A Comparison of the Effect of Pre-briefing on Students’ Performance and Perceived Self Confidence During Simulation

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"I HEAR AND I FORGET
I SEE AND I REMEMBER
I DO AND I UNDERSTAND"
PURPOSE
To compare different pre-briefing styles on the traditional and accelerated BSN student’s performance and their perceived self confidence before and after the simulation experience.
BACKGROUND

Simulation is commonly being used in the education of new healthcare providers to learn about the complexities encountered when providing patient care.

- To provide opportunities to practice skills
- To increase confidence in their skills
- To bridge the gap between theory and practice
  (Galloway, 2009)
- To engage in critical thinking
• Most simulation research has focused on simulation format and post simulation de-briefing.
• Page-Cutrara(2014) found that the method of pre-briefing and it’s impact on the learning outcomes is an area for further study.
PERFORMANCE GAP

Major concern with the education of future healthcare workers is to find ways to bridge the gap between theory and clinical practice (Galloway, 2009) and to increase students’ confidence.
Students encounter critical thinking opportunities in the clinical setting, however, it is not uncommon for the instructor or the precepting nurse to take over the task of critically thinking.
Critical thinking – scientific evidenced-based knowledge or condition is analyzed

Clinical reasoning- apply critical thinking to specific situation, assessment findings and how does it apply

Clinical Judgement – make decision on action to take based on the patient’s status

Victor-Chmil (2013)
“Think like a Nurse”

Goal of any Nursing Program is to prepare the students to:

- Make accurate clinical assessments and judgements based on the didactic theory learned in the classroom
- Identify risk factors that can affect patient safety or outcome
- Use critical thinking and decision making skills based on EBP
- Formulate actions using clinical reasoning.
Obstetrics example: During the birth of the newborn a series of activities occur very quickly such as preparing for the delivery and transitioning the newborn. Students attending their first delivery often observe the delivery process from a skills perspective without connecting the underlying theory guiding the nurse’s actions.
According to Jeffries (2012), the simulation framework outlines important components of a simulation design that enhance the learner’s experience.

- Pre-briefing
- Simulation
- De-briefing
DE-BRIEFING

Students reflect on one’s thinking process to examine
• what they did
• why
• how their decisions affected the patient ‘s outcome.
PRE-BRIEFING

Preparation for the simulation includes

- Learning objectives
- Patient information up to the time they enter the room
- Background information so that they can identify potential risk factors that may compromise patient safety or outcomes
Learning Resources Center

“Where the magic happens”
OB Skills in LRC

Week 1 Skills:
• Labor and Delivery
• Newborn

Week 2 Skills:
• Postpartum Hemorrhage
60 students

Sim Day 1:
30 students

Sim day 2:
30 students

8:00 AM
10 students
L&D Team
3-4 students

9:30 AM
10 students
Newborn
3 students

11:00 AM
10 students
Postpartum
3-4 students
The simulation was obstetric-based.

- Three simulation scenarios occurred in succession:
  1. Precipitous labor
  2. Newborn transition
  3. Postpartum hemorrhage

- ISBARR Tool for communication between the simulation teams and critical reporting.
Pre-Briefing with all 3 teams

1. L&D Precip Delivery

2. Newborn Transition

3. Report

3. Report

Postpartum Team-Hemorrhage

4. Call report

HCP

5. Implement orders

6. After simulations over: Debriefing with all 3 teams
L&D Simulation Goals

1) Introduce self*
2) Ask the patient, “what brings you to the hospital today?”*
3) What is your EDD?
4) Assess FHT and apply EFM*
5) What number pregnancy is this for you?
6) Any problems with the current pregnancy or previous pregnancies?
7) Any allergies?
8) What medications are you currently taking?
9) Assess vital signs and contractions
10) Give SBAR to physician/midwife*
Goal:
- Assess patient
- Critically think about priority of care; “what is next step due to change in patient’s status”
Actions:
- Check the patient
- Call the midwife/physician
- Give an SBAR to midwife
Newborn Transition Simulation

Goal:
• Simulate infant,
• Evaluate heart rate and respiratory rate
• Assigning Apgar scores
• Applying eye antibiotic ointment,
• Administering IM injection of Vitamin K,
• Hat, diaper and swaddle infant
Report/Hand-off:

After the newborn assessment is complete, both labor & delivery and newborn assessment teams give a report to the post-partum team.
POST-PARTUM SIMULATION

Goals:
• Communicate with patient
• Assess patient
• Identify hemorrhage
• Place infant in crib
• Massage fundus
• Take vital signs
• Lower head of bed
• Re-check vital signs
• Call physician/midwife & give SBAR
• Write down orders & read back
• Carry out orders
• Change peri pad & chux
PURPOSE

Compare different pre-briefing styles
With students’ performance & confidence.

*Limited research exists to see if these styles affect the student’s ability to identify risk factors and implement appropriate patient interventions.
Are there any significant relationships between:
• Students’ performance during simulation and the style of pre-briefing they received?
• Students’ self confidence scores and the pre-briefing style they received?
• Accelerated vs. traditional BSN students?
STUDY DESIGN

- Quasi-experimental, Pre-test Post-test design.
- Preparation for simulation experience.
- Students were randomly assigned to one of the three simulation teams (L&D, Newborn, or Postpartum)
STYLES OF PRE-BRIEFING

Chart based pre-briefing (CBP)
Verbal pre-briefing (VPB)
Written pre-briefing (WPB)
• Demographic survey
• Pre and Post Simulation Confidence Scales
• Simulation Observation Checklist Tool
<table>
<thead>
<tr>
<th>Task</th>
<th>Confidence Levels</th>
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</thead>
<tbody>
<tr>
<td>Introducing self to a patient</td>
<td>Very Confident, Somewhat Confident, Not Confident</td>
</tr>
<tr>
<td>Assessing a laboring patient</td>
<td>Very Confident, Somewhat Confident, Not Confident</td>
</tr>
<tr>
<td>Reading fetal monitor tracing</td>
<td>Very Confident, Somewhat Confident, Not Confident</td>
</tr>
<tr>
<td>Preparing patient for delivery</td>
<td>Very Confident, Somewhat Confident, Not Confident</td>
</tr>
<tr>
<td>Assisting during a delivery</td>
<td>Very Confident, Somewhat Confident, Not Confident</td>
</tr>
</tbody>
</table>

**Reliability**

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Sim Chronbach’s alpha</td>
<td>.792</td>
</tr>
<tr>
<td>Post-Sim Chronbach’s alpha</td>
<td>.834</td>
</tr>
<tr>
<td>Pre-Briefing Style</td>
<td>Yes</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>L&amp;D SIMULATION: (Students performed following activities)</td>
<td></td>
</tr>
<tr>
<td>Introduced self to patient or talked to pt</td>
<td></td>
</tr>
<tr>
<td>Applies EFM</td>
<td></td>
</tr>
<tr>
<td>Checked orders</td>
<td></td>
</tr>
<tr>
<td>Identified need to perform vaginal exam when pt states baby is coming</td>
<td></td>
</tr>
<tr>
<td>Assessed FHR pattern on monitor</td>
<td></td>
</tr>
<tr>
<td>ID’d stage of labor</td>
<td></td>
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<tr>
<td>ID’d need to call Midwife/MD for delivery</td>
<td></td>
</tr>
<tr>
<td>Prepared birthing bed after midwife/MD ready</td>
<td></td>
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<tr>
<td>In Report to Postpartum team includes:</td>
<td></td>
</tr>
<tr>
<td>• Situation/Background</td>
<td></td>
</tr>
<tr>
<td>• Recommendations for plan of care</td>
<td></td>
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</tbody>
</table>
Performance and Pre-briefing Style

- **L&D**
  - Chart (no): 6
  - Verbal: 7
  - Written: 7

- **Newborn**
  - Chart (no): 9
  - Verbal: 8
  - Written: 8

- **Postpartum**
  - Chart (no): 10
  - Verbal: 10
  - Written: 10
Confidence Level and Pre-briefing Style

<table>
<thead>
<tr>
<th></th>
<th>Chart (No) Pre-briefing</th>
<th>Verbal Pre-briefing</th>
<th>Written Pre-Briefing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Confidence</td>
<td>28</td>
<td>25</td>
<td>27</td>
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<tr>
<td>Post-Confidence</td>
<td>31</td>
<td>30</td>
<td>33</td>
</tr>
<tr>
<td>Change in Confidence</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Differences in Traditional BSN & Accelerated students’ performance and confidence scores
• Traditional & Accelerated students’ performance:
  
  • Similar during Labor & Newborn simulations
  • Accelerated students had higher performance scores during postpartum hemorrhage simulation.
Traditional vs Accelerated & Confidence scores

The University of Akron
College of Health Professions
School of Nursing

Chart
Verbal
Written

Trad Accel
Trad Accel
Trad Accel

Pretest
Post-test
Change
Traditional vs Accelerated Performance score, & Type of Pre-briefing

The University of Akron
College of Health Professions
School of Nursing
DISCUSSION

• The Accelerated group who received charts & written pre-briefing had more confidence than Traditional students.

• Study supports students perform better in simulations when received structured pre-briefing.
LIMITATIONS

- Beneficence
- Convenience sampling
- Small sample
- Homogenous sample
- Unable to do paired $t$-tests, did ANOVAs
What’s next?

- Better prepare students for L&D
- Performance tool
- Additional data analysis
  - Generational diversity
  - Learning preferences
  - Clinical experiences


