advanced students (Abrahamson, Denson, & Wolf, 1969; Childs & Sepples, 2006; Good, 2003; Ziv, Small, & Wolpe, 2000). However, little research has been conducted to determine the effectiveness of using simulation as a learning strategy for teaching basic nursing skills to beginning students. Nurse educators need to conduct research for the purpose of describing simulation as a learning strategy for beginning nursing students and determining its efficacy within the skills laboratory setting.

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The purpose of this quasi-experimental research study was to compare the effectiveness of using simulation versus a traditional learning method to promote self-confidence and satisfaction with learning among beginning nursing students learning effective comfort care measures. The research questions for this study were:

- Is there a difference in level of self-confidence between students receiving traditional skills laboratory instruction and students participating in a simulation experience when learning effective comfort care measures?
- Is there a difference in satisfaction with learning between students receiving traditional laboratory instruction and students participating in a simulation experience when learning effective comfort care measures?

- classroom simulation on nursing students' self-efficacy related to health teaching. *Nursing Education*, 44, 310-314.
- Good, M.L. (2003). Patient simulation for training basic and advanced clinical skills. *Nursing Education*, 37(Suppl. 1), 14-21.
- Hawkins, K., Todd, M., & Manz, J. (2008). A unique simulation teaching method. *Nursing Education*, 47, 524-527.
- Hawranik, P., & Thorpe, K.M. (2008). Helping faculty enhance scholarship. *Nursing Education*, 39, 155-163.
- Henneman, E.A., & Cunningham, H. (2005). Using clinical simulation to teach patient safety in an acute/critical care nursing course. *Nursing Education*, 30, 172-177.
- Jeffries, P.R. (2005). A framework for designing, implementing, and evaluating simulations used as teaching strategies in nursing. *Nursing Education*, 26, 96-103.
- Jeffries, P.R. (Ed.). (2007). *Simulation in nursing education: A national league for nursing*. New York, NY: National League for Nursing.
- Jeffries, P.R. (2009). Dreams for the future for clinical simulation. *Nursing Education*, 30, 71.
- Johansson, N., & Lally, T. (1990-1991). Effectiveness of a death-education program in reducing death anxiety of nursing students. *Nursing Education*, 22, 25-33.
- Johnson, J.H., Zerwic, J.J., & Theis, S.L. (1999). Clinical simulation laboratory: An adjunct to clinical teaching. *Nursing Education*, 24(5), 37-41.
- Kidd, T., & Kendall, S. (2007). Review of effective advanced cardiac life support training using experiential learning. *Nursing Education*, 30, 16, 58-66.
- Kolb, D. (1984). *Experiential learning: The cyclical process of knowledge development*. Englewood Cliffs, NJ: Prentice Hall.
- Larew, C., Lessans, S., Spunt, D., Foster, D., & Covington, B.G. (2006). Innovations in clinical simulation: Application of Benner's theory in an interactive patient care simulation. *Nursing Education*, 31, 27, 16-21.
- Laschinger, H.K. (1990). Review of experimental learning theory research in the nursing profession. *Nursing Education*, 15, 985-993.
- Morgan, R. (2006). Using clinical skills laboratories to promote theory-practice integration during first practice placement: An Irish perspective. *Nursing Education*, 31, 155-161.
- National League for Nursing. (2005). *Simulation in nursing education: A national league for nursing*. New York, NY: Author.
- Oermann, M.H., & Gaberson, K.B. (2006). *Simulation in nursing education: A national league for nursing* (2nd ed.). New York, NY: Springer.
- Peterson, M.J., & Bechtel, G.A. (2000). Combining the arts: An applied critical thinking approach in the skills laboratory. *Nursing Education*, 13(2), 43-49.
- Schumacher, L. (2004). Simulation in nursing education. In G.E. Loyd, C.L. Lake, & R.B. Greenberg (Eds.), *Simulation in nursing education* (pp. 169-203). Philadelphia, PA: Elsevier.
- Smith, S.J. (2008). *High-fidelity simulation: Factors correlated with nursing student satisfaction and self-confidence* (Unpublished doctoral dissertation). University of Northern Colorado, Greeley, Colorado.
- Smith, S.J., & Roehrs, C.J. (2009). High-fidelity simulation: Factors correlated with nursing student satisfaction and self-confidence. *Nursing Education*, 30, 74-78.
- Starkweather, A.R., & Kardong-Edgren, S. (2008). Diffusion of innovation: Embedding simulation into nursing curricula. *Nursing Education*, 33(1), Article 13.
- Wilson, H.J. (2000). An integrated approach to consultation coaching using professional actors as simulated patients. *Nursing Education*, 22, 370-379.
- Ziv, A., Small, S.D., & Wolpe, P.R. (2000). Patient safety and simulation-based medical education. *Nursing Education*, 22, 489-496.

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