

Impact of Simulation on Nursing Students’ HESI Scores: A Casual Comparative Study
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Background and Significance

Simulation strategies are one method available to nurse educators to improve undergraduate nursing students’ critical thinking skills (Howard, Ross, Mitchell, & Nelson, 2010; Kameg, Englert, Howard, and Perozzi, 2013).The problem explored in this study is whether differences exist in the Health Education Systems Incorporated (HESI) physical assessment scores for three groups of nursing students enrolled in an undergraduate health assessment course, each of whom used different strategies.

Objective

The purpose of this nonexperimental quantitative study using secondary data analysis was to determine if differences exist in using simulations as teaching-learning strategies by comparing the HESI physical assessment scores of undergraduate nursing students who used simulated electronic health record (EHR) with virtual simulations to the scores of students who had not been exposed to these teaching-learning strategies.

References

Howard, V., Ross, C., Mitchell, A., & Nelson, G. (2010). Human patient simulators and interactive case studies: A comparative analysis of learning outcomes and student perceptions. *Computers, Informatics, Nursing*, 28(1), 42-48. Retrieved from <http://journals.lww.com/cinjournal/Pages/default.aspx>

Kameg, K., Englert, N., Howard, V., & Perozzi, K. (2013). Fusion of psychiatric and medical high fidelity patient simulation scenarios: Effect on nursing knowledge, retention of knowledge, and perception. *Issues in Mental Health Nursing*, 34(12), 892-900. doi:10.3109/01612840.2013.854543

Methods

This study incorporated a casual comparative design as it sought to explain differences between group members. The sample consists of 699 sophomore undergraduate nursing students enrolled in the Bachelor of Science in nursing program at the research site, whose records were reviewed through secondary data analysis. The sampling strategy used for this study is a single stage sampling procedure. The data analysis used to answer the research questions is the independent samples *t* test.

Results

The HESI physical assessment scores were higher for nursing students who used a simulated EHR with virtual simulation (785.55 ± 180.43) as a learning strategy in the lab than the scores of students who did not use simulation 642.90 ± 10.29). The null hypothesis was rejected because the *p* = 0.00; ≤ α 0.05.

Conclusion

These findings suggest a simulated EHR with virtual simulation merits inclusion in nursing education. Future research is needed to evaluate the effectiveness of the simulated EHR with virtual simulation in other clinical nursing courses. Additionally, future research is needed to track the impact of the simulated EHR with virtual simulation on student nurses as they progress through the sophomore, junior, and senior level.

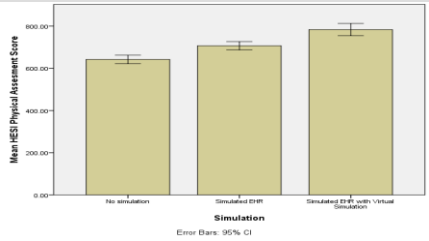


Figure 1. HESI Physical Assessment Scores of Students who did not use Simulation, Students who Used a Simulated EHR, and Students who Used a Simulated EHR With Virtual Simulation