Examining Nursing Student Stress in an End–of–Life Care Simulation: Grade Level and Simulated Patient Type

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Review of the Literature

- Recommendation by AACN, RWJF, and in NCLEX-RN: Incorporate end-of-life (EOL) care in undergraduate nursing curricula (American Association of Colleges of Nursing, 2016; Kopp & Hanson, 2012)
- New grad dissatisfaction with EOL education, anxiety, uncertainty contribute to attrition (Kwekkeboom et al., 2005; Gillan et al., 2013, MacKusik & Minkic, 2010)
The purpose of this quasi-experimental study was to examine the relationship between undergraduate nursing students’ stress before and after participating in an end-of-life care simulation, using either simulated patient type: a high-fidelity mannequin or standardized patient
Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and psychological stress moderated by grade level?

Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and physiological stress moderated by grade level?

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Gender: Male</th>
<th>Gender Female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td>58.3% (7)</td>
<td>34% (50)</td>
<td>35.8% (57)</td>
</tr>
<tr>
<td>Senior</td>
<td>41.7% (5)</td>
<td>66% (97)</td>
<td>64.2% (102)</td>
</tr>
<tr>
<td>Total</td>
<td>100% (12)</td>
<td>100% (147)</td>
<td>100% (159)</td>
</tr>
</tbody>
</table>
Interventions

- IRB approval
- Randomization of 159 participants
- Students cared for or observed care of a high-fidelity mannequin or standardized patient
- STAI, HR, Blood pressure pre and post

<table>
<thead>
<tr>
<th>Grade</th>
<th>High-Fidelity Mannequin</th>
<th>Standardized Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>Senior</td>
<td>47</td>
<td>55</td>
</tr>
</tbody>
</table>
Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and psychological stress moderated by grade level?

- There were no statistically significant interaction effects between patient type and grade level on psychological stress ($F(1, 155)=0.411, p=0.52$).

- There were no statistically significant main effects by grade level on psychological stress ($F(1, 155)=1.347, p=0.248$).

- Patient type did impact psychological stress at the *trend* level ($F(1, 155)=3.137, p=0.08$). A very small effect size was noted ($\eta^2=0.02$).
Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and physiological stress moderated by grade level?

- There were no statistically significant interaction effects between patient type and grade level on percentage change in systolic blood pressure ($F(1, 155)=0.369, p=0.54$).
- There were no statistically significant main effects by grade level on percent change in systolic blood pressure ($F(1, 155)=0.010, p=0.92$) or patient type on percent change in systolic blood pressure ($F(1, 155)=0.528, p=0.47$).
Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and physiological stress moderated by grade level?

- There was no statistically significant interaction effect between patient type and grade level on physiological stress, as measured by percent change in diastolic blood pressure ($F(1, 155)=0.339, p=0.56$).

- There was no statistically significant main effect by grade level on percent change in diastolic blood pressure ($F(1, 155)=0.562, p=0.46$) or patient type on diastolic blood pressure ($F(1, 155)=1.190, p=0.28$).
Among undergraduate nursing students participating in an end-of-life care simulation, is the relationship between simulated patient type and physiological stress moderated by grade level?

- There was no statistically significant interaction effect by patient type and grade level on physiological stress, as measured by percent change in heart rate ($F(1, 155)=0.530, p=0.47$).
- There were no statistically significant main effects when examining the relationship between patient type on percent change in heart rate ($F(1, 155)=0.000, p=1.00$) and grade level on percent change in heart rate ($F(1, 155)=0.025, p=0.88$).
Findings in Relation to the Literature

- No previous research on this.
- Ramasama, Venkatsalu, Kellher, and Hua Shao (2015): First year nursing students preferred learning EOL care in the lab rather than didactic portion.
- Understanding which patient type and at what grade level causes greater amounts of stress → holistic needs of learner.
- Further research needed.
- 31.4% of sample size diagnosed with anxiety; consistent with previous research.
  - Chen, Chen, Sung, Hsieh, Lee and Change (2015) found 32.5% of 625 nursing students experienced depressive symptoms, anxiety, at a community college.
- Impact on curricular decision-making: When and how.
References