



# The Effectiveness of Virtual Clinical Simulation on the Transferability of Clinical Nursing Skills to Practice

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# NON-DISCLOSURE

- ▶ AUTHOR:
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- ▶ LEARNING OBJECTIVES
  - ▶ Identify the purpose of the qualitative interview study
  - ▶ Describe future implications for the use of virtual simulations in nursing education
  - ▶ Determine further research studies to support virtual simulations in nursing education
- ▶ NON-DISCLOSURE
  - ▶ *The presenter indicates that there is no real or perceived vested interest that relates to this presentation.*
  - ▶ *There was no sponsorship or commercial support given to this author.*



# Abstract

- ▶ Analyze the use, implementation, and integration of virtual clinical simulations (VCS) as emerging technology in nursing education and practice.
- ▶ Purpose of this qualitative interview study was to determine the impact of the use of a VCS program called Shadow Health on critical thinking, clinical reasoning skills, and psychomotor skills, and the transferability of those skills learned in an online Health Assessment course to real-world application



# Introduction

- ▶ Nursing education programs lack sufficient clinical practice teaching sites to adequately educate and prepare nurse clinicians .
- ▶ The NCSBN found that up to 50% of clinical simulation could be substituted for traditional hands-on learning experiences
- ▶ The expense of initiating and sustaining faculty training in clinical laboratory simulations and lack of resources prohibit some nursing programs from adopting such efforts
- ▶ Use of virtual simulations successfully used in other disciplines however, new to nursing education



# Research Questions

- **Q1.**How did the participants' critical thinking and critical reasoning skills change after using the VCS in the Health Assessment course?
- **Q2.**How did the participants apply the assessment techniques learned using a VCS to real-life nursing experiences?



# Methods

- ▶ Duncan and Ravert's (2010) interview guide based on Lasater's (2007) Clinical Judgment Rubric
  - ▶ Semi-structured interviews took place remotely using the ZOOM meeting room for approximately 30-40 minutes per participant
  - ▶ Audio-recordings were transcribed and sent for member checking
  - ▶ Open-coding procedures were implemented
  - ▶ The codes and categories obtained were imported into the ATLAS.ti. program



# Participants

- Criteria
  - Completed the Health Assessment course within one year
  - Must be working as a RN
  - Students were not the researchers students



# Results

## ► Themes:

- *Increased confidence of assessment skills*
- *Improved recognition of patient condition or status*
- *Improved communication*
- *Adaptation of assessment techniques*



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# Discussion

- The results demonstrated that all but one of the participants agreed that their critical-thinking and clinical-reasoning skills improved as a result of using Shadow Health as a learning tool.
- The results were consistent with other research studies, simulation and virtual simulation have shown to improve critical-thinking and clinical-reasoning skills.



# Limitations

- One small RN-BSN program in northeastern U.S.
- Using ZOOM meeting room
- Time lapse between course completion and interviews



# Conclusions

- ▶ The IOM, the TIGER Initiative, and QSEN competencies support and recommend the use of technology in nursing education.
- ▶ Ethically, nursing educators need to implement innovative teaching strategies to provide adequate clinical education experiences.
- ▶ Faced with limited clinical experiences and barriers of implementing simulation laboratories, VCS are emerging as alternative and supplemental clinical experiences.
- ▶ This study adds to existing research literature and to validate using VCS as an effective teaching strategy.



# Implications

- Utilize VCS in nursing education programs
- Utilize VCS for professional development; competencies and introduction of new skills
- Implement VCE for Interprofessional Education (IPE)
- Utilize VCS to prepare telehealth nursing practitioners



# Further Research

- Greater scales using multi-site universities/colleges with increased sample populations
- Investigate preparation protocols for students using virtual environments and the influence of preparation on student learning outcomes need
- Comparative studies between F2F vs Virtual assessments of student learning outcomes



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