

Sigma's 30th International Nursing Research Congress

This Is a Disaster!: Disaster Preparedness in Nursing Curriculum

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Purpose: Globally, natural and manmade disasters are an imminent threat. Despite these threats, to our knowledge, no formal nursing curricula prepares nurses for these threats. Nursing as a science and profession is woefully unprepared to address disasters. Failure to institute disaster preparedness curriculum will lead to global and local humanitarian crises. Today, with both natural and manmade disasters on the rise, we need to adequately prepare our nurses to contend with the repercussions of these disasters. A nurse's ability to intervene early can prevent deaths and poor clinical manifestations. For instance, with the inevitable threat of global warming, disaster relief education is needed more than ever. In October 2018, a landmark report from the United Nations' scientific panel on climate change painted a dire picture of immediate consequences of climate change, describing a world of worsening food shortages, wildfires, mass die-off of coral reefs, and of increased coastal flooding as soon as 2040, if 2.7 degrees of warming occur (Davenport, 2018). The environmental impacts of these disasters will lead to humanitarian crises. Additionally, in a recent study concerning losses from hurricanes, losses from tropical cyclones are expected to double every 10 years; a rate that implies that losses in 2050 will be 15 times greater than those in the 2000s (Freeman and Ashley, 2017). We hypothesized that a lack of disaster training in nursing school results in deficits of basic disaster healthcare knowledge among nurses.

Methods: After institutional approval, we recruited participants through social media. Via a quantitative cross-sectional comparative design, we constructed demographic questions about disaster training for participants and then administered (with permission from American Nurses Credentialing Center [ANCC]) the National Healthcare Disaster Exam to further assess participants' disaster relief knowledge.

Results: Demographically, most participants reported no training in active shooter scenarios, providing care without power or in mass casualties, fire drills, tornado drills, bomb threats, or floods. Chi-square tests of independence were conducted between age, disaster experience, education level, nursing role, and military experience and analyzed with responses to disaster preparation questions. No statistically significant associations presented among any categories and disaster preparation questions, with the exception of disaster experience and knowledge of health consequences ($\chi^2[3]=9.561, p=0.031$), disaster experiences and knowledge of medical countermeasures ($\chi^2[3]=9.561, p=0.023$), and age and knowledge of individual health consequences ($\chi^2[3]=2.345, p=0.039$).

Even in participants who reported having disaster experience, that experience was only associated with significantly different responses to two test questions. In the absence of disaster experience, most people reported almost zero preparation; even having military experience did not significantly affect results. Our hypothesis was correct; disaster curriculum in nursing school is non-existent and does not prepare nurses for disaster scenarios in the workplace.

Conclusion: Based on our review of the literature, these results fill critical gaps in nurses' overall disaster healthcare knowledge. Nursing programs lack curricula to prepare nurses for the physical and mental care of disaster victims. According to the National Center for Victims of Crime, the number of mass shootings occurring in the past ten years is 2.4x greater than the decade prior (1998 to 2007) with more than half (57%) of all recorded mass shootings having occurred within the past 10 years (National Criminal Justice Reference Service, 2018). In 2016 and 2017 alone, 50 mass-killing incidents (20 in 2016, 30 in 2017) resulted in 943 casualties (221 people killed and 722 people wounded, excluding the shooters) (U.S. Department of Justice [DOJ], Federal Bureau of Investigation [FBI], 2018). On October 27th, 2018, an active-shooter stormed into the Tree of Life Congregation Synagogue in Pittsburgh's Squirrel Hill neighborhood shouting hate for Jews and killing worshipers. Eleven people were killed, two other worshipers were injured, and four officers also were injured (Hafner and Meley, 2018). Disaster preparedness is vital for nurses to respond to these threats. Current literature suggests there is a gap in knowledge concerning disaster preparedness in natural and man-made disaster education in nursing curriculum (Jose and Dufrene, 2014).

Implications of our findings include evidence supporting the incorporation of innovative pedagogy within nursing education. Life-saving disaster preparedness knowledge may be implemented into nursing curriculum through discussion of disaster scenarios and adding disaster preparedness lecture materials. Furthermore, recognizing that graduating nurses need stronger skills in disaster nursing, disaster simulations may be implemented into curriculum (Rafferty-Semon, Jarzembak, and Shanholtzer, 2017). At least one person in nursing faculty should be responsible for disaster preparedness education for their respective school of nursing. This person should be nationally certified by an accredited program. Interprofessional and interagency collaboration is likely required to implement these programs and education. This study may bring about potentially paradigm shifting educational initiatives to better our future nurses.

Title:

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Keywords:

Disaster preparedness, Nursing curriculum and Nursing research

References:

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Abstract Summary:

Globally, natural and manmade disasters are an imminent threat. Despite these threats, nurses are lacking training in school. The objective of this study is to determine the level of disaster preparedness nursing curriculum offers students so that awareness to these deficits catalyzes efforts for innovative pedagogy within curriculum.

Content Outline:

1. Introduction
 1. Importance of Disaster Preparedness
 2. Background of Disasters
2. Body
 - What We Are Not Prepared For
 1. Active Shooter Scenarios
 2. Practicing Nursing with No Power at the Facility
 3. Mass Casualties in Hospital Settings
 4. Fire Drills
 5. Tornado Drills
 6. Bomb Threats
 7. Flooding
 8. Lack of Information Regarding Disaster Readiness Campaigns
 9. Lack of Information Regarding Community Events Promoting Emergency Preparedness
 10. Lack of Curriculum Promoting Educational Activities, Resources, or Websites for Disaster Readiness/ Emergency Preparedness
 11. Lack of Emergency Exercises and Drills in Nursing School
1. Implications
 1. Innovative Pedagogy within Nursing Education
 2. Life-saving Disaster Preparedness Knowledge Amongst Nurses
 3. Schools Will Be Required to Have One Person in Teaching Faculty Responsible for Disaster Preparedness Education
 4. Require Interprofessional Collaboration and Interagency to Implement Programs and Educations
- Conclusion
 1. This Study May Bring About Potentially Paradigm Shifting Educational Initiatives to Better our Future Nurses

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Any relevant financial relationships? Yes

Relationship	Description of Potential Conflict
Board member	Unpaid board member of International Network for Doctoral Education in Nursing

Signed on 11/19/2018 by *Kate Kemplin*

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