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

Robin A. Lewis

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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

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Written for students in nurse educator programs, nursing faculty, and other health care educators, Virtual Simulation in Nursing Education unpacks the necessary tools for successful integration of technology into nursing programs. The benefits of virtual simulation in nursing education are innumerable: less expensive, easier to access, and location independent compared with nondigital simulations. Yet the evolving nature of both curricula and technology complicates the implementation of a coherent integration plan. Success requires a coordinated impetus from faculty, administrators, and studen...