

Southern Adventist University

KnowledgeExchange@Southern

Faculty Works

School of Nursing

Fall 11-2019

360 Degree Virtual Reality Increases Student's Confidence in Clinical Skills in Simulation

Ronda Christman

Southern Adventist University, rchristman@southern.edu

Barbara James

Southern Adventist University, bjames@southern.edu

Kerry Allen

Southern Adventisti University, kcallen@southern.edu

Follow this and additional works at: https://knowledge.e.southern.edu/facworks_nur



Part of the [Health Information Technology Commons](#)

Recommended Citation

Christman, R.M., James, B.R., & Allen, K.C. (2019, Nov.). 360 Degree Virtual Reality Increases Student's Confidence in Clinical Skills in Simulation. Poster presentation at Connect, Collaborate, Catalyze at 45th Sigma Biennial Convention, Washington, DC.

This Non-Art Poster is brought to you for free and open access by the School of Nursing at KnowledgeExchange@Southern. It has been accepted for inclusion in Faculty Works by an authorized administrator of KnowledgeExchange@Southern. For more information, please contact jspears@southern.edu.

Citation: Christman, R.M., James, B.R., & Allen, K.C. (2019, Nov.). 360 Degree Virtual Reality Increases Student's Confidence in Clinical Skills in Simulation. Poster presentation at Connect, Collaborate, Catalyze at 45th Sigma Biennial Convention, Washington, DC.

STTI Evidence



13 February 2019

Ronda M. Christman PhD, MSN, MA, RN
Southern Adventist University
PO Box 370
Collegedale, TN 37315
USA

Dear Ronda M. Christman:

Congratulations again on your selection for presentation during 45th Biennial Convention (16-20 November 2019). We look forward to your participation in this prestigious event. The opportunity to collaborate with nursing scholars from around the world involved in the advancement of nursing science promises to be rewarding and stimulating.

PRESENTATION(S) SCHEDULED

- Abstract ID # 100127
- Presentation Type: Poster
- Abstract Title: Igniting an Interest in Research Class With Experiential Learning
- Session Title: Accepted Research Posters
Unscheduled

There will be a total of three presentations scheduled during the concurrent sessions and the total presentation time for each oral presentation is 15 minutes with an additional 5 minutes for questions from the audience. For a symposium, the organizer of the symposium will determine the order and length of each presentation. Poster presentations are scheduled at various dates and times during the program. Please review the poster schedule on our [website](#).

VIEW YOUR SESSION/ABSTRACT

A detailed schedule of presentations is available [online](#). You can view your submission, but changes cannot be made at this time.

360 Degree Virtual Reality Increase Student's Confidence in Clinical Skills in Simulation
Background
Clinical cases for nursing students is in high demand. This reality creates a challenge for nursing faculty who seek to provide optimal clinical experiences for students. Access to the technology of 3D simulation - by use of a 360° camera - provides a viable realistic, scenario-based simulation that may be viewed by individual students with the use of Virtual goggles. In this way, the clinical experience is brought directly to the nursing student when a real or standardized patient is not available. Clinical sites and preceptors are becoming more difficult to secure, yet each student needs repeated exposure to a wide variety of clinical situations in which timely clinical decision making is critical. Alternative teaching approaches that provide optimal clinical experiences for students are needed.

The purpose of this study is to explore if there was a difference between learning outcomes of nursing students who learn by traditional methods or who utilize virtual reality simulation via 360° camera technology?

Methods
The Schools of Nursing (SON) and Informatics and Communication (SIC) participated in an interprofessional collaboration on the development and staging of realistic scenarios, and/or using scripted, standardized patients where nursing interventions were required. Scenarios ranged from simple to complex, appropriate for the level of the student. Filming, accomplished through utilization of a 360 degree camera, and video editing was accomplished by the research assistants and/or the SIC. Scenarios were disseminated via links. Students experienced the simulation through virtual reality virtual goggles. A brief training video was developed and shown to each student to guide them through the mechanics of viewing the virtual reality 360° scenario.

Results
Of the 20 360 VR degree participants, well over three quarters (80%) strongly agreed or agreed that this VR simulation increased their confidence in the clinical skill. When the traditional simulation students were asked if their simulation increased their confidence in the clinical skill a well over half (61%) strongly agreed or agreed.

Implications
As nurse educators it is our opportunity to provide our students with cutting edge innovative experiences. It is also our responsibility to provide our students with a wide variety of clinical experiences in clinical agencies. This 360 degree VR simulation can provide students with the much needed hands-on clinical experiences in our classrooms. This provides students the clinical skills in a convenient location utilizing their personal technology device.

360 Degree Virtual Reality Increase Student's Confidence in Clinical Skills in Simulation

Barbara R. James, PhD, MSN, RN, Ronda M. Christman, PhD, MSN, MA, RN, & Kerry C. Allen, MSN, RN

Southern Adventist University



Introduction	Procedures	Results	Implications
<p>Classical approach for learning students on clinical cases for nursing students is in high demand. This reality creates a challenge for nursing faculty who seek to provide optimal clinical experiences for students. Access to the technology of 3D simulation - by use of a 360° camera - provides a viable realistic, scenario-based simulation that may be viewed by individual students with the use of Virtual goggles. In this way, the clinical experience is brought directly to the nursing student when a real or standardized patient is not available. Clinical sites and preceptors are becoming more difficult to secure, yet each student needs repeated exposure to a wide variety of clinical situations in which timely clinical decision making is critical. Alternative teaching approaches that provide optimal clinical experiences for students are needed.</p>	<p>Background Clinical cases for nursing students is in high demand. This reality creates a challenge for nursing faculty who seek to provide optimal clinical experiences for students. Access to the technology of 3D simulation - by use of a 360° camera - provides a viable realistic, scenario-based simulation that may be viewed by individual students with the use of Virtual goggles. In this way, the clinical experience is brought directly to the nursing student when a real or standardized patient is not available. Clinical sites and preceptors are becoming more difficult to secure, yet each student needs repeated exposure to a wide variety of clinical situations in which timely clinical decision making is critical. Alternative teaching approaches that provide optimal clinical experiences for students are needed.</p>	<p>Students self-reported: Did this VR film learning experience increase your confidence? </p> <p>Did this Traditional class learning experience increase your confidence? </p>	<p>For Educators the Implications are: Provide students with cutting edge innovative experiences in clinical agencies. This 360 degree VR simulation can provide students with the much needed hands-on clinical experiences in our classrooms. This provides students the clinical skills in a convenient location utilizing their personal technology device.</p>
<p>Purpose The purpose of this study is to explore if there was a difference between learning outcomes of nursing students who learn by traditional methods or who utilize virtual reality simulation via 360° camera technology?</p>	<p>Research Questions Did this film of simulation increase your confidence level?</p>	<p>References Christman, R.M., James, B.R., & Allen, K.C. (2019, Nov.). 360 Degree Virtual Reality Increases Student's Confidence in Clinical Skills in Simulation. Poster presentation at Connect, Collaborate, Catalyze at 45th Sigma Biennial Convention, Washington, DC.</p>	<p>Acknowledgments The authors would like to thank the faculty and staff of Southern Adventist University for their support and assistance in the development and staging of realistic scenarios, and/or using scripted, standardized patients where nursing interventions were required.</p>
<p>Sample A convenience sample was used consisting of 20 360 degree participants, well over three quarters (80%) strongly agreed or agreed that this VR simulation increased their confidence in the clinical skill. When the traditional simulation students were asked if their simulation increased their confidence in the clinical skill a well over half (61%) strongly agreed or agreed.</p>			

