Psychiatric Simulation: Improve Learning Outcomes and Maintain BSN Enrollment

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Disclosures

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Objectives

• Discuss scaffolding as a means to achieve learning competencies
• Compare traditional and simulation student learning outcomes
• Translate project findings to various program contexts
Background

• 43% of RNs in SC are BSN prepared
• SC goal 65% BSN prepared
• IOM goal 80% BSN prepared
• BSN prepared nurses = improved health outcomes

AACN; IOM; NCSBN
Background

- Increased competition for Behavioral health (BH) clinical sites
- BH site closures
- BH sites take fewer students
- Varying quality of BH sites
- BH enrollment capacity constrains BSN enrollment
- NCSBN Clinical Simulation study, up to 50% simulation

AACN; IOM; NCSBN
Purpose

• To develop & pilot a BH clinical simulation sub-course
• To improve undergraduate BH learning outcomes by scaffolding BH content and skills
• To increase BH simulation from 8% to 50%
• To decrease reliance on clinical site availability
Design

• The BH simulation project launched in fall 2016
• Six simulations
• 4 of 6 were rolling simulations
• Book ended by an orientation and wrap-up simulations
Design: Rolling Simulations

- Rolling simulations:
  - Sim section (e.g. assessment)
  - Teaching and discussion
  - Sim section (e.g. planning)
  - Teaching and discussion....
  - Debriefing
Design: Scaffolding

• BH competencies scaffolded on one another
  – Orientation Sim: Safety, MI SBIRT, SBAR
  – Sim 1: Safety/Crisis, 17 yo AA female, overdose
  – Sim 2: Safety/Crisis, 18 yo Hispanic female, Catholic, gay, hanging
  – Sim 3: Neurocognitive Disorder, 72yo W female,
  – Sim 4: Neurocognitive Disorder, 84 yo Asian American, Buddhist
  – Wrap-up Sim: Table-top, prioritization of care and activities
Evaluation: Formative Learning Measures

- MI SBIRT check offs
- Sim unit 1: teaching sim
- Sim unit 2: competency evaluation sim

- Sim unit 3: teaching sim
- Sim unit 4: competency evaluation sim
# Evaluation: Simulation Evaluation Form

<table>
<thead>
<tr>
<th>Assessment Nurse</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Washes hands/uses foam before giving care/entering room</td>
<td></td>
</tr>
<tr>
<td>Acknowledges client (AIDET)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select all that apply</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduces self and role</td>
<td></td>
</tr>
<tr>
<td>Duration of visit</td>
<td></td>
</tr>
<tr>
<td>Explains purpose of visit</td>
<td></td>
</tr>
<tr>
<td>Thanks client</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Identified client with two methods</td>
<td></td>
</tr>
<tr>
<td>(armband &amp; asking) or</td>
<td></td>
</tr>
<tr>
<td>Identified client with one method</td>
<td></td>
</tr>
<tr>
<td>(armband or asking)</td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal techniques to calm the patient</td>
<td>(slow/soft voice)</td>
</tr>
<tr>
<td>Nonverbal techniques (space, same level, open body Lang.)</td>
<td></td>
</tr>
<tr>
<td>Simple sentences. Simple choices</td>
<td></td>
</tr>
<tr>
<td>as needed</td>
<td></td>
</tr>
<tr>
<td>Broad Opening, open quests,</td>
<td></td>
</tr>
<tr>
<td>reflection, paraphrasing, etc</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select all that apply</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assesses safety- suicide ideation</td>
<td></td>
</tr>
<tr>
<td>S. Plan prn if Yes for SI</td>
<td></td>
</tr>
<tr>
<td>S. Means/Intent, if Yes for SI &amp;</td>
<td></td>
</tr>
<tr>
<td>plan</td>
<td></td>
</tr>
<tr>
<td>Collects data for MSE: hearing</td>
<td></td>
</tr>
<tr>
<td>voices, seeing things?</td>
<td></td>
</tr>
</tbody>
</table>
Evaluation: Summative Learning Outcomes

- CLECS (Clinical Learning Environment Comparison Survey)
  - Students
  - Faculty
- Mental Health ATI: Fall 2015 vs Fall 2016
- Final Exam Scores: Fall 2015 vs Fall 2016
- Student simulation evaluations
Evaluation: Analysis

• T-tests for ATI and final exam scores
• Correlation coefficient
• Wilcoxin-signed rank test for CLECS
  – traditional v. simulation learning
Evaluation Results

• 76 students completed a series of 6 sims during fall 2016
• 75 students completed the final surveys
• 95% female; 90% white
• 53% had clinical work experience
• 2% had experience in mental health care
• 58% had experience with mental health problems—personal or family members
Evaluation Results

• Student CLECS: 16 out of 29 domains ranked significantly higher in the sim learning environment compared to the traditional learning environment.

• Student CLECS: Other 13 domains nonsig but mean scores still higher for sim learning environment with exception of documentation.
Evaluation Results

• 94% of students agreed that simulation enhanced learning in the traditional environment

• 93% agreed that the traditional environment enhances simulation learning
Evaluation Results

- Final exam grades for fall 2016 were 3% (3.12 points; $p=.0001$) higher compared to fall 2015.
- Proctored Mental Health ATI scores were not significant but the mean scores were 1.21 points higher in 2016 v. 2015
- Student simulation evaluations showed increasing student confidence in pre-sim preparation across time.
Evaluation Results

• Faculty CLECS: Out of 8 faculty members, 3 completed surveys for traditional and simulation environments (taught in both areas). 2 of them completed only the simulation environment questions (didn’t teach in traditional). 3 of them did not complete surveys.

• Faculty CLECS: For most domain areas, the faculty rated the traditional setting higher for achieving learning outcomes.
Evaluation Results

- Reduced BSN enrollment constraints
- Clinical site use was maximized
- Number of clinical faculty needed reduced
- Established business case to continue simulation program
Conclusion

• Carefully developed, curriculum driven, simulations may improve mental health learning outcomes and are an efficient means to deliver more standardized, mental health content to BSN students.

• Creating a ‘level playing field’ for learners may boost learning outcomes.

• Faculty may need further development to embrace the changing ecosystem of nursing education.
Conclusion

• Educational innovation and project evaluations are time consuming endeavors, which benefit from external funding sources.
• Additional work is needed to evaluate educational innovations and strengthen the science of teaching/learning.
Thank you!
References


• Kaddoura, M.A., 2010. New graduate nurses’ perceptions of the effects of clinical simulation on their critical thinking, learning, and confidence. The Journal of Continuing Education in Nursing 41 (11), 506-516.


References

- Nursing, N.L.f., Lack of Clinical Placements is Main Obstacle to Capacity by Nursing Program, 2014.
- Rosseter, R., Amid Calls for a More Highly Educated RN Workforce,
- New AACN Data Confirm Enrollment Surge in Schools of Nursing. United Stated Department of Labor.
• Rosseter, R.J., 2017. Nursing Shortage Fact Sheet.