

**Increasing Nursing Students' Simulated
Resuscitation Performance:
a Standardized Simulation-Based Acute and
Intensive Care Nursing Curriculum**

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Background

- Simulation-based curriculum in the development of students' **critical thinking** and **complex clinical skills** during a **resuscitation** simulation.
- Few studies have comprehensively examined the effectiveness of a standardized simulation-based acute and intensive care nursing curriculum on the performance of students in a resuscitation simulation

Objective

- To evaluate the impact of a standardized simulation-based **acute and intensive care nursing curriculum** on nursing students' **performance** in a **resuscitation simulation**

Methods

- **Design:** Two-group, non-randomized quasi-experimental design.
- **Setting:** A simulation center in a Chinese University School of Nursing.
- **Participants:**
 - Third-year nursing students (N=39)
 - Control group (CG, n = 20)
 - Experimental group (EG, n = 19)

Methods

- **CG** (n=20) participated in the **traditional curriculum** from September to December 2014 .
 - Two modules: emergency care (including disaster response) and critical care with thirty-four lecture hours and two skill-practice hours (trauma).
- **EG** (n=19) participated in a **standardized high-technology, simulation-based emergency and intensive care nursing curriculum** from March to May 2015 .
 - **Three modules:** disaster response, emergency care, and critical care
 - Clinical priorities (e.g. Triage), basic resuscitation skills, airway/breathing management, circulation management and team work with eighteen lecture hours, six skill practice hours and twelve simulation hours.

Methods



Methods

- The outcome measures included the difference in nursing students' performance between pre- and post-intervention in the EG and the difference in performance between the CG and the EG.
- This included **measuring the time elapsed from the call for assistance to initiation of chest compressions and successful defibrillation** for each student.
- All the students have passed the test of chest compressions in the second-year course of Fundamentals of Nursing, therefore the technique of chest compressions was not the key point of this study.

Methods

- Thirty-nine third-year nursing students were recruited to form 19 resuscitation teams, **10 in the CG with 2 students in each team and 9 in the EG with 3 in 1 team and 2 in each of the other 8 teams.**
- Each team performed one simulated resuscitation selected randomly at the beginning of the course from the three modules.
- All teams completed three by the end of the course.
- The simulations were video recorded using software embedded in the monitoring system in the simulation lab.

Results

Table 1

Participants' sociodemographic by group ($N=39$)

Variable	EG	CG	t/F	p
	n=19	n=20		
Age (mean (SD))	20.26 (0.653)	20.45 (0.686)	0.589	0.448
Gender				
Female	16	13	1.892	0.170
Male	3	7		
Place of residence				
Urban	12	12	0.043	0.819
Rural	7	8		

Results

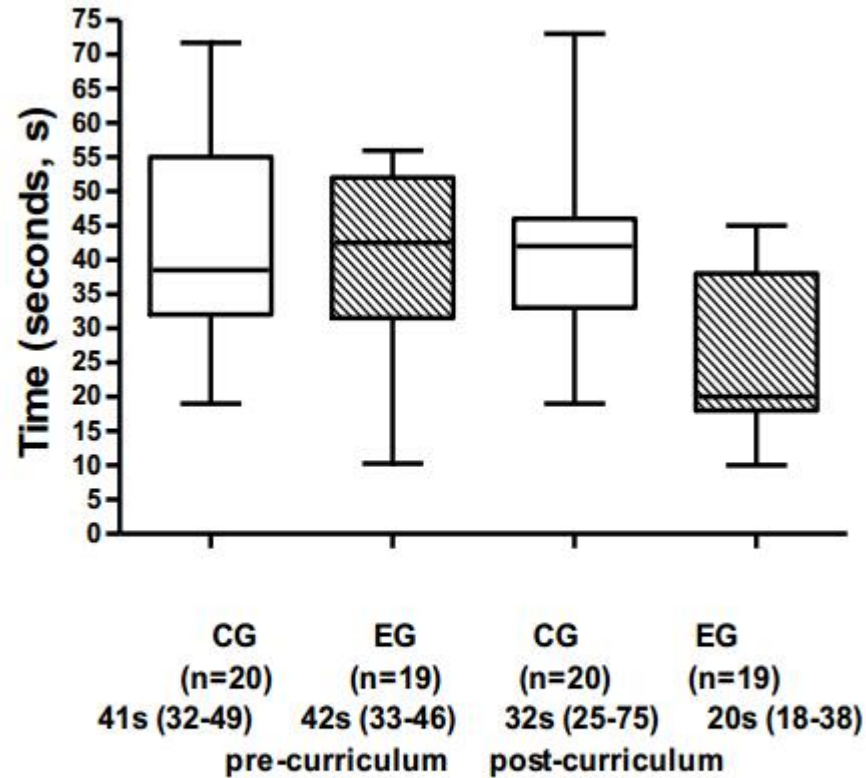


Figure 1. Median (IQR) time to starting compressions at the beginning and the end of the curriculum: CG=control group; EG= experimental group

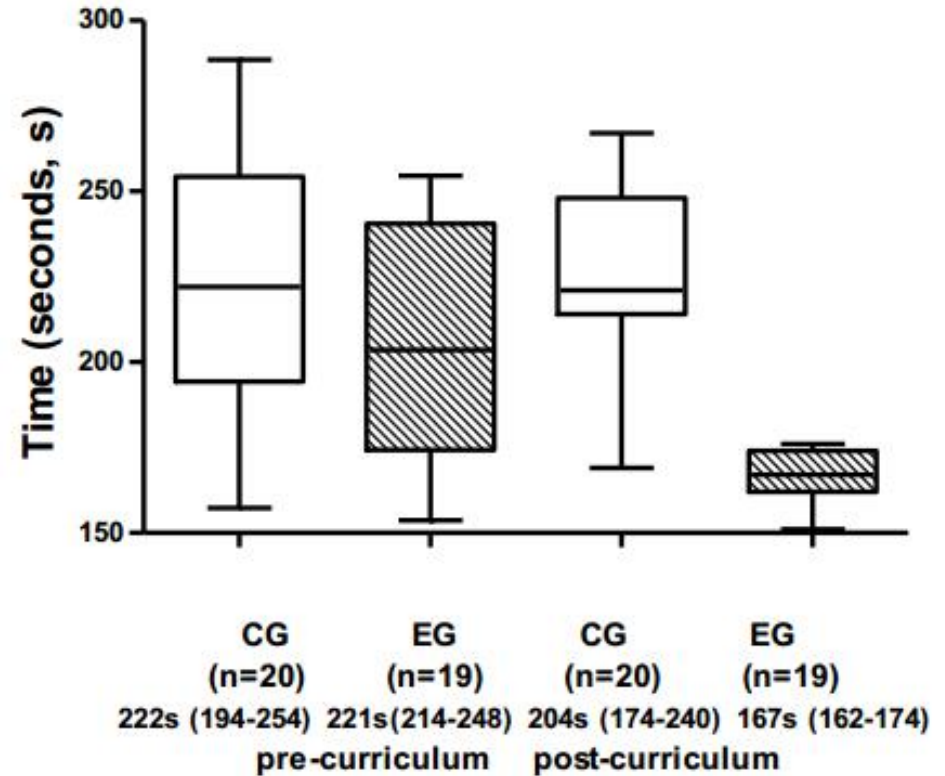


Figure 2. Median (IQR) time to successful defibrillation at the beginning and the end of the curriculum: CG=control group; EG= experimental group

Conclusions

- A simulation-based acute and intensive care nursing curriculum was created and well received by third-year nursing students and associated with improved performance in a resuscitation simulation

A bouquet of flowers is shown on the left side of the image. It includes several red lilies, a large white rose, and several pink carnations. There are also smaller white flowers and greenery interspersed throughout the arrangement. The bouquet is set against a light, warm-toned background.

Thanks for your attention!