Abstract

Purpose/Aim: Obtain baseline data to evaluate WHNP student confidence and readiness to perform clinical skills in preparation for practicum experiences in an asynchronous distance learning environment.

Hypothesis: Mobile-learning Augmented Reality (mAR) interventions designed to teach essential clinical skills to women’s health nurse practitioner students in a distance program will improve preparation and confidence prior to their entrance into supervised clinical experiences.

Inclusion and exclusion criteria: Any Nurse-Midwifery and Women’s Health Nurse Practitioner Distance Learning Graduate student enrolled in the Primary Care of Episodic Illness for Women Practicum at the University of Cincinnati.

Methods: An online survey was used to evaluate student confidence and readiness to perform clinical skills prior to their initial practicum experience.

Discussion: Supported by the initial pilot data, this project provides an opportunity to address a gap in the WHNP program by implementing innovative mAR technology to improve student clinical readiness and satisfaction.

Augmented Reality

Prior Research
- Virtual clinical simulation environment provides students the opportunity to safely engage in a variety healthcare scenarios while practicing skills and procedures until proficient.
- Augmented Reality (AR) encompasses mobile technologies that can support mobile learning (m-learning), where real-time views of real-world objects or environments may be enhanced by computer-generated media (Ortega et al., 2011; Wagner and Schmalstieg, 2007).
- Digital augmented elements can be displayed superimposed on the real world.

Methods
- Institutional Review Board (IRB) approval obtained from UC.
- Survey Gizmo web-based data capture tool. Consent and link to survey launched in Blackboard. Survey contents included: demographic information, use of mobile-technology with current operating system, 26 question Likert-scale survey to evaluate confidence and preparedness for initial practicum experience.
- CBE, Speculum Exam, Specimen Collection, Wet Mount, Pap Smear, Pelvic Exam, Uterine Sound, EMIL, Valvar Biopsy, IUD Insertion.
- Data collection occurred the first week of the semester for 2017-18 AY (Fall, Spring, Summer).

Pre-Clinical Readiness Assessment

Potential Solution

Discussion
- Implement simulation technology in an asynchronous distance learning environment
- Augmented reality simulation offers a cost-effective method of knowledge and skill building, which is available to anyone with an internet-connected computer; thereby, substantially increasing the availability of training and educational experiences that can be tailored to the learning needs and outcomes of diverse health professions students.

Impact of Practitioner Education
- Simulation experiences are becoming increasingly more important in health profession education.
- Augmented Reality represents emerging simulation technology that turns mobile devices into mobile multimedia networked reference devices.
- The use of simulation in health care education is directly related to rapidly evolving technology.
- The mAR clinical skills training resources in distance nursing education has the potential to the supplement and enhance the academic experience of students preparing for nurse practitioner clinical experiences.

References