The Effect of Virtual Clinical Gaming Simulations on Student Learning Outcomes in Medical-Surgical Nursing Education Courses

Robin A. Lewis

Date of Award
2009

Degree Name
Doctor of Education

College
Graduate School of Education and Professional Development

Type of Degree
Ed.D.

Document Type
Dissertation

First Advisor
Lisa A. Heaton

Second Advisor
Rudy Pauley

Third Advisor
Samuel Securro

Abstract
The purpose of this study was to determine what the effects of virtual clinical simulation instruction were on the learning outcomes of students in higher education medical-surgical nursing education courses. This study fills a gap in the literature by adding data to the body of knowledge related to the use of this strategy for practical application in the classroom. This study used a causal comparative design. Data were acquired from the ATI Content Mastery Series (CMS) 2.1 Medical Surgical Examination™ information for the fall 2006 through fall 2008 academic semesters. Additionally, data were collected using a pre- and post-course Medical-Surgical Nursing Self-Assessment Survey administered to the medical-surgical virtual clinical simulation comparison group during the fall 2008 semester. Participants were higher education undergraduate medical surgical nursing students at one urban private university enrolled during the 2008-2009 academic year. Students were fluent English speakers and had a grade point average (GPA) of 2.5 or greater in nursing coursework. Participation in the survey was voluntary. Benefits of the research included positive effects of using virtual clinical simulation to deliver medical-surgical nursing content. Findings revealed that students who received virtual clinical simulation instruction significantly demonstrated (p = .000) for medical surgical content mastery and 100% of students demonstrated positive growth (p = .000) in perceived competency. Results empower nursing stakeholders such as administrators, program chairs, faculty, and students with information for decision-making about learning outcomes, limitations, and recommendations related to the use of virtual clinical simulations in medical-surgical nursing education courses.

Subject
Nursing assessment

Recommended Citation
Lewis, Robin A., "The Effect of Virtual Clinical Gaming Simulations on Student Learning Outcomes in Medical-Surgical Nursing Education Courses" (2009). Theses, Dissertations and Capstones. 139.

https://mds.marshall.edu/etd/139
Main outcome measure: The main outcome measure was technical performance assessed by two independent observers blinded to trainee and training status using a previously validated general and task specific rating scale. Impact of virtual reality simulator training on surgical performance and operation time. Values are medians (ranges; interquartile ranges) unless stated otherwise. View this table. However, by showing the effects of simulator training in settings closely resembling a regional simulator training course the external validity was improved. The primary investigator helped the trainee to use the simulator and introduced the different training modules but did not teach laparoscopic techniques.