Enhancing Knowledge and Retention of Infant Safe Sleep Practices with Simulation

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Disclosures

• There will be no discussion of off label use or investigational use of any product in this presentation.

• There are no financial relationships to disclose.

• There are no conflicts of interest to report.
Categories of Sudden Unexpected Infant Death (SUID)

- SUID – unforeseen and precipitous death of an infant < 1 year of age

- Categories of SUID
  - Sudden infant death syndrome
  - Unknown cause
  - Accidental suffocation
Background & Significance

• Late 1980s 1.4 deaths per 1,000 live births\(^1\)

• 1992 American Academy of Pediatricians (AAP) Safe Sleep Recommendations

• 1994 “Back to Sleep” Campaign

• 1996 SUID Investigation Reporting
  – Rate of SUID decreased by more than 50% by the end of the decade\(^1\)

• 2010 0.4 deaths per 1,000 live births\(^2\)

• 2015 0.9 deaths per 1,000 live births\(^2\)
Background & Significance

• 3,700 infants annually – cause of death classified as SUID$^3$
  – 43% SIDS; 32% unknown cause; 25% accidental suffocation & strangulation

• Bed-sharing is the greatest risk factor$^4$
Statement of the Problem

• Following discharge, newborn caregivers are more likely to model the nursing behaviors exhibited in the hospital setting\textsuperscript{5}

• Despite national recommendations, nurses’ non-adherence to infant safe sleep best practices persists

• 29\% of new mothers report "\textit{sometimes to always}” bed-sharing with their baby\textsuperscript{2}

What We Know about Adult Learners

• Traditional educational modalities are not likely to change imbedded beliefs and behaviors\textsuperscript{6}
Research Question

What is the effect of simulation-based learning experiences on the acquisition & retention of knowledge, behavior, and clinical skills of senior-level, traditional BSN nursing students regarding infant safe sleep practices?
Participant Demographics

$n = 51$

- 87% females
- 13% males

Age 21 – 38 y/o

- 9.8% children

- 13.7% work history
- 35.3% PSA past year
What did we hope to accomplish?

Provide the foundation for an evidenced-based approach to inform the future nursing workforce about infant safe sleep practices, which may influence caregiver practices at home **AND** has the potential to impact the behaviors of nurses who currently work in the hospital setting.
Design and Methods

• Pre-post interventional pilot study (additional collection of qualitative data) at the University of Louisiana at Lafayette, College of Nursing and Allied Health Professions

  – Phase I (pre-test)
  
  – Phase II (post-test)
  • One month after Phase I activities
Phase I

• 10-item multiple-choice pre-test

• Random assignment to 1 of three simulation scenarios

• Pre-briefing, scenario execution, group debriefing
  (total time ~4 hours)
Phase II – one month later

• Post-test (items rearranged)

• Random assignment to 1 of the two remaining simulation scenarios

• Scenario execution, group debriefing for the purpose of clarification and to close the learning loop (total time ~ 1 hour)
Modified Creighton Competency Evaluation Instrument (C-CEI®) was used to evaluate Simulation Performance

- Assessment
- Communication
- Clinical Judgement
- Patient Safety

**Validity 92.9 − 97.25; reliability Chronbach’s alpha .979**
Results

• Between Phase I and Phase II....
  – Mean test scores* increased by 15.88 points
  – Mean overall simulation performance scores* improved by 18.62 points
  – Mean safe sleep specific simulation performance scores* improved by 28.66 points

• Only 19.6% of participants placed the infant in a safe sleep environment during Phase I, while 78.4% did so at the end of Phase II (58.8% increase)

*statistical significance noted
Results

• “I used this information yesterday during clinical to educate a young, new mother who was sleeping with her baby in bed on her chest!!”

• “PERFECT opportunity to use what I learned in this study in clinical”

• I used this research experience in a real hospital setting when a new mom placed her baby to sleep on a pillow & I explained to her that it’s not recommended”
Study Limitations

• Single-center site

• Limited to nursing students

• Some participants performed in pairs
Implications for Nursing Practice

• Integration into nursing curriculum (Maternal-Child course/Clinical rotation)

• Partnering with key community stakeholders to replicate findings using nurses in the inpatient setting as participants

• Integrate into annual competency training days (NICU, well-baby nursery, post partum, and L&D)
Thank You for Your Attention!
References


