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# Clinical Competency using Group- Based Simulated Learning

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# Learning Objectives

- Learners will understand the benefits of alternate evidence-based learning methods to prepare students for Level II fieldwork experiences
- Learners will support development of escape room environments to better prepare students for site specific learning opportunities.



# But.....Can you Escape THIS Presentation?

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# Course Abstract

In the current post healthcare emergency state, occupational therapy students desire more opportunities to prepare for their future clinical rotations. Clinicians have higher acuity of patients, increased productivity, and more expectations on their schedules. Due to these needs, it is the call to Occupational Therapy programs to support clinical learning and better prepare students for their fieldwork rotations. Research by Temple and Giles (2002) support video-based simulations as valuable tools to support student learning to help build confidence prior to their fieldwork rotation. Other healthcare professions have emphasized the benefits to improving clinical reasoning utilizing the Escape Room as a tool for the student's learning environment (Friedrick, Teaford, and Taubenheim, 2020). Andrzejewski et al, 2020) indicate that students report improved confidence and clinical reasoning through simulation in their Level II Fieldwork preparation.



# Why complete this study?

- This presentation will discuss the benefits of a pilot study that developed a Clinical Competency using a Group- Based simulated Learning Environment to use an escape room as a tool to assess students' ability to demonstrate clinical reasoning for students preparing for their Level II Occupational Therapy Fieldwork Education.



# Preparing Students for the Clinical Field - Current Challenges

- Long established challenges to hosting fieldwork students
  - Pressures of the workplace lead to challenges with fieldwork education
  - Likely because of rising pressures on fieldwork educators - COVID effects?
  - Top challenges with fieldwork education:
    - Workload
    - Physical space
    - **Concern about student capabilities**
- Gap between Level 1 and Level 2 Experiences
  - Standard is for Level 1 to be primarily observational and Level 2 experiences end in entry-level competence - wide distance between these two forms of clinical expectation
  - Gap between classwork and fieldwork has been identified as a barrier for students
- Some clinical professions raising awareness regarding shifts in professionalism in a post-COVID era

(DeBenedictis, 2023; Evenson et al., 2015;  
Rezaee et al., 2014; Thomas et al., 2007)



# Background - The Value of Simulations in Learning

- Simulations as a teaching tool
  - 71% of educators reported using simulation tools (actors for classroom activities, video simulation platforms, etc)
  - Simulations improve student confidence in allied health and short-term skill acquisition.
    - Long term retention still unknown
- Simulations and fieldwork
  - Video case studies have been used to increase student confidence
  - Simulations beginning to be more widely used for Level 1 fieldwork experiences in OT
- Simulations lower the stakes for student learning and **mistakes**

(Bethea et al., 2014; Heuer et al., 2022;  
Palominos et al., 2019)





# Escape Rooms as a Simulation and Clinical Preparedness

- Other professions have begun using game-based simulations to stimulate clinical reasoning
  - Nursing
  - Interprofessional escape rooms
- Fieldwork competency and preparedness
  - Focus group research shows that dynamic simulation environments are thought to help with “soft skill” acquisition such as:
    - Communication
    - Interprofessional collaboration
    - Student confidence
- Gamification of learning may increase student motivation
- Pilot tests on escape rooms for OT student show promise with critical thinking and knowledge retention

(Andrzejewski et al., 2020; Casler, 2022;  
Dugnol-Menéndez et al., 2021; Fan, 2023)



# Further questions

- Does a group- based simulated learning environment help support development of clinical reasoning skills?
- Will this group- based environment help students be more successful on their Level II Fieldwork rotations?



# Elements included in design

Areas of clinical skills reported  
as a challenge in Level II  
rotations

Client **safety** is area most valued  
by Fieldwork Performance  
Evaluation (FWPE)

Operationalized into the following  
elements:

- Environmental safety awareness
- Disease precautions (e.g. contact, droplet, etc)
- Condition-specific precautions
- Transfers
- Patient education



# Simulation Set-Up



# Simulation Sequence



## Case Review

Students required to review chart and case study.

Materials included patient history, OT evaluation, and other documentation.

Students required to review materials for clinically relevant information.

Code entered to move forward.

## Disease Specific Precautions

Next, students were required to complete protocols related to disease specific precautions.

PPE use, donning technique, and safety was evaluated.

Code was entered to move forward.

## Environmental Safety

After donning PPE, students were required to scan the environment for safety concerns.

Trip hazards, cord entanglement, or other concerns were left around the room for students to clear.

Code was entered to move forward.

## Condition Precautions and Transfers

When the environment was safe, students were required to begin treatment of patient.

Condition-specific precautions were in case study (e.g. spinal, hip, etc).

Transfers in keeping with these precautions were required.

Code entered to move forward.

## Treatment, patient education

OT students were required to perform a basic ADL task and educate the patient throughout execution (e.g. hemi dressing, toileting with sternal precautions).

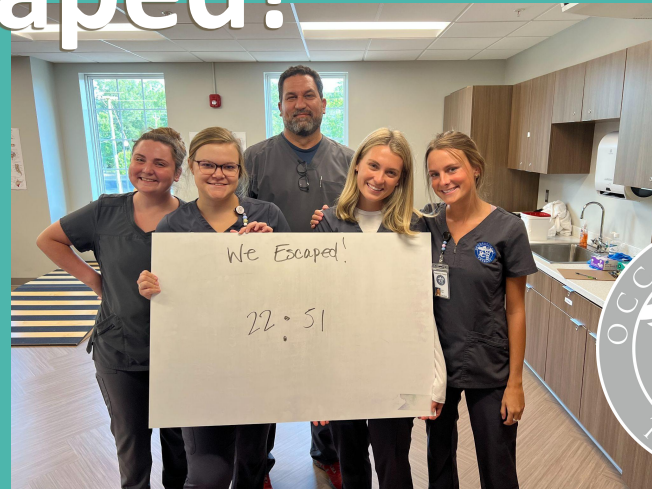
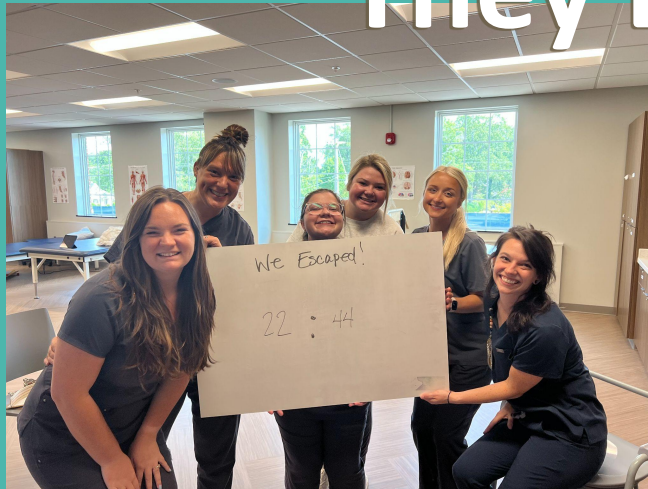
Code was entered to move forward.

Students doffed PPE.

Students entered final code and escaped.



They Escaped!





# Qualitative Feedback

- "This was so much fun!! I learned so much through this "Hands On" Escape Room with Mr. Frank
- "This experience provided a **realistic** experience. I appreciated having the opportunity to gain experience before fieldwork"
- "There were a lot of people in the room. Difficult for all people to fully participate. I enjoyed this experience and would love to do this more"
- "I personally liked it. I liked the role play aspect of testing and I felt comfortable trying my skills out. I also surprised myself by how much I knew! I think a smaller group may have been more effective to give the group a laptop to use upon entering the room? I'm glad the experience modeled an inpatient setting."



# Quantitative Results

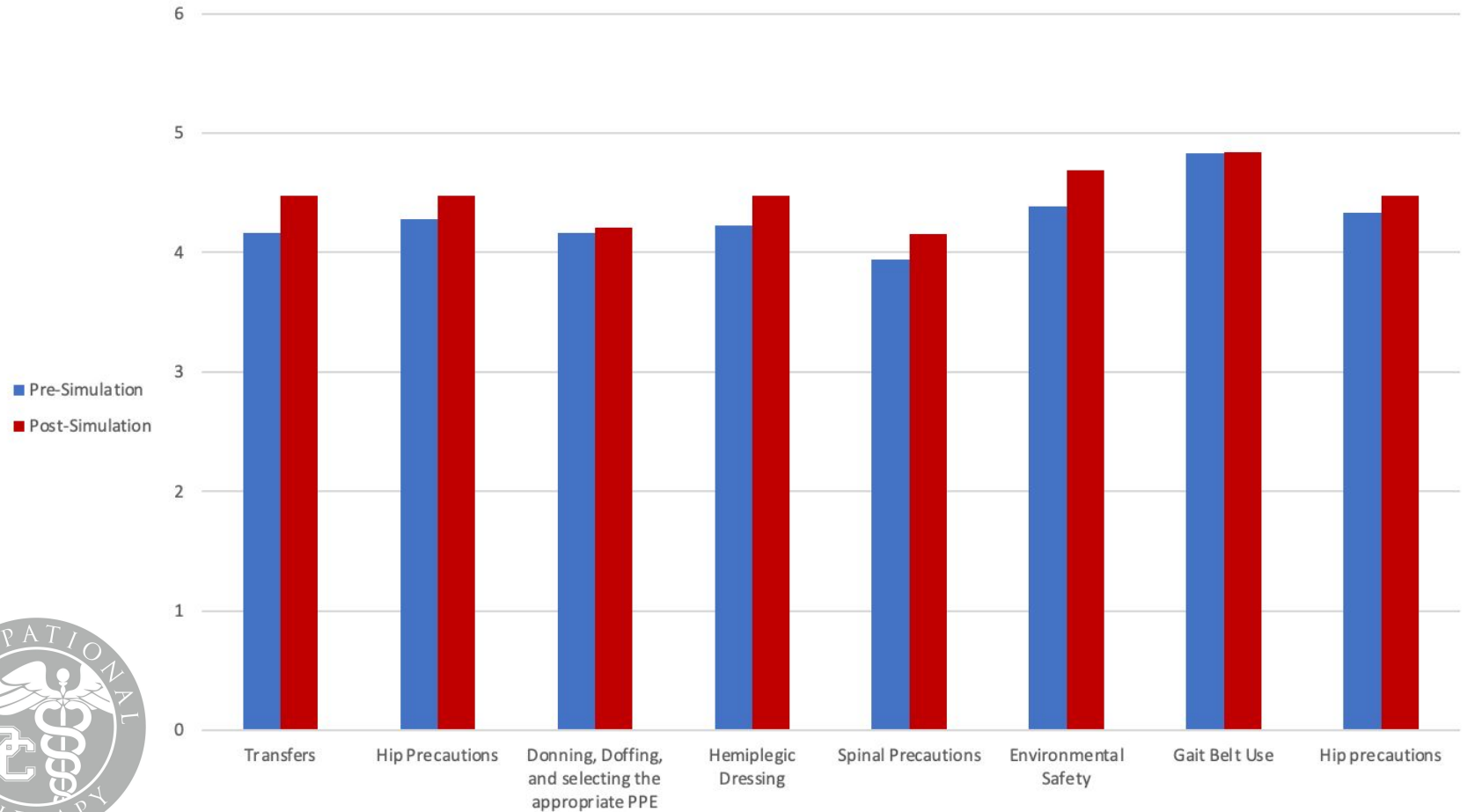
Students' reported knowledge showed no demonstrable increase before or after the simulation.

- However, this is likely due to time and specificity of questions used in pre/post test
- Students' self-reported **confidence** in treatment skills did increase in 7 domains
- T-tests were not statistically significant





## Student's Pre and Post Self-Reported Confidence



# Future Implications



- Continued development of clinical parameters
  - Feedback from educators regarding crucial skills for current practice
  - **Interdisciplinary** involvement in clinical scenarios
  - Represent more clinical settings and scenarios
- Spread to other universities to compare effectiveness between curricula
- Refine case studies, logistics, \_\_\_\_\_ and group sizes

## The Next Steps.....



# Questions?

Please feel free to email us with any questions about the presentation:

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# THANK YOU!

