



Evaluation of vSim for Nursing® in an Adult Health Nursing Course: A Multi-site Pilot Study



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Abstract

Virtual simulation is the next step in utilizing simulation as a teaching pedagogy. This multi-site, mixed-method, quasi-experimental study evaluated the effectiveness and student satisfaction of vSim for Nursing® in an Adult Health Nursing course. Students indicated vSim was effective in understanding course concepts and provided a positive experiential learning experience.

Objectives

- Describe the implementation of vSim for Nursing, a virtual simulation program, in an adult health nursing course at multi-sites (or in two different nursing programs).
- Examine student outcomes for effectiveness and student satisfaction of vSim for Nursing in an adult health course.
- Evaluate the role of collaboration among nurse educators from diverse multi-sites in advancing nursing education.

Instrument

vSim for Nursing-Medical-Surgical Nursing is an interactive virtual simulation program to foster confidence building and readiness to practice in nursing students. Clinical scenarios are embedded in a virtual clinical setting where students interact with patients in a true-to-life and safe environment without causing harm to a real patient.

Methods

- A convenience sample of 103 undergraduate nursing students currently enrolled in a second semester adult health course was obtained from two sites (83 female students and 20 male students; age ranges included: 18-21=42, 22-25=47, 26-30=9, 31-40=5).
- A quasi-experimental, three group, mixed method design was used for this study.
- Students were assigned to groups according to their course sections, control group C (n= 35); intervention group 1 S (n= 32); and intervention group 2 NS (n=36).
- Student groups C and S were from a university located in a rural community within the southeastern United States; group NS was from a college located in an urban area in the northeastern United States.

Descriptive Analysis of Open-Ended Responses

- Forty-three of the sixty-eight students who completed the SEMSNV provided comments.
- Each researcher independently read and re-read the SEMSNV comments developing themes from the student narratives.
- Themes:
 - Prepared for clinical
 - Realism
 - Critical thinking
 - Difficulty navigating

Quantitative Data Analysis

- A one way ANOVA revealed no statistical difference in the unit exam scores between the simulation groups and the non-simulation group, $F(1,100) = 3.184, p = .077$, suggesting that vSim for Nursing was neither an advantage nor disadvantage to students.
- Post simulation quiz score means were group C= 55.31, group S = 59.03, group NS = 58.06, indicating that both simulation groups scored higher than the control group; however, the difference was not statistically significant $F(1, 95) = .619, p = .433$.

Conclusions

Study results indicated students were highly satisfied with vSim for Nursing, found vSim for Nursing to be very beneficial and even preferred vSim for Nursing over other virtual simulation programs. However, the researchers were unable to confirm that vSim for Nursing was effective as a teaching tool in an adult health course, leaving faculty with unanswered questions regarding the disconnect between faculty findings and student findings. Based on the overwhelming positive response by students, vSim for Nursing warrants further investigations, using other methods to measure effectiveness to ascertain if knowledge acquisition is indeed improved as indicated by students in this study.

Suggestions for utilizing vSim for Nursing include:

- Flipped Classroom
- Alternative Clinical Experience
- Introduction to the Clinical Setting

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