Can Simulation Enhance Self-reported Confidence in Physical Therapist Students?

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Purpose
To assess the ability of simulation to enhance learning and confidence in physical therapist students during their first clinical physical therapy course, using outcome data gathered both qualitatively and quantitatively.

Background
- Simulation in the medical field has been seen since the early 1900s where it was used for medical students. 
- Simulation is widely used to help improve skill and emulate real life situations.
- Studies have shown that simulation can be beneficial for pharmacist students, nursing students, and physical therapist students towards the end of their curriculum.
- Research is lacking regarding PT students early on in their curriculum, to determine if simulation can have a positive impact on their learning.
- Previous studies have been done that show simulation education increases confidence in PT students.

Methods

**SUBJECTS:** All students enrolled in PT5101/5102 and PT2000 (Foundational PT Class and Co-op Preparation Class) participated as part of their course work.

**Study Groups of 2**
- Standardized Interprofessional Simulation Experience developed

**Role-played: Newsw and Patient**
- Post Sim Debriefing

**Outcome Measures**
- Pre Survey
- Qual/Quant Post Survey
- Post Sim Faculty Debrief

Abstract

**Background and Purpose:** Simulation education has been proven to be beneficial in many health professions including physical therapy, to increase patient safety, teamwork, and interprofessional practice. Research into the benefits of simulation in early years of a physical therapy curriculum is not well known. The purpose of this study was to gather outcome data and assess the ability of simulation to enhance learning and confidence in physical therapist students during their first physical therapy course.

**Methods:** Undergraduate students enrolled in their first foundational PT course which focuses on interprofessional role identification, basic functional mobility, and psychomotor skills participated in a simulation experience with a standardized patient. A standard patient case scenario requiring students to perform specific skills including interprofessional teamwork and patient mobilization was utilized for uniformity of the experience. Student’s perceptions of the experience were assessed using a mixed methods survey. Pre and post surveys were conducted to examine change in student perceptions of self-confidence with performed skills. Faculty perceptions of the activity were obtained through a post education focus group.

**Results:** The students reported an overall 7.5% increase in confidence (95% CI = 7.08-7.92) as well as increased confidence on each individual question: 9.34% (95% CI = 8.61-10.08), 4.83% (95% CI = 4.25-5.41), 9.30% (95% CI = 8.47-10.13), 5.55% (95% CI = 5.04-6.07), 8.48% (95% CI = 7.54-9.42) between pre and post simulation. **Discussion:** Increase in student confidence post simulation suggests that simulation is an appropriate method to increase student practical performance and prepare students for the clinical environment.

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Conclusion

Results suggest that using simulation education for physical therapist students early on in their curriculum promotes increased confidence. Further analysis should be done to determine the extent to which simulation education impacts student grades and clinical performance.

Clinical Relevance

This project provides positive information on the ability of simulation to benefit student learning. It enables faculty development in physical therapy education, and provides outcome data for further examination on the topic.