

INCREASING SIMULATION TO IMPROVE CONFIDENCE DURING MEDICATION ADMINISTRATION IN ASSOCIATE DEGREE NURSING STUDENTS

JESSICA LANDRY-LYONS, BSN, RN

FORT HAYS STATE UNIVERSITY, DEPARTMENT OF NURSING



FORT HAYS STATE
UNIVERSITY

Introduction & Purpose

At Eastern Maine Community College (EMCC) students are taught the skills needed for medication administration (MA) in the first semester of their nursing education career. Following the successful completion of their MA evaluation, students are allowed to pass medications with their instructor during clinical rotations. Students remark that they lack confidence when administering medications due to minimal opportunities to perform the actual skill during clinical experiences (Schneidereith, 2021). MA errors still occur at alarming rates within health systems across the world, and the significance of medication safety is of paramount importance in terms of nursing education (Jones et al., 2022). Simulation is utilized within nursing education programs to provide a safe space for students to practice without potential for student error. Programs may not currently be implementing MA into their simulation. Findings of this study may suggest that students would experience greater levels of confidence and fewer MA errors if they were able to participate in MA simulation prior to passing medications in the clinical setting.

Research Question & Variables

Research question- Will providing medication administration-focused simulations to Associate degree nursing students at Eastern Maine Community College (EMCC) increase their confidence in safely administering medications?

Dependent variable- Student confidence rating

Independent variable- Increase in medication administration simulation

Review of Literature

- Student success in clinical performance and competence can be linked to experiential learning theory (ELT), simulation which provides experiences like clinical rotations, is rooted in the use of ELT (Lee et al., 2019).
- The level of student's perceived self-efficacy may be related to safe MA practices, noting students with higher reported confidence via survey made fewer medication errors than those students who reported the opposite (Chan et al., 2019).
- Through repeated simulation experiences, students showed a decrease in the occurrence of simulation-based medical error tendency (Kocyigit & Karagozoglu, 2022).
- In a post-experience survey following the employment of simulation-based activities (SBA), students expressed higher feelings of competence in MA (Pol-Castaneda et al., 2022).
- In examining student errors in the clinical setting, MA errors occur most frequently, with a higher incidence in the simulation setting versus the clinical setting (Spector, 2023). This could indicate that students are making errors in the appropriate setting and through an increase in simulation, further clinical setting MA errors could be prevented.

Methodology

A experimental approach was used for this study including a qualitative survey addressing student perceptions of confidence in performing the skill of MA. Students were offered increase MA simulations on a voluntary attendance basis. Students completed paper surveys at the beginning and end of the study as well as interval surveys following each simulation experience.

Outcomes & Recommendations

A total 67 students were eligible to participate in the study. A total of 62 respondents were included on the initial study survey with 59 completing the post-study survey. Only 24 of those students participated in the offering of simulation. The analysis involved calculating the differences between participates pre-survey and post-study confidence levels. With the sample size of 59, a significance level of 0.05 and p value of 0.079, a paired samples t-test was used to determine that no significant difference existed between the two confidence intervals.

Conclusion

While the simulation showed promising results in enhancing confidence levels among participants, the analysis did not show a statistically significant difference between pre-study confidence levels and post-study confidence levels. These findings suggest the need for further research to explore the long-term effects of simulation based training on confidence and its correlation with clinical performance.



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