Does the use of case studies impact scores on specialty exams for undergraduate nursing students?

Claudine Dufrene PhD, RN-BC, GNP-BC, CNE
Pamela Hodges PhD, RN, CNE
Kelly Vandenberg PhD, RN
Disclosure

Learning Objectives
- Verbalize the effects of case studies as a learning activity to better understand content for standardized specialty exams
- Identify strategies that impact the implementation of case studies within a specialty course

Authors
- Claudine Dufrene PhD, RN-BC, GNP-BC, CNE
- Pamela Hodges PhD, RN, CNE
- Kelly Vandenberg PhD, RN

Disclosure
- The authors have no conflict of interest to report. No sponsorship or commercial support was obtained for the study.
Background

Baccalaureate nursing program at a faith-based university
Commercial specialty exams initially used in some, but not all clinical courses
No special preparation required for exams
Perceived by some faculty and students as not important
Exit exam used to determine eligibility for completion of nursing program
Clinical courses now administering commercially-prepared specialty exams
Case studies included in the specialty exam packages were used in Fundamentals and Health Assessment courses beginning in Summer 2014.

Review of past specialty exams for these courses revealed administration in summer of 2012 only and no use of case studies for preparation.

The fundamentals specialty exam was administered to the second group after completion of three semesters of the nursing program.
Implementation

- **Group A:** Junior students did not complete case studies and were administered the specialty exams in fundamentals and health assessment.

- **Group B:** Junior students did not complete case studies and were NOT administered a specialty exam. As seniors they completed three Fundamentals case studies in the Externship course and took the fundamentals specialty exam.

- **Group C:** Junior students completed five assigned case studies in the fundamentals course and seven assigned case studies in the health assessment course. As seniors they completed five Fundamentals case studies in the Externship course.

- **Group D:** Junior students completed ten assigned case studies in the fundamentals course and seven assigned case studies in the health assessment course.
## Results Fundamentals Specialty Exam

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score</th>
<th>Median Score</th>
<th>Mean Conversion Score</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (n=28)</td>
<td>638</td>
<td>611</td>
<td>60.65</td>
<td>386 – 849</td>
</tr>
<tr>
<td>B (n=33)</td>
<td>804</td>
<td>789</td>
<td>76.11</td>
<td>523 – 1031</td>
</tr>
<tr>
<td>C (n=34)</td>
<td>775</td>
<td>786</td>
<td>70.89</td>
<td>513 – 1178</td>
</tr>
<tr>
<td>D (n=36)</td>
<td>765</td>
<td>777</td>
<td>71.92</td>
<td>374 - 1122</td>
</tr>
</tbody>
</table>
# Results Health Assessment Specialty Exam

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score</th>
<th>Median Score</th>
<th>Mean Conversion Score</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (n=28)</td>
<td>669</td>
<td>639</td>
<td>63.93</td>
<td>426-970</td>
</tr>
<tr>
<td>B</td>
<td>Group Did Not Take Exam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (n=34)</td>
<td>889</td>
<td>865</td>
<td>80.85</td>
<td>661-1222</td>
</tr>
<tr>
<td>D (n=36)</td>
<td>818</td>
<td>819</td>
<td>77.11</td>
<td>491-1053</td>
</tr>
</tbody>
</table>
# Ethnicity

<table>
<thead>
<tr>
<th>Group</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>African American</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (n=28)</td>
<td>29%</td>
<td>32%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>B (n=33)</td>
<td>24%</td>
<td>49%</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>C (n=34)</td>
<td>35%</td>
<td>41%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>D (n=36)</td>
<td>11%</td>
<td>47%</td>
<td>17%</td>
<td>25%</td>
</tr>
<tr>
<td>Group</td>
<td>Age 17-20</td>
<td>Age 21-30</td>
<td>Age 31-40</td>
<td>Age 41-50</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>A (n=28)</td>
<td>1</td>
<td>15</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>B (n=33)</td>
<td>1</td>
<td>24</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>C (n=34)</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>D (n=36)</td>
<td>5</td>
<td>24</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>
Scores were significantly higher in groups who completed case studies compared to the group who had not completed case studies.

Group D had a significantly higher percentage of ethnically diverse and English as a second language students than other groups.
Implications

- Results are from one school of nursing and cannot be generalized to the population.
- Additional studies are recommended.
Conclusion

- Use of case studies can have a positive impact on student learning.
- Standardized test scores are also impacted by use of case studies.
Questions?

Thank you!

Contact Dr. Dufrene for additional questions. dufrenc@stthom.edu