Emergency Situation Simulation Education

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Disclaimer

Conflicts of Interest

This educational activity does not include any content that relates to products and/or services of a commercial interest that would create a conflict of interest.

Commercial Support

There is no commercial support being received for this session.

Objectives

- Identify the need and importance of mock code education
- Discuss how to use simulation as a learning methodology
- Describe how the instructional design process can enhance scenario development

Did you know?

- Per American Heart Association
  - Over 475,000 Americans suffer a cardiac arrest each year
  - Only 45% survived thanks to immediate CPR

Background

- Traditional nursing education
  - Wait for experiences

- Simulation
  - Make the experiences

Introduction

- Don't want to do CPR due to lack of confidence
- Feel unprepared to handle emergency situations
- Bandura's Theory of Self-Efficacy

Purpose

- Determine if emergency situation simulation exercises will improve the self-efficacy and competence in second semester senior nursing students which has the potential to improve patient outcomes.

Literature Review

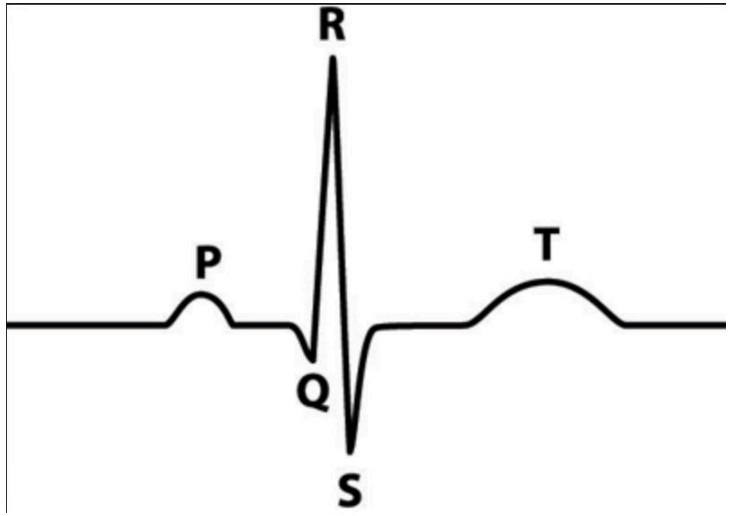
- Key terms used: simulation, student, baccalaureate, mock code and competence
- 16 articles met criteria
- Provided evidence that simulation improves knowledge in skills
- Lack of emergency situation simulations

Sample & Setting

- The University of Texas at Austin
  - School of Nursing
  - Convenience sample of Second Semester Senior Nursing Students

TEXAS Nursing

Methods



- Non-experimental
- Pre-/Post-Interventional Design
- EKG & Mini-ACLS Class
- Descriptive Statistics and paired *t*-tests

Barriers & Sustainability

- No barriers identified
  - Cost and space are important considerations
- Full support from administration
- Concern for the future is the manikin due to technology

Data Collection & Timeline

- Fall Semester 2018 – Spring 2019
  - Surveys Pre-/Post-Intervention
- Approvals came from:
  - IRB Approval August 2018
  - HAH Division Chair
  - Course Facilitator

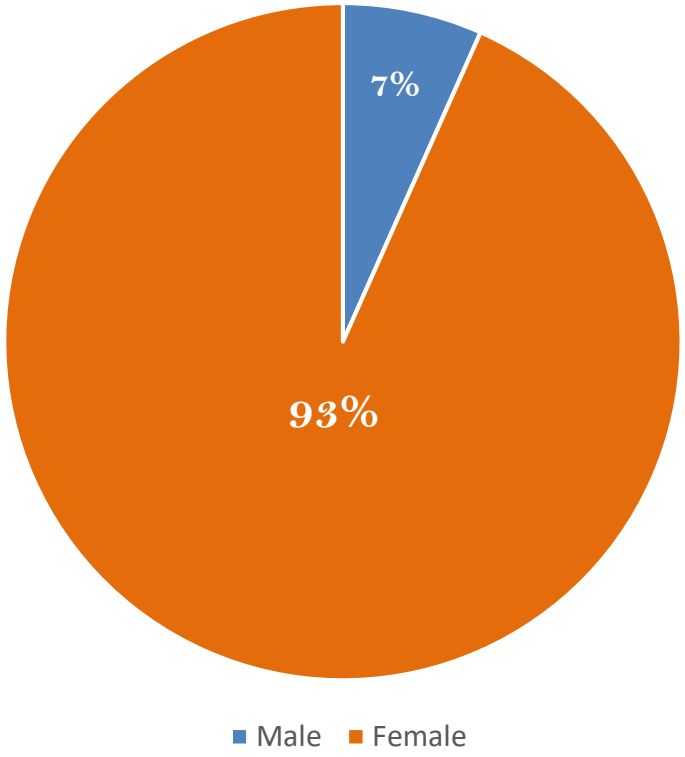
Ethical Consideration

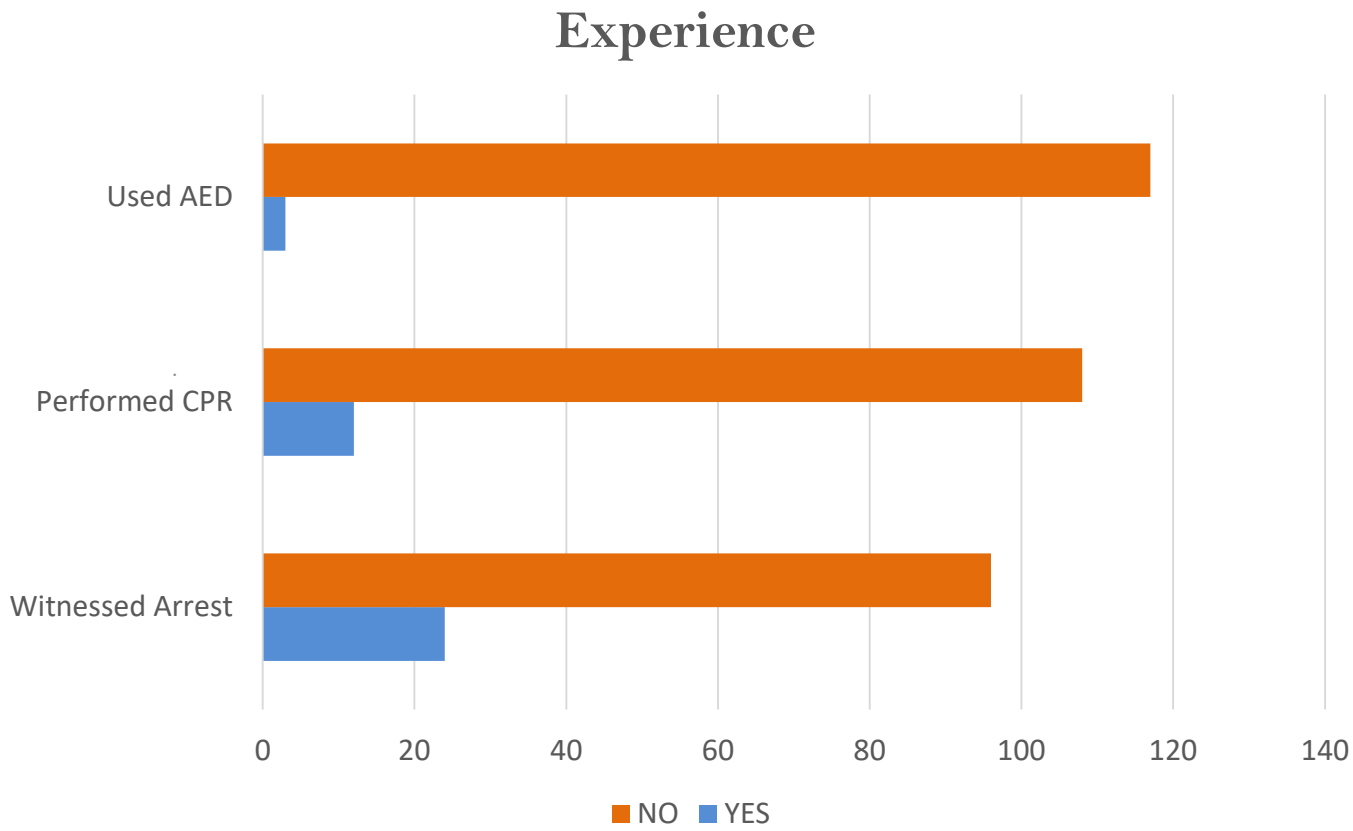
- All surveys were coded by a 4-digit number chosen by the participant
- No identifying data on survey
- Participation was not required

Funding

- NIGP Grant
  - Manikin ($11,000)
  - Crash Cart ($2,700)
  - Emergency Meds ($250/60 students)

Demographics $n=120$





Results

- The pre-/post-survey is in 3 sections
  - Recognition & Alertness
  - CPR
  - Safe Use of AED
- Each section showed improvements in scores post-simulation

BASIC LIFE SUPPORT AND DEFIBRILLATION SELF-EFFICACY SCALE

Recognition & Alertness	Paired *t*-test Result
Assess consciousness within 5 seconds	.000
Shout for help and continue 'Primary Survey	.005
Open the airway	.001
Assess breathing in 10 seconds	.000
Call for help and initiate CPR	.665
CPR	
Perform CPR according to guidelines	.199
Effective chest compressions	.001
Effective rescue breaths	.013
Maintain correct ratio of CPR to breaths	.000
Safe Use of AED	
Switch on AED as soon as available	.004
Follow AED prompts in correct order	.023
Attach AED appropriately	.032
Ensures no one touches the victim	.160
Deliver rapid and safe shocks	.001
Resume post-shock protocol without hesitation	.022
Guarantee minimal interruptions in CPR	.000
Continue as directed AED prompts	.004

NLN Survey

- NLN Simulation Design Scale
- Students felt the sim was well designed
- Results ranged 4.21 – 4.89

Discussion

- Sim-based education is effective in increasing self-efficacy in emergency situations
- This education can lead to improvements in patient outcomes
- Positive impacts on novice nurses as well

Future Practice

- More exposure to emergencies
- Frequent CPR

Conclusion

- Simulation is increasingly common in nursing education
- Can enhance confidence in clinical judgement & technical skills
- Can enhance competence in recognizing patient deterioration

Practice Implications

- Simulation is a valuable learning tool for students
- Students loved the challenge and the feel for a real emergency
- Loved practicing not only how to respond but what to say

Limitations

- Timeframe
- Lack of ability to follow up
- Need larger group with graduate students


thank
you

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