Strengthening Cultural Competence in Prenatal Care with a Virtual Community: Building Capacity through Collaboration

Lisa Young DNP, APRN, Yvonne Weideman, DNP, RN, Faye Grund, PhD, APRN, Joan Such Lockhart, PhD, RN, ANEF, FAAN, Mark Fridline, PhD, Marie Panas, MSN, RN
Disclosures

• The authors of the presentation have identified no potential conflicts of interest.
Objectives

• Describe the collaboration of the students, faculty and community members of the cultural virtual simulation

• Describe the project outcomes related to a cultural prenatal care virtual simulation collaborative experience for students from two private universities.

• Understand the use the evaluative process of the students in the study.
Introduction

Support for this project was provided by Robert Wood Johnson Innovative Grant

Funded by
The New Careers in Nursing Program

The Necessity for Cultural Education

The need for increasing cultural content in curriculum

- Healthy People 2020
- Institute of Medicine Report
- Department of Health and Human Services
- Meet the needs of a changing society
The Dilemma

- Faculty
  - Shortage of faculty
  - Expertise of faculty in specialty areas

- Clinical Placement
  - Limitation in sites
  - Limited exposure to diverse populations

- Finances
The Innovative Project

• Collaboration
  - Universities-Duquesne and Ashland University
  - Faculty-Behavioral/Community and Maternal Health

• Clinical experiences
  - Virtual Simulation (VSE)
    - Amish population
    - African American population
Project Aims

• Strengthen the cultural competence of ASD nursing students in prenatal care using a VSE
  • Perceived Clinical Cultural Competence
  • Plan of care

• Determine the effectiveness of share resources between 2 private universities
  • Post evaluations
Jeffreys’ CCC Model

- **Cultural competence**: multidimensional learning process:
  - integrates transcultural skills in three educational dimensions:
    - cognitive
    - practical/psychomotor, and
    - affective
  - involves TSE (confidence) as a major influencing factor, and aims to achieve culturally congruent care.
The Transcultural Self-Efficacy Test (TSET) by Marianne Jeffreys is a diagnostic tool that measures students' confidence for performing general transcultural nursing skills among diverse client populations.

Description of TSET Subscales

• Cognitive Subscale (25 questions)
  • Self-efficacy rating knowledge about the ways cultural factors may influence nursing care.

• Practical Subscale (28 questions)
  • Self-efficacy rating about interviewing clients of different cultural backgrounds to learn their values and beliefs.

• Affective Subscale (30 questions)
  • Self-efficacy rating the values, attitudes, and beliefs concerning cultural awareness, acceptance, appreciation, recognition, and advocacy.

Intervention

• Virtual Simulation Experience
  • Shared Learning Management system (DU)
  • Modules (Amish and African American)
    • Pre-natal video
    • Interaction between students and community members
    • Post-natal video
    • Interaction between students and community members
    • Development of cultural care plan
    • Debriefing
Methods

- IRB approval
- Pre and post-test design
- Consent of the students
- Data collection and analysis
  - Quantitative
  - Qualitative
Demographics

• Ashland University
  • 28 students (traditional and ASD)

• Duquesne University
  • 113 students (ASD)

• 8 collaborative groups, 9 DU groups
Distribution of **Cognitive** Subscale Scores

![Distribution Chart](image)

*Statistically significant (p < .05)*
Distribution of Practica**l** Subscale Scores

*Statistically significant (p < .05)*
Distribution of Affective Subscale Scores

*Statistically significant (p < .05)
Distribution of **Overall** Scores

*Statistically significant (p < .05)
Mean Self-Efficacy Strength Subscale Score

*Statistically significant (p < .05)
Mean Self-Efficacy Strength Overall Score – By Group

*Statistically significant (p < .05)
### Subscale Means, Standard Deviations, and Paired t-tests

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Difference</th>
<th>95% Confidence Interval Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>7.200</td>
<td>8.157</td>
<td>0.957</td>
<td>[.769 to 1.145]</td>
</tr>
<tr>
<td></td>
<td>1.245</td>
<td>1.133</td>
<td>1.109</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.061 (p = 0.000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.557</td>
<td>1.297</td>
<td>1.549</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.810 (p = 0.000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical</td>
<td>6.420</td>
<td>7.659</td>
<td>1.239</td>
<td>[.920 to 1.559]</td>
</tr>
<tr>
<td></td>
<td>1.728</td>
<td>1.717</td>
<td>1.884</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.674 (p = 0.000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td>8.487</td>
<td>8.781</td>
<td>0.294</td>
<td>[.138 to .448]</td>
</tr>
<tr>
<td></td>
<td>1.127</td>
<td>0.991</td>
<td>0.819</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.738 (p = 0.000)</td>
<td></td>
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</tbody>
</table>
Plan of Care Instrument

- **Purpose**
  - Identify and prioritize health care needs
  - Identify and prioritize nursing interventions
- **Collaborative project within each group**
- **Grading criteria**
  - Cultural assessment
  - Access to care
  - Health practices
  - Health teaching needs
  - Is realistic
# Plan of Care Instrument - Amish

<table>
<thead>
<tr>
<th>Plan of Care Grading Criteria</th>
<th>Collaboration (n=8)</th>
<th>No Collaboration (n=9)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporates findings from cultural assessment</td>
<td>9.13</td>
<td>9.11</td>
<td>0.02</td>
</tr>
<tr>
<td>Demonstrates understanding of virtual patient’s access to care</td>
<td>9.88</td>
<td>10.00</td>
<td>-0.12</td>
</tr>
<tr>
<td>Incorporates cultural health practices such as folk medicine if</td>
<td>8.63</td>
<td>9.56</td>
<td>-0.93</td>
</tr>
<tr>
<td>appropriate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifies key health teaching needs of virtual patient and</td>
<td>9.25</td>
<td>8.22</td>
<td>1.03</td>
</tr>
<tr>
<td>appropriate delivery method</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is realistic given the virtual patient’s scenario and culture</td>
<td>8.88</td>
<td>8.67</td>
<td>0.21</td>
</tr>
<tr>
<td>Total Rubric Score</td>
<td>45.75</td>
<td>45.56</td>
<td>0.19</td>
</tr>
</tbody>
</table>
## Plan of Care Instrument – African American

<table>
<thead>
<tr>
<th>Plan of Care Grading Criteria</th>
<th>Collaboration (n=8)</th>
<th>No Collaboration (n=9)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporates findings from cultural assessment</td>
<td>9.38</td>
<td>9.33</td>
<td>0.05</td>
</tr>
<tr>
<td>Demonstrates understanding of virtual patient’s access to care</td>
<td>9.25</td>
<td>9.56</td>
<td>-0.31</td>
</tr>
<tr>
<td>Incorporates cultural health practices such as folk medicine if appropriate</td>
<td>8.75</td>
<td>8.89</td>
<td>-0.14</td>
</tr>
<tr>
<td>Identifies key health teaching needs of virtual patient and appropriate delivery method</td>
<td>8.75</td>
<td>8.89</td>
<td>-0.14</td>
</tr>
<tr>
<td>Is realistic given the virtual patient’s scenario and culture</td>
<td>9.25</td>
<td>9.00</td>
<td>0.25</td>
</tr>
<tr>
<td>Total Rubric Score</td>
<td>45.38</td>
<td>45.67</td>
<td>-0.29</td>
</tr>
</tbody>
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## Post Course Student Evaluation

<table>
<thead>
<tr>
<th>Post Course Student Evaluation Question</th>
<th>Collaboration</th>
<th>No Collaboration</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, the Virtual prenatal community module helped me meet the learning objectives.</td>
<td>3.35, 1.130</td>
<td>3.49, 1.132</td>
<td>-0.14</td>
</tr>
<tr>
<td>Overall, the Virtual prenatal community module helped strengthen my understanding related to the influence of culture on health.</td>
<td>3.58, 1.063</td>
<td>3.65, 1.135</td>
<td>-0.07</td>
</tr>
<tr>
<td>The Virtual prenatal community module helped me understand the prenatal health needs of underserved African-American women.</td>
<td>3.47, 1.165</td>
<td>3.41, 1.237</td>
<td>0.06</td>
</tr>
<tr>
<td>The Virtual prenatal community module helped me understand the prenatal needs of Amish women.</td>
<td>3.77, 1.031</td>
<td>3.86, 1.060</td>
<td>-0.09</td>
</tr>
<tr>
<td>Directions and tools used in the Virtual prenatal community module were clear and organized.</td>
<td>2.96, 1.277</td>
<td>3.27, 1.253</td>
<td>-0.31</td>
</tr>
<tr>
<td>I would recommend the Virtual prenatal community module to my colleagues.</td>
<td>2.68, 1.359</td>
<td>2.80, 1.348</td>
<td>-0.12</td>
</tr>
</tbody>
</table>
# Post Course Student Evaluation

## Students in Collaborative Group

<table>
<thead>
<tr>
<th>Post Course Student Evaluation Question</th>
<th>Ashland</th>
<th></th>
<th>Duquesne</th>
<th></th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborating with nursing students from another school of nursing was of value to me in the Virtual prenatal community module.</td>
<td>2.85</td>
<td>1.347</td>
<td>2.65</td>
<td>1.687</td>
<td>0.20</td>
</tr>
</tbody>
</table>
Conclusions

• The VSE was an innovative way to build capacity

• Collaboration helps students to gain access to diverse population and gain cultural competence
Future application

• Increase variety of simulated experiences
• Add interdisciplinary outcomes
References


• National Council of State Boards of Nursing, (2013). *NCLEX RN examination: Detailed test plan for the national council licensure examination for registered nurses*. Chicago, IL
Questions