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To ascertain if high fidelity simulation with didactic teaching improve nurses' competency in the management of critically ill patients

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Introduction:

Simulation has been used to create a learning environment without jeopardizing patient safety and has been shown to potentially contribute to knowledge, increased confidence, engagement and active learning in participants (Aebersold & Tschannen, 2013; Goldsworthy, 2012).

Aim:

This study aims to determine the effectiveness of the Simulation Programme on Registered Nurse's (RN) improvement in knowledge and clinical competency in patient assessment and judgment.

Method:

This study utilizes a mix method design and is conducted in a simulation lab in tertiary hospital. A total four sessions of the simulation programme were conducted between September 2017 to December 2018 (N= 55). The programme is a two-day course which covered didactic teaching on major physiological systems including cardiology, respiratory, abdominal and neurological system, paired with a set of simulated scenarios.

Pre- and post- MCQ was administered to the participants to determine knowledge improvement. The clinical competency on assessment and management of clinical deterioration was measured based on the 4 corresponding simulated scenarios using the competency checklist.

Data analysis:

Pre- and post- MCQ score was analyzed via paired *t* test. A score was given for each simulated case by the assessors via a competency checklist to evaluate clinical competency. Thematic content analysis was used to explore the participants' learning experience.

Results:

Demographic data (Figure 1 and 2). There is significant improvement in pre and post knowledge score (Table 1). Both the practical scores on clinical competency based on the simulated case scenarios (M= 63.6, SD= 4.9) and overall scores (M=78.1, SD=6.2) attained above 70 % of overall set target which reflecs the effectiveness of the program. There were no association between year of working experience and changes in knowledge score.

Staffs reported improvement in their knowledge and skills in recognition of deteriorating signs and symptoms, case presentation, and management of the patient in critical conditions. It was also reported that the critical thinking, teamwork and leadership are enhanced during the simulation.

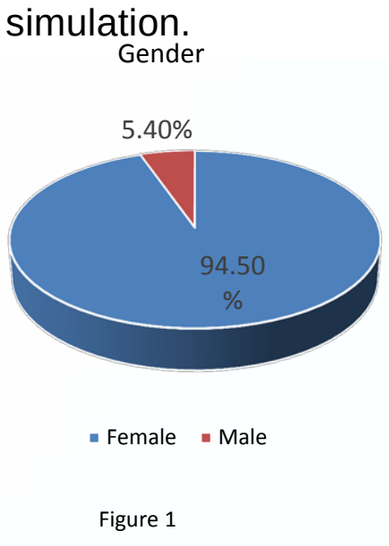

Figure 1

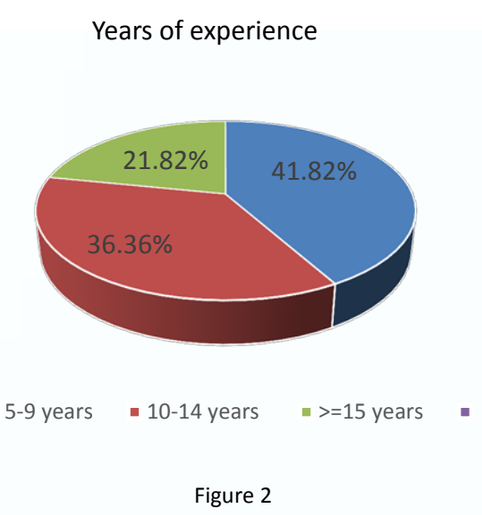

Figure 2

Table 1: Pre- and Post- knowledge score

Pre-score		Post-score	
M (SD)		M(SD)	*p* value
11.07 (2.56)		14.45 (1.94)	< 0.001*

Conclusion:

This study demonstrated the effectiveness of the simulation programme in enhancing the RNs' knowledge and skills of assessment and management of critically ill patients. Future studies are required to assess the competency of each simulated case with specific domains.

References:

Aebersold, M., & Tschannen, D. (2013). Simulation in nursing practice: the impact on patient care. *Simulation in Nursing Practice, 18 (2)*, DOI: 3912/OJIN.

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