

# The Impact of Clinical Simulation on Beginning Nursing Students Self-Efficacy and Learning

Lucy Van Otterloo, PhD, RNC, CNS  
Cathleen Deckers, Ed.D, RN, CHSE  
School of Nursing  
California State University, Long Beach

# Background

- Use of simulation as an educational tool
  - Improves communication skills, collaboration, and critical thinking . (Norman, 2012; Yuan et al., 2012)
  - Improves self-efficacy and competency. (Bambini et al., 2009)
- National Council of State Boards of Nursing recommends substituting high-quality simulation experience for 50% of traditional clinical hours.  
(Alexander et al., 2015)

# Background

- Few attempts to determine effectiveness in building self-efficacy prior to the beginning of the clinical experience.
  - Informs the best placement of simulation in the curriculum.
  - Determines usefulness of simulation in preparing the student for the clinical experience.

# Background

- Major curriculum change in the School of Nursing
  - Nursing Care of the Childbearing Family
    - Second semester
- Novice student
  - Increased anxiety
  - Limited knowledge and skills
  - Limited hands-on experience

# Purpose

- To compare the effectiveness of two educational delivery methods for the clinical setting on beginning level nursing students' self-efficacy.
  - Traditional lecture
  - High-fidelity human simulation

# Methods

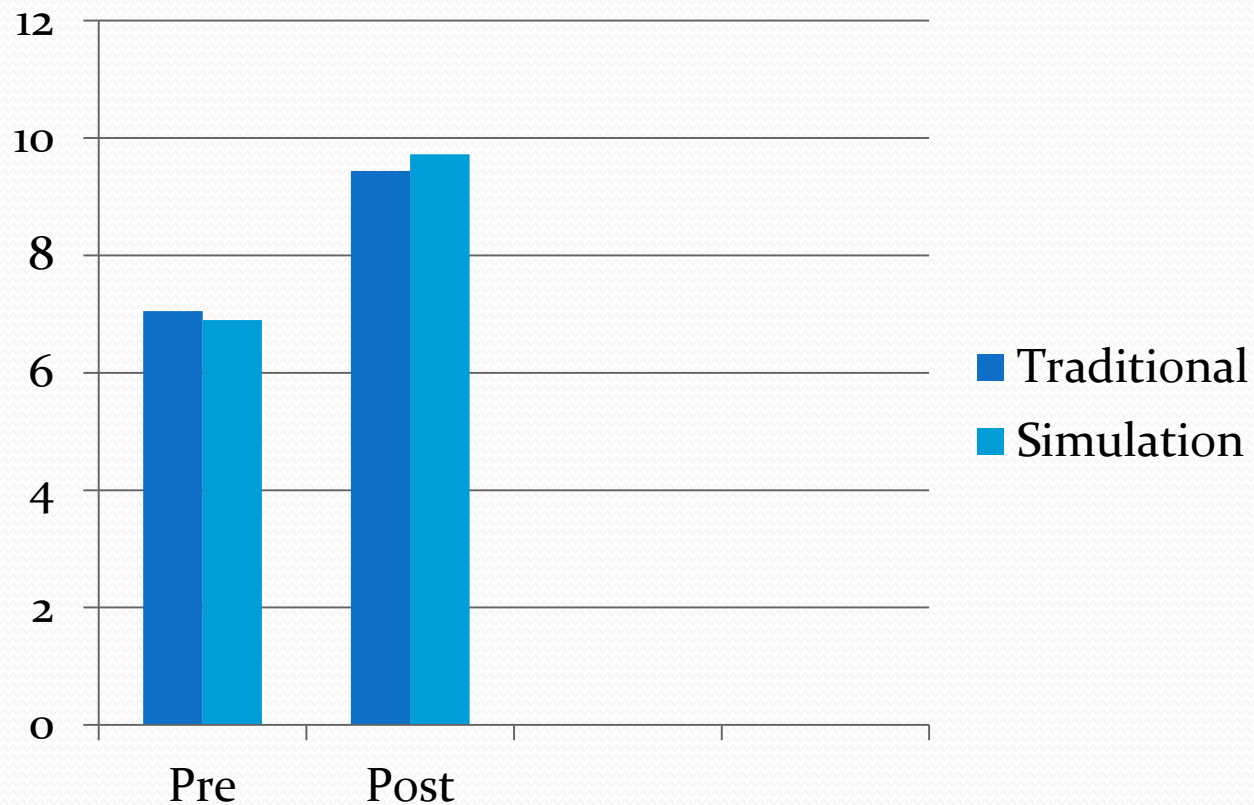
- Control/experimental design
  - Students enrolled in the clinical course
    - Pre/post test
    - Obstetric Nurse Self-Efficacy (ONSE) survey
- First week – orientation
  - Pre-test
- Second week – traditional/simulation
  - Post-test
- Third week – clinical unit
  - ONSE survey

# Results

- 150 students over four semesters
  - Control – 64
  - Experimental – 80
- 7 instructors
  - Varying levels of experience with simulation

# Results

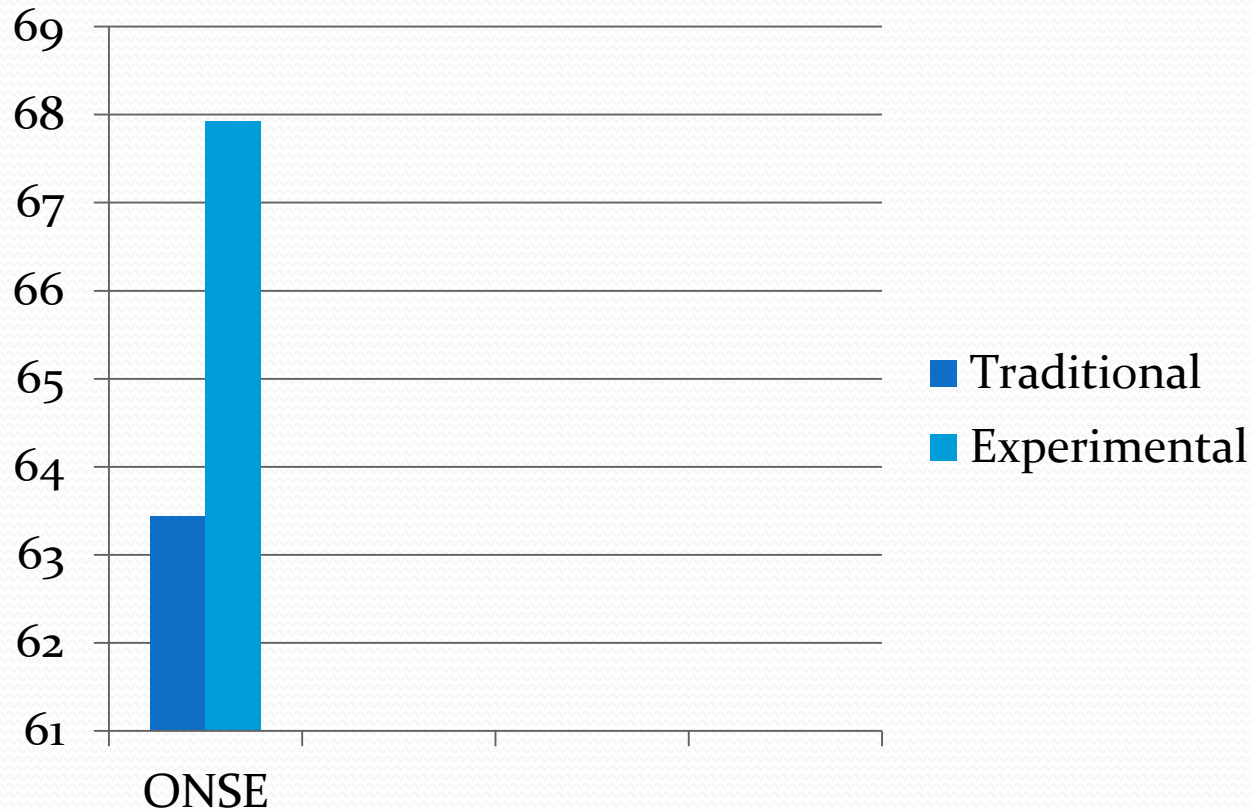
- Knowledge – no significant difference ( $p=0.25$ )





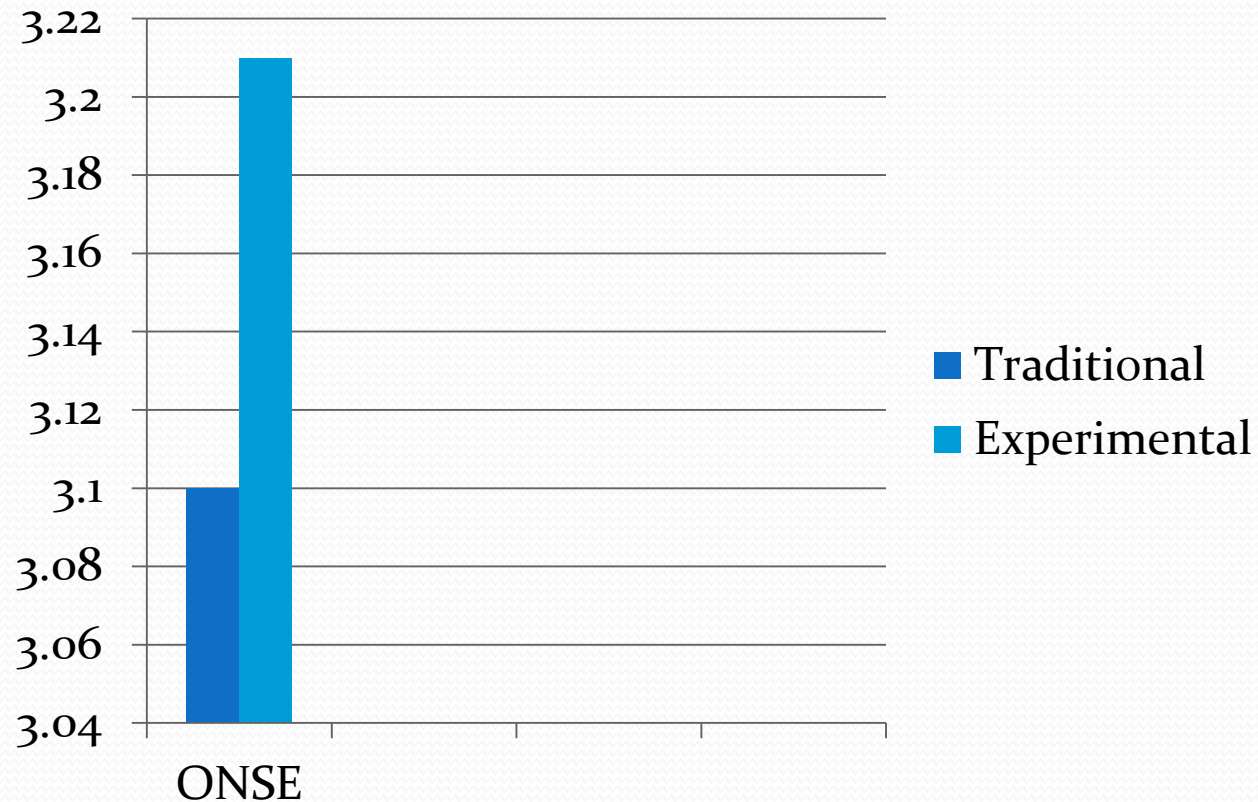
# Results

Confidence – overall no significant difference ( $p=.06$ )



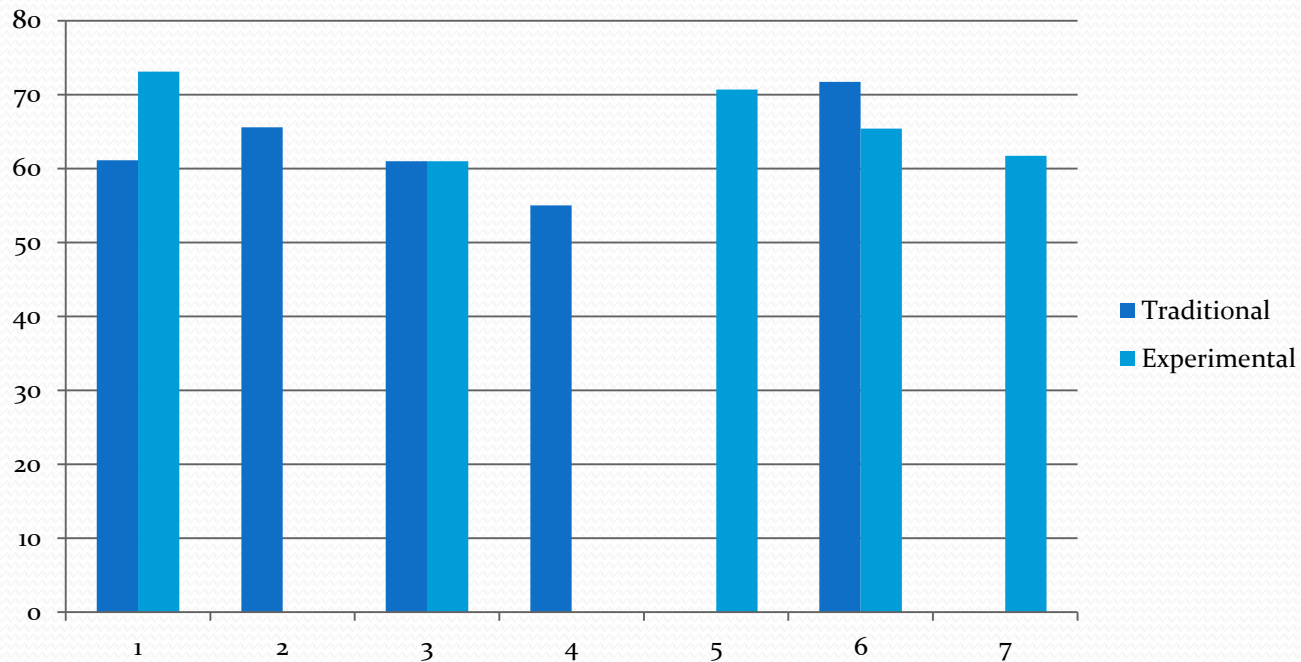
# Results

- Confidence – no significant difference ( $p=0.63$ )



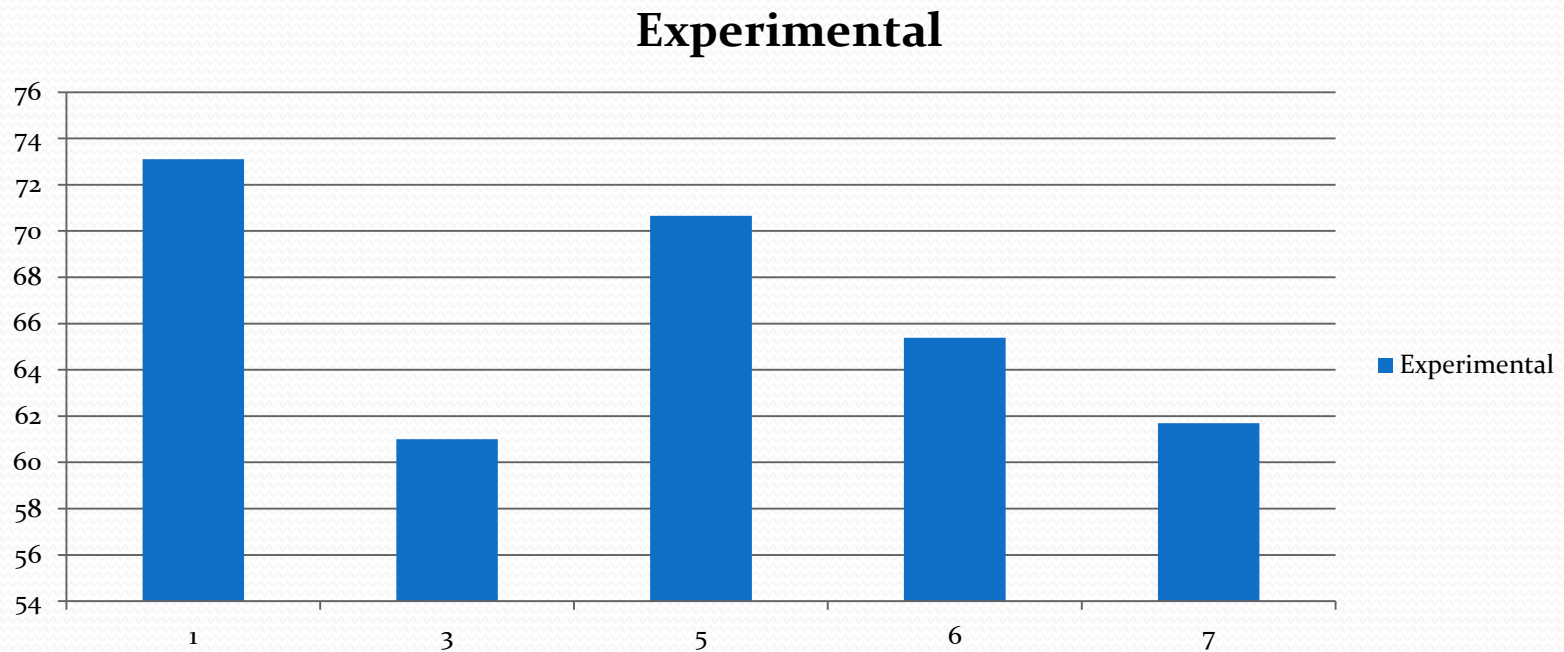
# Results

- Faculty that participated in pilot ( $p=.03$ )



# Results

- Comparison between groups
  - Group 1 and 5 vs. Group 3, 6, 7 ( $p < .05$ )



# Results

- Qualitative data
  - Students
    - Better prepared to initiate care for the laboring woman
    - Less anxious about “not-knowing”
    - Adapted to the new unit quickly
  - Faculty
    - Positive difference in initiation of and confidence in care

# Limitations

- Different faculty participating with varying levels of simulation experience
- ONSE – designed for new grads not new students

# Implications for Nursing

- Support the use of simulation to assist in enhancing undergraduate students' self-efficacy in dealing with obstetric patients.
  - Satisfaction in learning
- Need for pilot of design by all faculty
  - Learning opportunities for faculty in use of simulation
- Identifies students who need additional help and guidance