American Red Cross Simulation & Student Nurse Disaster Preparedness

Patricia Frohock Hanes, PhD, MAED, MS DPEM, RN, CNE
Anna Marie Hefner, PhD, MAED, RN, CPNP

Azusa Pacific University School of Nursing, Azusa, CA, USA
Background

• Disasters increasing worldwide
• Major nursing organizations support disaster nursing
• Student nurses underutilized resource
ICN Competencies

- International Council of Nurses (ICN)
  - Nurses lack training for disasters
  - Core Competencies for Disaster Nursing 2009, with World Health Organization
  - Uses four phases of disasters:
    - Preparedness
    - Response
    - Recovery
    - Mitigation
ICN Framework of Disaster Nursing Competencies

- Centered on four phases of disasters
- Health promotion/illness prevention
- Policy development
- Education
- Communication
- Ethics
- Population health
Purpose

• Describe:
  – Conduction of web-enhanced, low-fidelity disaster simulation/course
  – Results of evaluative survey administered after disaster nursing course/simulation with student nurses
Conceptual Frameworks

- Theories of learning styles
- Social cognitive learning
- Self-efficacy
- Volunteerism
- Human behavior
American Red Cross Student Nurse Disaster Course

• Introduction to ARC as NGO
• Role of student nurses
• Hybrid course
  – First hour online, focus on history of ARC
  – Second part F2F as web-enhanced, tabletop simulation
  – Students add injects
  – Hotwash at conclusion
American Red Cross Student Nurse Disaster Course

• Free course open to nursing students at all levels
• Teacher volunteer affiliated with ARC
• Held at different sites
• Students registered as shelter workers at end
Methods: Hypotheses

1. Simulation will provide a supportive learning process in disaster preparedness
2. Disaster simulation will increase self-efficacy in students in disaster situations
3. Low-fidelity disaster simulations are an effective way to teach disaster preparedness
Evaluative survey data was collected in four areas:

- Demographics
- Simulation design
- Educational practices
- Student satisfaction and self-efficacy
## Results

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>84%</td>
</tr>
<tr>
<td>Males</td>
<td>9%</td>
</tr>
<tr>
<td>Unknown</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>44%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15%</td>
</tr>
<tr>
<td>Asian</td>
<td>28%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Attends APU</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>91%</td>
</tr>
<tr>
<td>No</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Have a Nursing License</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23%</td>
</tr>
<tr>
<td>No</td>
<td>77%</td>
</tr>
</tbody>
</table>
Results

Personal Preparedness Plan

- Yes: 64
- No: [circle diagram]
- Unknown: [circle diagram]
Hypothesis 1

Simulation will provide a supportive learning process in disaster preparedness

• 88% of the participants
  – Better think critically about scenarios
  – Globally about their roles in disasters

• 94% of the participants
  – Simulation helped gain knowledge in disaster preparedness
Hypothesis 2

Disaster simulation will increase self-efficacy in students in disaster situations

• 87% of the participants:
  – More confident in ability to provide care in disasters
  – Simulation allowed for learning from mistakes
  – Holistic view of individual, community, and their roles as student nurses
Hypothesis 3

Low-fidelity disaster simulations are an effective way to teach disaster preparedness.

- 84% of the participants found:
  - Useful, hands-on learning opportunity where classroom skills were applied in realistic settings
  - Variety of scenarios increased knowledge and response to disasters
Conclusions

• Student nurses
  – Valid asset in disaster preparedness
  – Increase region’s capacity to respond in times of crisis
  – Want and need disaster nursing education
  – Are part of our volunteer disaster preparedness and response system
Implications
Implications

• Disaster training of student nurses is welcome and easily done using classroom design, table top simulation

• Future research needs to
  – Explore ways to effectively incorporate broad disaster nursing education into existing curricula
  – Measure effectiveness of education
Selected References


Thank You!

Contact:
Dr. Patricia Hanes
phanes@apu.edu

Dr. Anna Hefner
ahefner@apu.edu