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Community Health Nurse Educators and Disaster Nursing Education

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A Dissertation Submitted to The Graduate School at the University of Missouri-St. Louis
in partial fulfillment of the requirements for the degree
Doctor of Philosophy in Nursing

December 2020

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Acknowledgments

I wish to dedicate my dissertation to Dr. Mary Ann Drake who has selfishly given so much of herself to educate and mentor me over the years. Dr. Drake is the kind of educator who not only teaches, but inspires. Thank you for introducing me to the beautiful world of public health and for instilling a passion for social justice in me. Thank you for believing in me far more than I believe in myself. There will never be another Mary Ann Drake, you are a gift to this world and your students are forever impacted by your endless advocacy, grace, and compassion.

I also dedicate this dissertation to my husband, Terry, and my children Sammy, Terry Jr., and Max. Thank you for giving me a reason to wake up each morning and do the work that I do. Thank you for being patient and supportive as I have furthered my education for all of these years. I love you so very much.

Lastly, I dedicate this dissertation to my mom and dad who taught me to work hard and never give up. I was raised to believe that I could do anything I set my mind to, and I have.

I wish to extend my deepest gratitude to Dr. Tokac for his advocacy, support, laughter, and endless patience. You arrived in my life at the perfect time and are a true blessing. I look forward to working on future projects with you.

I would like to thank Dr. Vandermause and Dr. Bender for being gracious and lending their expertise to my dissertation. Your kindness and mentorship will never be forgotten.

Abstract

The world is struggling with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic and the need for disaster nursing education has never been more clear. Recently, the American Nurses Association reported that of the over 32,000 nurses surveyed; only 11% felt well prepared to care for a COVID-19 patient (ANA, 2020). Community health nurse educators are tasked with educating future nurses on disasters, yet, little is known about this population's perceived competence in disaster preparedness. The purpose of this study is to describe community health nurse educators' perceived competence in disaster preparedness.

The study is a descriptive, correlational design used to measure community health nurse educator's perceived preparedness for disaster response. The study examined the relationships between community health nurse educator's perceived preparedness and personal attributes and self-regulation (motivation).

Two findings were statistically significant. First, if community health nurse educators had actively participated in a disaster event in the past, they reported greater perceived competence in disaster nursing preparedness ($p=.001$). Second, the higher the level of self-regulation the more familiar community health nurse educators were with disaster preparedness.

Community health nurse educators are on the frontlines of healthcare's response to a disaster. Community health nurse educators must stress the importance of the nurse's role in disaster preparedness to administrators and professional organizations of nursing, and provide themselves, and students, with the self-determination to take the risks involved in preparing and acting in a disaster.

Chapter One: Introduction

Community Health Nurse Educators and Disaster Nursing Education

Disasters can destroy lives within a matter of moments, often without warning. The incidence of disasters is on the rise in the United States, with the Federal Emergency Management Agency (FEMA) reporting an average of 43 disasters declared annually (Zotti, Williams, Robertson, Horney, & Hsia, 2013). The United States has experienced a series of these tragedies over the last several years, which have resulted in a significant loss of life and the security that so many citizens have become accustomed to. No Americans are immune to the potential of destruction and trauma that disasters leave behind. With the world in the middle of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic, as this study is conducted, the need for disaster nursing education has never been more clear. Recently, the American Nurses Association found that 87% of nurses feared going to work, 36% have cared for a COVID-19 positive patient without having adequate personal protective equipment (PPE), and of the over 32,000 nurses surveyed; only 11% felt well prepared to care for a COVID-19 patient (ANA, 2020). This further exposes the gap in what nurses need to know in a disaster compared to how well they know it. The purpose of this research study is to describe community health nurse educators' perceived disaster preparedness and competence in educating the future nurses of America.

Background of Problem

Due to the vast array of causes and effects of disasters, it is difficult for nurses to gain a comprehensive and cohesive understanding of disaster preparedness and management. When examining disasters as a whole, the end result and needs are similar

for any mass casualty event. Regardless of type or cause, the health care workforce, living in any part of the nation, is vulnerable to a disaster event. With this knowledge, attention should be given to the perceived preparedness and competence of community health nurse educators in the United States. This population is the group of professionals who are responsible for incorporating disaster nursing curriculum into their already content-packed community health nurse courses.

It is difficult to find one agreed-upon definition of disaster in the literature considering the differing types and impacts of these events. Oztekin et al., (2015) explained that a disaster is “a serious disruption of the functioning community or a society causing widespread human, material, economic, or environmental losses which exceed the ability of the affected community or society to cope using its own resources” (p. 99). This definition covers the breadth and depth of disasters which can be natural or manmade. The American Red Cross (2003) goes into greater detail in their definition; “A threatening or occurring event of such destructive magnitude and force as to dislocate people, separate family members, damage or destroy homes, and injure or kill people. A disaster produces a range and level of immediate suffering and basic human needs that cannot be promptly or adequately addressed by the affected people, and impedes them from initiating and proceeding with their recovery efforts. Natural disasters include floods, tornadoes, hurricanes, typhoons, winter storms, tsunamis, hail storms, wildfires, windstorms, epidemics, and earthquakes. Human-caused disasters—whether intentional or unintentional—include residential fires, building collapses, transportation accidents, hazardous materials releases, explosions, and domestic acts of terrorism”

Natural disasters may include events such as an earthquake, tornado, hurricane, tsunami, volcano, or flooding. Man-made disasters may include events such as biochemical terrorism, chemical spills, nuclear events, fires, explosions, transportation accidents, gun violence, and warfare (Veneema, 2017). Communicable disease outbreaks and pandemics are another type of disaster that warrant research and understanding. The H1N1 Influenza pandemic was a reminder of the ability of viruses to wreak havoc on the healthcare system, and that poor public health preparedness anywhere in the world can impact the United States (Moore, 2012). We are reminded of this again with the current COVID-19 pandemic and the impact it has had on our country and the world. While disaster type, cause, and definition may vary significantly, the outcomes can be equally horrific.

A renewed sense of commitment to disaster preparedness and management began after the terrorist attacks on the United States on September 11, 2001. This disaster shook America to its core and exposed the fragility of the country and its citizens. The events of that day solidified disaster preparedness as a national security priority (Moore, 2012). The majority of the new training that resulted from this event, focused mainly on military and government settings (Wisniewski, Dennik-Champion, Peltier, 2004). “Major changes were made by the Bush administration to avoid and respond to potential mass-casualty disasters, most notably through the development of Homeland Security” (Wisniewski et al., 2004). Hurricane Katrina in 2005, once again, brought attention back to the need for extensive disaster preparedness. This event was an awakening, not only to the government but also to the healthcare community. Nurses recognized the need for further disaster training, beyond basic nursing skills (Stangeland, 2010). Nurses,

physicians, and other healthcare professionals worked without electricity and quickly ran out of medications and supplies trying to care for patients.

Mass casualty shootings have also impacted the importance of disaster preparedness and management, especially in the healthcare and first responder settings. A school shooting in Newtown, CT. occurred on December 14, 2012, leaving 28 dead and two injured (Schumacher-Matos, 2012). The Orlando Pulse night club shooting in Florida on June 12, 2016, occurred two blocks from the Orlando Regional Medical Center. Due to the close proximity, numerous victims were brought to the center rapidly and without warning. The facility received 49 victims, a SWAT team member, nine succumbed to their injuries, 17 presented to other hospitals, and a total of 40 victims died in the club (Bloch, Hersher, Domonoske, Kennedy, & Dwyer, 2016). This facility participated in a tri-county active shooter mass casualty intake drill, which proved to be beneficial. Emergency department (ED) physicians and nurses were forced to triage and care for patients being dropped off in trucks. This demonstrates one example of a situation that nurses may find themselves in.

Other mass casualty shootings that have occurred in recent years include loss of more lives. The Las Vegas shooting on October 1, 2017, resulting in 58 deaths and more than 850 wounded (Wamsley, 2017). A school shooting occurred in Parkland, Florida, at Marjory Stoneman Douglas Highschool, leaving 17 dead and 17 injured (Wamsley & Gonzales, 2018). Sadly, these examples only touch the surface of the disasters that have affected the United States in recent history.

With the overall incidences of disasters on the rise and the everchanging global effects of climate change, it is time to assess and address the disaster preparedness

education of nurses. Nurses are the largest group of healthcare professionals and are consistently voted as the most trusted profession. In Gallup's 2019 poll assessing ethics and honesty, the most trusted profession was nursing for the 20th year in a row (Gallup, 2019). Nurses know their communities, are comfortable with treating the most vulnerable patients, have knowledge of resources, and have assessment and clinical skills that are determinantal in a disaster (International Council of Nurses, (ICN) 2009). Due to this, nurses are able to reach the most vulnerable in their communities, offer resources, work collaboratively with outside organizations, and care for the injured. It is logical that nurses would either be on the frontlines of a disaster or, at the very least, sufficiently trained to act in a capacity that would allow them to protect and care for themselves and their patients.

As previously mentioned, disasters vary, but this should not prevent nurses from being prepared. The outcomes of the examples mentioned previously are mass casualties that require all nurses to feel confident in their ability to assist in some way. An all-hazards approach, which is recommended by the Federal Emergency Management Agency (FEMA), would allow nurses and other responders to be prepared for any mass casualty event (Veenema, 2017). This means that training would provide a foundation of preparedness that could be effective in any disaster. All hazards preparedness takes the personalization out of training so that the focus is not on the type of disaster but on the main aspects that pertain to mass casualties.

All nurses may not agree that they need to be trained in disaster preparedness and management. Many may believe that this role is for public health nurses only, however, when a disaster strikes, and mass patients are delivered to the ED, nurses of all specialties

are needed. Nurses have a history of volunteering to assist in disasters, but often because of their compassionate nature and not necessarily because they feel prepared (ANA, 2017). A small number of nurses have ever assisted in a disaster, and many of those who have are not adequately prepared (ICN and WHO, 2009). In the event of a disaster, nurses may choose to volunteer, may already be present at work, or may decide to come into work on over-time (ANA, 2017). Regardless of how nurses find themselves face to face with a disaster, it is vital that nurses, as frontline providers, are knowledgeable about disaster response, because this will save patients' lives. Wisniewshil, Dennik-Champion, and Peltier (2004) note that healthcare advocates are unanimous that nurses need to be educated to respond to disasters. Robinson (2010) explains that "experience in many disasters suggests that although teams of experts may later fly in to help, it is the available services from local hospitals and clinics that are called upon to provide immediate assistance" (p. 1). The healthcare personnel who help in these instances are often left to work with confusion and lack of guidance (Nasrabadi, 2007).

There have been limited studies that focus on the disaster preparedness of nurses in the literature (Labrague et al., 2018). Those that have been conducted involve the generalist nurse, emergency nurses, military nurses, or public health nurses. Often, these studies show that nurses do not feel prepared or competent to manage disasters including students and faculty in nursing programs (Charney, 2019). A few studies have been done on the preparedness of hospital nurses. Nurses report feeling unprepared and lacking the skills to be efficient caregivers and leaders in the disaster setting. The Crisis Standards of Care (IOM, 2009) noted that hospitals, walk-in clinics, and private practices need crisis response plans that designate the shift from conventional standards of care to providing

essential services during a disaster. That is a heavy charge for medical facilities, and nurses are expected to be able to make that shift along with their leaders and peers, often, at a moment's notice. A robust nursing workforce is needed for a hospital to handle a disaster appropriately and effectively (McHugh, 2010).

The population who will be educating nurses, soon to be entering the workforce, are community health nurse educators. If this group can explain their level of preparedness and perceived competence, it makes sense to start there, and work forward, to eventually create a disaster curriculum that would benefit all nurses and communities. Understanding the perceived competence of community health nurse educators, will reveal the disaster content areas in which educators are familiar or unfamiliar with various aspects of disaster preparedness. Baack and Albers (2013) describe the need for an understanding of the perceived preparedness of nurses in the United States that differentiate the mediating factors. The authors were able to show that nurses reported feeling unprepared for a disaster and the need for further research and training (Baack & Albers). Examining community health educators may lead to a greater understanding of why they may or may not incorporate disaster preparedness content into the courses they deliver to students. According to Stangeland (2010) “nursing school governing bodies have developed competencies to be included in the nursing curriculum; however, nursing programs have been identified as still lacking in the area of disaster nursing curriculum (p. 425).”

A few studies have been done on the preparedness of hospital nurses. Nurses report feeling unprepared and lacking the skills to be efficient caregivers and leaders in the disaster setting.

The Study

The study is a descriptive correlational design. Community Health Nurse Educators were surveyed using Qualtrics on their perceptions of competence in disaster preparedness. The instrument will be described in detail in the methods section but included 55 questions that are simple multiple-choice, a couple of yes/no, and Likert-type questions. The research questions to be answered in the research are as follows;

1. What is the perceived competence of community health nurse educators regarding their disaster preparedness?
2. Which of the variables - individual differences; geographic location, role (nursing background), age, years of nursing, years of teaching, importance of disaster education and previous disaster experience, and self-regulation most influence perceived competence in disaster preparedness?
3. Is there a relationship between self-regulation scores and perceived competence in disaster preparedness?
4. Is there a relationship between perceived competence in disaster preparedness and the perceived importance of disaster education?
5. Is there a relationship between perceived competence in disaster preparedness and actively participating in a major disaster event?

Significance of the Problem

The majority of disaster nursing literature is focused on hospital nurse's post-disaster, which is reasonable considering that is where patients will end up for care after a disaster. There are limited studies, however, that examine the perceived preparedness of nursing students and nursing educators. It is easy to make the connection that if

community health nurse educators feel unprepared, community health nursing students and working nurses most likely do too. The burden falls on community health educators to take a leadership role; however, the gap in the literature in regard to their knowledge makes it difficult to know where to begin this endeavor.

Value to Nurses

Research has shown that nurses feel inadequately prepared to act in disasters and that disaster content in curriculum is lacking in academic programs. Weiner, Irwin, Trangenstein, & Gordon (2005) conducted a study that examined the level of disaster preparedness curricula in the United States nursing schools. The study consisted of 348 nursing programs who answered the survey, with 5 filling it out incompletely, and 45 of the 50 states represented and Puerto Rico (Weiner et al.). The results showed that a minimal amount of curriculum (if any) was devoted to disaster content and that "74% of students felt that the faculty were not at all prepared or were poorly prepared" to teach the disaster content (p.338). Only "5.2% of the sample" answered that the faculty was well prepared to teach the content (p. 338). These results are a red flag and should represent a concern for community health nursing educators. If the faculty educating the students aren't adequately prepared, how can nursing students be expected to learn the material?

While there is a need for further research on preparedness and nursing, there is also a wealth of information to begin making changes. Currently, disaster nursing education is sporadically provided in a community health course, continuing education modules, or through the workplace, when taught at all. This education is developed from various recommendations or a combination of competencies including; AACN, ICN, WHO. What is missing from the literature is the perceived disaster preparedness of the

community health educators who are charged with including this content in an already packed curriculum. In traditional undergraduate nursing courses, faculty are teaching students based on the preparation of the NCLEX (Veenema et al., 2017). There are limited, if any, questions asked on the NCLEX about disaster preparedness, which minimizes the importance of fitting disaster content into community health courses. It is known that many of the basic skills required for disaster preparedness are taught across the undergraduate nursing curriculum; however, nurses still feel unprepared for many aspects of disasters. There has been minimal literature that focused on educators.

Since the disaster nursing content falls in community, public, and population health textbooks and is recommended by the AACN essentials, it makes sense to assess community health nurse educators as a beginning to coordinating a standard of required disaster education in nursing programs. If community health nurse educators do not feel prepared, this will give us a glimpse into where, to begin with, disaster education. This information could potentially lead to education for educators. Community health nurse educators could obtain training or education and then build upon that knowledge to carry out the information to their students. An all hazards approach could be used with more or less of a focus on specific types of disasters depending on the area of risk. The Johns Hopkins Bloomberg School of Public Health Recommendations for Improving National Nurse Preparedness for Pandemic Response could be used as a guide, along with the research and guidance of disaster nursing experts (2020).

The AACN BSN Essentials published in 2008 states that "the baccalaureate program prepares the graduate to Use clinical judgment and decision-making skills in appropriate, timely nursing care during disaster, mass casualty, and other emergency

situations" (p.25). This specific reference to disaster nursing preparedness falls under Essential VII: Clinical Prevention and Population Health. The AACN published a follow-up supplement to the essentials of baccalaureate competencies and curricular guidelines specifically for public health nursing (AACN, 2013). This supplement "motivates the use of strategic planning frameworks to design health promotion and education programs" (p. 21). It also provides a teaching strategy for the topic of interprofessional communication and collaboration for improving patient health outcomes, which is aimed at disaster nursing; "introduce students to strategies for clear team communication in challenging high-stress situations such as accidents, mass casualty, or disease outbreaks" (p.20).

While disaster preparedness is a core component of nursing programs, many nurses are still not equipped with the skills to manage disasters. Students report that their education does not adequately address the foundation of disaster preparedness (Charney, 2019). This study will address the where the disconnect in education is occurring. the community health educator's perspective of competence in managing disasters. This, in turn, will add information to assist in curriculum needs and improved the care of victims after a disaster.

Competencies

The ICN Framework of Disaster Nursing Competencies includes guidance for all nurses. According to (ICN/WHO, 2009), "The sporadic nature of disaster nursing education has resulted in a workforce with limited capability to respond in the event of a disaster, develop policy, educate, or accept leadership roles" (p. 28). The document also touches on the lack of confidence that faculty feel due to being unprepared to teach

disaster nursing. "The lack of formal education has created a workforce with little or no competency in disaster nursing" (ICN/WHO, 2009, p. 30). It is recommended that disaster is taught in the classroom and online using the standard competencies which fall under the disaster management continuum; risk reduction, disease prevention, and health promotion, policy development and planning; ethical practice, legal practice, and accountability, communication and information sharing, education and preparedness; care of the community, care of individuals and families, psychological care, care of vulnerable populations, long-term individual, family, and community recovery. Nurses should play a role in all areas of the disaster continuum.

Another document that provides support for disasters is the guidance for establishing standards of care (IOM, 2009). This is for use in disaster situations, and a piece of guidance includes directions for clinical care in disasters. These include surge capacity strategies such as the implementation of community-based triage capabilities and risk communication about when to seek care. These strategies, when used correctly, can reduce the burden on healthcare demand. The Crisis Standards of Care call for all healthcare facilities to have a plan in place in the event of a crisis. The standards of care suggest a continuum of care that is set into place in a mass casualty event. This guidance includes five key elements; strong ethical grounding, integrated and ongoing community and provider engagement, assurances regarding legal authority and environment, clear indicators, triggers, and lines of responsibility and evidence-based clinical processes and operations (Altegot, Stroud, Hanson, 2009). Nurses will serve a significant role if following these standards.

The Quad Council Coalition (QCC) of Public Health Nursing Organizations (now the Council of Public Health Nursing Organizations) is comprised of the Alliance of Nurses for Healthy Environments (AHNE), the Association of Community Health Nursing Educators (ACHNE), the Association of Public Health Nurses (APHN), and the American Public Health Association-Public Health Nursing Section (APHA-PHN). Further guidelines are provided by this set of standards. The QCC was founded in 1988 “to address priorities for public health nursing education, practice, leadership, and research and as the voice of public health nursing” (QCC, 2018). Domain 7: Financial Planning, Evaluation, and Management Skills include competencies across all three tiers of public health nurses. These include the ability to explain the public health nurse’s role in disaster response, develop partnerships that have authority over emergency preparedness, and to demonstrate leadership across agency partnerships that have authority over emergency preparedness (QCC, 2018). Community health nurse educators are nurses with experience and training who are able to educate future nurses on these topics.

As mentioned previously, the AACN Essentials historically have mentioned disaster preparedness in the essentials. A new draft of domains has recently been released that show population health as its own domain. Domain 3: Population Health includes the descriptor; engagement in partnerships to support and improve equitable, population health outcomes. It is difficult to know what this domain will include, but with population health being its own domain, emergency preparedness will most likely be included in this area. With more focus on population health, social determinants of

health, vulnerable populations, and emergency preparedness may get more attention and visibility.

Chapter 2: Literature Review

Disaster Nursing Education

As previously mentioned, natural and man-made disasters frequently happen in the United States and around the world. The results of these disasters are oftentimes devastating and debilitating to those left in their wake. Regardless of type or cause, the health care workforce, living in any part of the nation is vulnerable to a disaster event. Those who live on the coast are no longer the only ones who should be prepared. With this knowledge, attention should be given to the preparedness and perceived competence of community health nurse educators in the United States.

Nurses have learned valuable lessons from disasters in the past. Hurricane Katrina in 2005 and Hurricane Sandy in 2012 are just two of many examples. While mass casualty care is a significant part of disaster nursing that nurses should be prepared for, forced evacuations is another. Long term care facilities and hospitals, while rare, have been forced to evacuate in disasters historically. This adds another level of preparation for the nursing profession. Vandeventer, et al., (2017) adds the issue of loss of power along with forced evacuation as another blow to the healthcare profession in a disaster. Nurses who have experienced this in the past can assist in ideas to improve and create disaster nursing curriculum as a basis for nurses who may very well assist in a disaster as a registered nurse.

Disasters leave behind many victims. Nurses who work in and after a disaster are victims alongside their patients. Many nurses don't know the status of their own families and are taking on the care of their patients and facilities. The ethical and legal challenges that go along with disaster nursing is another aspect of disasters to consider. According to

Aliakbari, et al., (2015), there are two subthemes that fall under the theme of ethical and legal challenges. Those themes are; "professional ethics explores professional responsibility of nurses, as well as a sense of ethical obligation and adherence to the law, refers to nurse's familiarity with and observation of legal requirements" (Aliakbari et al., 2015, p. 493). Nurses who respond in a disaster face great challenges and deserve to feel as prepared as possible to handle the situation. Disaster nursing education can aid in preparing nurses for these ethical and legal dilemmas that might keep them from working in a disaster scenario.

Disasters occur every day throughout the world, according to the Pan American Health Organization (2000). While the impact of disasters vary in severity, they all threaten the quality of life to some extent. World Disasters Report 2007 showed a 60% increase in disasters in the years 1997-2006 compared to 1987-1996. With the increase in disasters, an increase in deaths, and in people affected by disasters also increased (Klyman, Kouppari, & Mukheir, 2007).

The need for qualified public health workers to participate in disaster preparedness and management exercises and training is well documented (ICN & WHO, 2009). According to the IOM Report Brief (2009), "in order to ensure that patients receive the best possible care in a catastrophic event, the nation needs a robust system to guide the public, healthcare professionals and institutions and governmental entities at all levels." The report brief also emphasizes the need for consistency in crisis care protocols, standards, and key elements. The vision of the ICN (2009) includes fairness, equitable processes, community and provider engagement, education, communication, and the rule of law. Nurses at all levels are poised to be a significant part of the disaster preparedness and

management team. According to Yin, He, Arbon, & Zhu (2011), “nurses are renowned for their flexibility and resourcefulness. Therefore, in an emergency or disaster situation, it is common for nurses to undertake roles that are outside their normal scope of practice, potentially leading to situations where they are asked to undertake duties that are beyond their knowledge or abilities” (p. 269).

Barriers for Nurses

Nurses face multiple barriers in obtaining the proper disaster preparedness training once they are out of school. If disaster preparedness is not learned in nursing school, this impacts all areas of the nursing profession. Some examples of nursing impacted are hospital nurses, school nurses, and community health nurses. Hospital nurses and nursing students have been mentioned, but it is the entirety of the nursing profession that needs a foundation for disaster education and this begins in nursing programs. Another group of nurses who are pivotal after a disaster and would benefit from improved disaster nursing preparedness and management are school nurses. After a community suffers from a disaster, school nurses assist children and families who are left behind. "47,000 nurses in the United States provide the resources that begin to bridge the gap between schools, students, families, and the healthcare community" (Evers & Puzniak, 2005, p. 232). With this connection between the nurse and community, it is evident why disaster education would be especially important for this group of nurses. Evers and Puzniak (2005) conducted a study showing the need for training among school nurses. The survey results showed that more training and preparation were needed and that respondents, specifically in Missouri, showed perceptions of the incidence of a

disaster were unlikely (Evers & Puzniak, 2005). This could explain why some nurses are not motivated to attend disaster training or focus on disaster education importance.

The ICN and WHO disaster nursing competencies call for a basic foundation of disaster nursing for all nurses. This is imperative considering the needs for qualified workers in the healthcare workforces and the number of casualties with each event. Another group of nurses who are considered to be first responders in public health nurses. Just as nurses are the largest group in the healthcare profession, public health nurses are the largest group in the public health profession (Chiu et al., 2011). Due to this, public health nurses also need adequate training. Some of this training will be done once a nurse enters the public health workforce, likely through FEMA. If these nurses receive disaster education in their nursing programs as well, they will be better prepared for the advanced training that they should receive as public health nurses.

The issue of nurses feeling unprepared or having inadequate disaster training is not specific to the United States. This appears to be a global issue, as well. There have been instances where nurses have acted in a disaster without any training at all. Yan, Turale, Stone, & Petrini (2015) found that nurses who responded to earthquakes in China, none had ever received disaster training prior. These nurses learned by trial and error in an actual disaster and the days and weeks that followed. Lessons are learned in a disaster, and changes are made after the event, but time and money can be saved by properly training nurses in school.

There are expectations and criteria that must be addressed at each level, laying the groundwork for disaster nursing. This should speak to curriculum development, but the content is still often touched on infrequently. A disaster nursing expert panel purposed

the need to establish national guidelines for disaster response for schools of nursing (Veenema et al., 2017). These guidelines would potentially guide schools in their roles in the event of a community disaster.

The National Council Licensure Examination (NCLEX) also plays a role in disaster nursing education in the curriculum (Veenema, et al., 2017). The disaster nursing expert panel mention that since many undergraduate nursing programs teach according to the NCLEX, it is less likely to be focused on as an area of study (Veenema et al., 2017). Since very few test questions focus on disaster, course content is spent on other more frequently tested areas. With limited classroom time and many concepts to teach in order for students to be successful on the exam, disaster education is often one of the subjects given less attention. The disaster nursing expert panel came up with two recommendations for this issue; “add more questions specific to disaster and emergency preparedness or add a state-based addendum to the examination that covers this content” (Veenema et al., 2017, p. 691). The panel and their recommendations are a reminder and encouragement as to why this content is crucial for nursing students to learn. Colleges and universities are being asked to include disaster in the nursing curriculum by the AACN essentials and other experts on disaster and curriculum, yet some nurses and faculty don't have the motivation to do so. As seen in the literature review, there are numerous reasons for nurses to learn, teach, and feel confident and empowered by the knowledge of disaster nursing.

Conceptual Framework

The Self Determination Theory (SDT) will guide this research study. 0This theory is an organismic theory of motivation based on intrinsic needs. In 2000, Ryan and

Deci wrote that “the fullest representations of humanity show people to be curious, vital and self-motivated” (p. 68). The importance of a topic and a person’s motivation determines whether or not a person has the desire to learn or change behavior regarding the topic. The origins of SDT are from three other theories; cognitive evaluation theory, organismic integration theory, and causality orientations theory (Deci, 1985). The theory explains behavior in the context of needs.

The (SDT) is fitting for many research areas but especially fitting for disaster nursing education research since it is empowering and influenced by perceived competence, which is what will be examined. Deci explained the theory in a TED Talk, explaining that “instead of asking how to motivate people, you should instead ask; how can you create the conditions in which other people will motivate themselves?” (Deci, 2012). Using the self-determination theory as a framework in which to understand educators perceived perception of disaster preparedness can help to further gauge the state of the science from a community health educators' perspective. This may result in the need for further education, training, and resources for community health educators, prior to their education of future nurses on this topic. Once a solid foundation of knowledge is formed for the educators teaching disaster nursing content, conditions can be created in which they can empower students to motivate themselves to engage in disaster nursing and fully understand its importance.

It is possible that there is a reluctance to alter curriculum and add disaster content, especially when nurses feel that that may or may not ever happen; to educators, nurses, or nursing students. This thinking may lead to the false belief that people are safe from disaster, and, as explained earlier in the paper, no one is ever completely safe. Perhaps a

helpful way to think of disaster preparedness is like health insurance while getting sick isn't certain, the likelihood of getting sick at some point is high. So, getting health insurance coverage is logical. The reluctance to include disaster content in community health curriculum may also be a strategic calculation so that educators can focus on content that nurses will use more often. The hesitancy to come together and create a curriculum based on national competencies may be an issue of lack of intrinsic motivation and value. This research will explore that with the foundation of the Self Determination Theory.

The theory describes two types of motivation; controlled and autonomous. In controlled motivation, the learner is seduced, ordered, or pressured into making a change (Deci, 2012). This does not often lead to lasting and meaningful change. In autonomous motivation, the learner or client has volition and choice, endorsement, find the task enjoyable, and deeply valued (Deci, 2012). When something is deeply valued, individuals are more likely to participate in the activity or behavior. Every nurse won't find disaster nursing education to be something they deeply value; however, it would be extremely beneficial to academia and nursing if community health educators did. If they see the value in the content and the relevance to themselves, their students, and communities, they are more likely to learn more themselves and teach it in an autonomously motivated way. This way of teaching makes learning more engaging and fun, and students will be more likely to absorb and value the information as well (Deci, 2012). It also explains the appropriate fit of SDT and its constructs.

The three major factors to be used in the study are; individual differences, self-regulation (including motivation and readiness), and perceived competence (Deci &

Ryan, 2002). These concepts will be used to indicate the concepts that may influence community health nurse educators to be prepared for disasters. These are the three of the four concepts that Baack and Alfred (2013) modified to fit disaster nursing research. “These four factors form the basis for a person’s readiness, ability, and commitment to take action in a disaster event” (Baack & Alfred, p. 282). The job climate (the fourth factor of the theory) will not be used in this study as it is not appropriate to the research questions. The stage has been set for further research aimed at disaster nursing and the use of the Social Determination Framework.

Concept Definitions

Individual differences are related to the variety of responses and experiences of community health nurse educators. These are the perceived forces that move a person to act or to change a behavior (Deci & Ryan, 2002). In this research, individual differences will explore what experiences will lead community health nurse educators to act in a disaster situation. There may be some factors that influence this, such as exposure to a previous disaster (Baack & Alfred, 2013) or an educator's view on the importance of disaster nursing education. This will be done by examining demographic information in the study and will be measured by the use of questions regarding; role, years in nursing, years in academia (added for this specific population), age, ethnicity, and geographic location (state). Two new researcher generated questions will be added specifically for the community health nurse educator population, which ask; do you teach disaster nursing in your community health course, and do you feel that disaster nursing education is important for all nurses? These will both be yes or no questions. The individual difference will show how past and current experiences have shaped the educator's

motivation to learn. "At their best, people are agentic and inspired, striving to learn, extend themselves, master new skills, and apply their talents responsibly" (Ryan & Deci, 2000, p. 68). This quote is especially fitting for the nursing profession as lifelong learners striving for evidence to take the best care possible of their patients.

Self-regulation of behavior, including motivation and relatedness, refers to the internal motivation that influences whether or not a person chooses to act (Ryan & Deci, 2000). This aspect of the study will be measured by the three-question Self-regulation survey as used in Baack & Alfred's (2013) research. The survey will show the likelihood of community health educators acting in a disaster. The total score of the survey ranges from 3-21 and is a Likert-type scale, with one being extremely likely and 7 being extremely unlikely. This will add an interesting aspect that will reveal the motivation of the community health nurse educator.

Perceived competence is described by Ryan and Deci (2000) as the level of competence that one feels that determines their belief in reaching their intended goal. This will be measured by the Emergency Preparedness Information Questionnaire (EPIQ). EPIQ assesses familiarity of the eight competencies dimensions of emergency preparedness (Garbutt et al., 2008). Alterations were made to the original 68 item EPIQ tool to make it a more appropriate fit for community health nurse educators and will be discussed further in the methodology section.

The concepts work together to result in a specific behavior. By looking at the perception and competence of community health educators through the lens of the SDT, new findings could emerge. Individual differences and self-regulation both directly affect perceived competence. By examining the results of the surveys distributed electronically

to all Association of Community Health Nurse Educators, the goal is to find out what factors may influence them to be prepared for disasters and to explore their perceived competence in acting in and educating about disasters.

Framework Description

SDT is meaningful and can be used in a variety of ways in nursing, including its application as a framework to view disaster nursing education. This study will use the SDT and three of its concepts to address a gap in the literature. There is plenty of research in the field of disaster preparedness and management; however, very little focuses on the perceived preparedness and competence of nurses. None could be found specifically targeting the disaster preparedness of community health nurse educators. The research that does exist has added a foundation for future disaster research to be implemented in a variety of ways.

The Association of Community Health Nurse Educators has roughly 275 members. The members are active and passionate about community health education curriculum and improvement. The association has members from across the United States and can offer a significant contribution to disaster nursing education. If community health nursing faculty do not have the knowledge and confidence needed to educate students on disaster education, that might be a solid starting point in which to begin to revise the community health curriculum.

Each of the concepts in the SDT is related. Individual differences, healthcare climate, and self-regulation all have a direct effect on perceived competence. This study will not focus on healthcare climate but will use individual difference and self-regulation as the guiding concepts of the framework. The community health nurse educator's perceived

competence in disaster nursing education may be influenced by these two concepts of the theory and may, in turn, impact whether or not the content is taught. The concepts could also influence whether or not an educator will advocate for curricular change if disaster education is not being adequately addressed.

A long-term goal would be for the community health nurse educator to teach disaster nursing content in nursing programs, using autonomous motivation, have adequate course content devoted to it, and result in nurses who are a positive addition to the disaster workforce. Another long-term goal would be for community health nurse educators to autonomously seek out their own disaster preparedness and management exercises and training and stay current with the topic. In this way, educators can keep up with the latest approaches to disaster preparedness and use the information to share with and educate their students. This would benefit nursing as a profession but, most importantly, the residents of any community who experience any disaster.

SDT Exemplar

SDT has been used as a lens in which to examine many phenomena. It has been combined with motivational interviewing in a study done by Vansteenkiste & Sheldon (2006) to examine factors related to motivating therapeutic change. SDT has also been used in numerous studies to investigate the intrinsic motivation that goes into behavioral change, such as physical activity initiation. The work that SDT has informed that is the most similar to this research study was done by Baack and Alfred (2013). The researchers used SDT to examine the perceived competence of rural nurses regarding their disaster preparedness.

The theory could also be relevantly applied to examine community health educators and their perceived competence of disaster preparedness with a similar approach. After altering a few focused demographic and research questions, the application can be easily revised to survey a different population. Baack and Alfred's (2013) research examined the state of disaster preparedness of nurses in Texas. The research study focused on a specific demographic; two healthcare systems and two small rural hospitals in Texas and included nurses with varying degrees of disaster experiences.

The research conducted by Baack and Alfred (2013) influenced this study and examined rural nurses' preparedness and perceived competence in managing disasters. Certain aspects of the SDT was used to underpin their study. The goal of the study was to "describe the current status of the nurse's preparedness to manage disasters in order to help communities, and healthcare systems strengthen their emergency response programs" (Baack & Alfred, p. 281). This goal is similar to the goal of community health nurse educators and can be modified to fit the educators to help communities, healthcare systems, nursing, and academia.

The study was able to show that disaster experience, individual differences, and self-regulation were significant predictors of the nurse's perceived competence in disaster preparedness (Baack & Alfred, 2013). These findings were explained by using each of the SDT factors. The findings of the study were consistent with previous nursing research (Fung et al., 2009; Garbutt et al., 2008; Gebbie & Qureshi, 2002) by showing that most nurses reported a perception of low to average competence in disaster preparedness (Baack & Alfred).

Some of the methods used in Baack and Alfred's study can be used to assess the state of disaster preparedness of community health nurse educators from across the United States. The theory chosen is a relevant framework in which to view disaster nursing preparedness and explain the findings. The study will reveal new data to add to disaster research with a unique and important sample population. It will provide a broad sample from varying geographic locations who share specialized roles as community health nurse educators.

Baack and Alfred (2013) noted that a limitation of their study was that it was focused on nurses, specifically in rural areas of the state of Texas. The study recommended replication in other geographic regions. While this research is crucial to the disaster nursing curricular planning and the safety of disaster victims, it can also be used in other ways. The body of literature on disaster nursing education does not include research specifically on community health nurse educators. If a university or college offers a community health nursing course, it is likely where disaster nursing education would fall. Community health nursing textbooks dedicate chapter(s) to disaster content. That is why research to focus on this specific population would benefit the direction of disaster preparedness and management. The research would span the United States and fit the recommendation of Baack and Alfred's (2013) request to perform research in further geographic regions.

Theory Comparison

The complexity of disasters adds to the difficulty in narrowing in on a theory in which to examine disaster research. The choice of a theory also depends on the aspect of the disaster being examined. Disaster literature often focuses on the immediate skills and

tasks needed in each phase of disasters using the continuum as the framework (Sementelli, 2007). As with any topic, conflicting perspectives can also cause barriers to the development of a theory related to disasters (Muhammad, 2018). After reviewing the literature and health behavior theories appropriate to examine disaster, two theories stood out; the Self-determination theory (SDT) and the theory of planned behavior (TPB).

Self-determination theory (SDT) (Deci & Ryan, 1985, 2012) and the Theory of Planned Behavior (TPB) (Ajzen, 1991) are two popular health behavior theories. Both were examined when preparing for this study. SDT argues that individuals are motivated when certain intrinsic needs are met. These basic needs include autonomy, competence, and relatedness, and if met, can impact behavior in a specific context (Hagger, Chatzisarantis, Culverhouse, & Biddle, 2003). Another theory that was examined was the Theory of Planned Behavior (TPB). This theory purposes that behavior change is determined by attitudes, subjective norms, and perceived control. The focus of TPB is that intentions largely predict behavioral engagement (Conner & Norman, 2005). Previous research has shown potential causal pathways between SDT and TPB; however, the overlap between concepts of the theories are not clear (Hagger et al., 2003). The theory of planned behavior purposes that the key predictor of behavior change is intent while SDT purposes that the key predictor of behavior change is motivation.

The concepts of TPB are attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). These concepts are thought to influence the intentions of an individual and are deeply extrinsic. Attitude is an individual's evaluation of the benefits of engaging in a particular behavior. Subjective norms are the opinions of others related

to the behavior. Perceived behavioral control is an individual's perception of being able to accomplish the behavior (Ajzen). According to Ajzen, the concepts are obtained throughout life experience over time and impact an individual to engage in a behavior. When examining behavior change through the lens of TPB, there are external pressures and forces that influence change, this type of change is not thought to persist long term (Ryan & Deci, 2000).

Examining the SDT and TPB together, SDT appears to be a better fit in which to explore the perceived competence of community health nurse educators. Educating nurses or nursing students has some extrinsic pressures and factors, but what drives nurses is intrinsic. Their patients are important to them, so they take care of them. They want their care to be the best, so they seek out extra training. More often these days, nurses work autonomously. Their intuition and critical thinking save lives. This is what motivates them, not extrinsic pressure. When discussing the importance and the need for disaster preparedness and education, motivation has the potential to promote lasting change. While the intention is extremely important in behavior, it is the motivation that will encourage and empower nurses to act.

Fostering motivation to learn, teach, and participate in disaster nursing education is an important move in the right direction. Deci and Ryan explain that motivation toward a specific behavior or activity will lead to approach-oriented beliefs toward performing the behavior and intentions to engage in the behavior in the future. That is what is needed for the future of disaster nursing education. This study will examine perceptions of preparedness and intrinsic motivation to become prepared. Nurses are naturally autonomous workers. They care for patients and interact with healthcare

providers from a place of autonomy and competence. This study will not look at external influences and how they impact a community health nurse educator to become prepared, although that could be interesting in further studies. The theory of planned behavior does not include competence as a concept. It examines outside influences and impacts; therefore, SDT is a better fit for the study.

The proposed study will use the SDT and the three concepts to address a gap in the literature. There is plenty of research in the field of disaster preparedness and management; however, very little focuses on the perceived preparedness and competence of nurses. Baack initially tackled this topic in 2011. The research has added a foundation for future disaster research to be implemented in a variety of ways. Baack and Alfred (2013) noted that a limitation of their study was that it was focused on the state of Texas. The study recommended replication in other geographic regions. While this research is crucial to the disaster nursing curricular planning and the safety of disaster victims, it can also be used in other ways. The body of literature on disaster nursing education does not include a study on community health nurse educators. If a university or college offers a community health nursing course, it is likely where disaster nursing education would fall. That is why research to focus on this specific population would benefit the direction of disaster preparedness and management.

The Association of Community Health Nurse Educators (ACHNE) is an engaged entity of public health nursing. With its wide range of members across the United States, it makes up a viable sample to survey. Members of ACHNE all teach public health, community health, and population health courses to students in a variety of nursing programs. The study will provide a view from a diverse group of educators teaching in

different levels of nursing. This could add depth and breadth to the disaster nursing education literature that is already published. The findings may also contribute some direction for future studies and substantial information on disaster content areas for community health nurse educators to target.

Chapter 3: Methodology

The study is a descriptive, correlational design used to measure community health nurse educator's perceived preparedness to disaster response. The study examined the relationships between and among community health nurse educator's perceived preparedness and personal attributes and self-regulation (motivation). The demographics included; geographic location, role (nursing background), age, years in nursing, years of teaching, the importance of disaster education, and previous disaster experience.

Sample/Sampling Frame

The sample population included community health nurse educators (n=123). The educators who participated in this study are nationally representative. IRB approval was obtained through the University of Missouri St. Louis IRB Committee. Permission was sought, and granted, to use the Association of Community Health Nurse Educators as the study sample. This was done via email and through the president of the organization. The survey remained open for four weeks. Once the survey came down, the response rate was n=68. With the goal of obtaining over 100 completed surveys, it was sent out again using the snowball sampling technique. This time, ACHNE members were asked to share the link with colleagues who are also community health nurse educators (though not necessarily members of ACHNE). The final sample population resulted in a group of community health nurse educators who teach in a variety of nursing programs and universities.

This study examined the following research questions:

1. What is the perceived competence of community health nurse educators regarding their disaster preparedness? Community health nurse educators perceived

competence in disaster preparedness will be measured using the EPIQ tool. This tool will provide a range of scores suggesting the perceived competence of participants.

2. Which of the variables - individual differences (geographic location, role (nursing background), age, years of nursing, years of teaching, the importance of disaster education and previous disaster experience), and self-regulation most influence perceived competence in disaster preparedness?
3. Is there a relationship between self-regulation scores and perceived competence in disaster preparedness? The scores of the self-regulation measure and the EPIQ tool in a multiple regression analysis.
4. Is there a relationship between perceived competence in disaster preparedness and the perceived importance of disaster education?
5. Is there a relationship between perceived competence in disaster preparedness and actively participating in a major disaster event?

Procedure

The inclusion criteria were that participants must be community health nurse educators and/or members of the Association of Community Health Nurse Educators. The recruitment plan included both active and passive strategies. An email was sent out explaining the research study's purpose, risks, and benefits. Participant questions or concerns were addressed via email, and participants were made aware that participation in the research was voluntary. Data was collected electronically. A Qualtrics survey was created and sent out electronically to the ACHNE listserv. The survey remained open for four weeks, with a reminder email sent out at the two week and three-week marks.

This resulted in 68 completed surveys. A snowball sampling technique was then used. An email was sent out again to the ACHNE Listserv requesting that members share the survey link to community health nurse educators whom they may know, or work with. This resulted in a population number of n=122 once all data was cleaned and incomplete surveys removed. Participants were entered into a drawing to receive one of ten 25.00 Amazon gift cards as an incentive for their time. The survey was confidential and identifying information in the form of email addresses were only included on those who choose to be part of the gift care drawing.

Retention strategies that were used in the study included follow up, reduced participation burden, and convenience. These strategies are recommended as important aspects of any research (Mazurek, Melnyk, & Morrison-Beedy, 2019). Follow up will be done by presenting or reporting the findings at a future annual meeting. Reduced participant burden was done by reducing the number of items on the survey from 68 items to 55 items. Convenience was displayed by providing the survey online with a direct link for participants to click to easily reach the survey.

Instrument

The EPIQ tool was created in 2003 and used in a large study conducted by Wisniewski, Dennik-Champion, and Peltier (2004). The tool consisted of 68 items assessing nurse self-reported perceived familiarity and competence in emergency preparedness. Throughout the study, the researchers expanded the tool to include self-reported familiarity with emergency preparedness competency dimensions (Wisniewski et al.). This provides strength to the instrument and the data that it is able to extract.

The total summed score of the EPIQ is used as a measure of nurses' perceived competence in disaster preparedness. The authors found that the tool was valid and reliable for assessing the perceived competence of nurses in emergency preparedness. The validity and reliability particulars of the tool will be discussed later in this document. Upon completion of the study, Wisniewski et al. recommended that further studies be done to examine nursing preparedness curricula.

The EPIQ tool consists of 10 dimensions of emergency preparedness. The subscale dimensions include familiarity with the following; detection of and response to an event (7 questions), incident Command System (ICS) (8 questions), ethical issues in triage (4 questions), epidemiology and surveillance (4 questions), isolation and quarantine (2 questions), decontamination (3 questions), communications and connectivity (7 questions), psychological issues (4 questions), special populations (2 questions), and accessing critical resources (3 questions). These dimensions match up nicely with the ICN framework (2009). The EPIQ tool has been used in numerous research studies to date (including Baack & Alfred, 2013; Schneider, 2019).

Three questions of the Self-Regulation survey (Baack & Alfred, 2013) were added to this study. These questions explored the community health nurse educator's likelihood (motivation), commitment to participate, and willingness to assume the risk of participation in disaster preparedness. This combination of survey instruments provided data from each of the constructs of the SDT. While the original EPIQ instrument contains 68 questions, this number was decreased to 55 items to include only questions relevant to this specific population. The survey also included self-regulation questions and demographic questions specific to community health nurse educators. After

incorporating the Self-Regulation and demographic survey questions, the instrument used in the study contained a total of 55 items.

Questions 1-7 were multiple-choice, yes or no, and fill in the blank and made up the demographic portion of the instrument. Questions 8-52 addressed the familiarity with emergency preparedness terms and activities and are Likert-style questions with one being very familiar and five not being familiar. The total possible range of scores for this section is 44-220. Questions 53-55 will be Likert-type questions with one being not likely and five being very likely and address self-regulation.

Reliability and Validity of Instrument

The EPIQ tool was tested for validity and reliability by the creators of the tool. The cumulative variance explained was 73.5%, and the coefficient alphas ranged from 0.83 to 0.94; these numbers show high levels of reliability (Wisniewski et al., 2004). In 2008, Garbutt, Peltier, and Fitzpatrick evaluated the EPIQ and reported Cronbach's alphas for the subscales ranged from 0.83 - 0.94 and 0.97 for the total instrument. Garbutt, Peltier, and Fitzpatrick (2008) also evaluated the tool and found the Cronbach's alphas for the subscales ranging from 0.84 - 0.95 and 0.98 for the EPIQ total instrument score. Baack and Alber's (2013) found the EPIQ tool's internal consistency reliability was also strong in their study with Cronbach's alphas for the subscales ranging from 0.84 - 0.95 and 0.98 for the EPIQ total score. In the most recent research in the literature examining the perceived disaster competence of the study's sample of emergency department (ED) registered nurses, the alpha was .98 for the total EPIQ (Scheider, 2019).

The Self-Regulation (SR) survey was used in Baack and Alber's (2003) and contained three questions relating to self-regulation to engage in disaster preparedness

activities. The Cronbach's alpha for the Self-Regulation survey in Baack and Alber's study sample was 0.91.

Instrument Exemplars

The two most relevant uses of EPIQ for the current study is by Baack and Albers in 2013 and Schneider in 2019. Baack (2011) actually created her own tool, which was a combination of the EPIQ survey, Nurse Assessment Readiness Survey (NAS), Self-Regulation Survey, and Job Satisfaction Survey. The 58-item survey was emailed to over 500 nurses. Using these instruments, with the bulk of the questions coming from the EPIQ scale, the researcher was able to provide valuable data for disaster nursing. This study also used the SDT, which is the theory that will be used in the current study to examine community health nurse educators.

While the study completed by Baack and Albers (2013) surveyed nurses in rural Texas, the results of the study were consistent with the research in the literature. The study reinforced the data that shows that nurses feel unprepared. Using the instruments to obtain the data pertinent to the constructs of the theory, Baack and Albers were able to show that intrinsic motivation does, in fact, predict disaster preparedness in nurses.

Baack and Albers (2013) recommended some major implications for practice and future research. Ethical and psychological preparedness should be part of disaster training. Public health organizations should hold disaster preparedness seminars and exercises, along with acute care nurses. Public health nurses are in charge of setting up shelters and the community at large, but that acute care nurses are needed to be ready to act in a disaster. The main finding was that nurses do not feel prepared to assist in a disaster. The major message that Baack and Albers reported was that training for nurses

must be consistent and ongoing throughout their careers. This sets the stage for the current research to be conducted with community health nurse educators.

The second exemplar and the most recent to use the EPIQ in disaster nursing research was conducted by Schneider (2019). This study used Patricia Benner's Novice to Expert Theory as a framework to guide his research but applied the EPIQ instrument in the same way as previous studies, but this researcher also added a few extra instruments. EPIQ (made up the bulk of the survey) but also included the Acknowledges Using Intuition in Nursing Scale (AUINS), the Triage Decision Making Inventory (TDMI), and a Demographic Data Information form designed by Schneider. This particular study examined full and part-time emergency nurses with a BSN degree or higher.

The validity and reliability for this current study was conducted on the EPIQ scale and the SR questions. The EPIQ scale (question numbers 9-52) had a Cronbachs Alpha of 0.98. The EPIQ questions were highly correlated with perceived competence in disaster nursing at a statistically significant level ($p < .001$) and total score range of 0.60 and 0.91. The SR questions had a Cronbachs Alpha of 0.89 (question numbers 53-55). The SR questions were also highly correlated with the perceived competence in disaster nursing at a statistically significant level ($p < .001$) and a total score range of 0.91-0.93.

The survey link was posted on a research website for nurses to participate voluntarily. The study included nurses working in acute care settings in a determined New York area. The participants were recruited through the Emergency Nurses Association. This survey was done by using Qualtrics, which was also used in the current study. Schneider found that the need for disaster nursing education is of utmost importance. With Emergency nurses being on the frontlines, Schneider (2019) states, "it

is vital that hospital administration, government officials, and professional practice organizations understand the importance of disaster preparedness knowledge and both explore and promote innovative methods to educate and train nurses" (P. 91).

Data Analysis

Quantitative data analysis was conducted in this research study. One-way ANOVA and independent t-test were used to analyze the data. A One-way ANOVA is used to compare two or more groups of variables but is most beneficial for testing three or more groups of variables. This test compares means to make inferences about data.

Assumptions of a One-way ANOVA include (Morgan et. al, 2011);

1. Observations are independent.
2. Variances on the dependent variable are across equal groups.
3. The dependent variable is normally distributed for each group.

A t-test is useful to use when comparing two groups of variables. T-tests can be one tailed or two tailed which is the reason that this test is beneficial. According to (Morgan, et. al, 2011) assumptions of an independent t-test include;

1. The variances of the dependent variable in the two populations are equal.
2. The dependent variable is normally distributed within each population.
3. The data are independent.

Independent and Dependent Variables

IV- The values used to predict the perceived competency of disaster preparedness in community health nurse educators are; geographic location, role (nursing background), age, years in nursing, years of teaching, the importance of disaster education, and previous disaster experience.

DV- The value to be predicted is the perceived competence of disaster preparedness in community health nurse educators.

Data was collected during the spring 2020 semester via a survey instrument. The Qualtrics survey was sent out electronically to the sample population via the ACHNE listserv with the link to the survey. The researcher did not collect individual emails or names of the sample population except for those who choose to take part in the gift card drawing. The data was collected and entered into SPSS Statistics version 26 for Windows. Findings will be submitted for potential display at the Association of Community Health Nurse Educators annual meeting in the summer of 2021.

Chapter 4: Results

This chapter explains the results of the data analysis including the quantitative survey results. Demographics are described and key findings are highlighted. The survey was open from February 20, 2020 to March 20, 2020. It was then reopened from April 30, 2020 to May 30, 2020, for a more robust response rate. Analysis of data was conducted using the Statistical Package for the Social Sciences (SPSS 26.0).

Response Rate

122

Sample Size and Demographics

The demographic characteristics are depicted in Table 1 and represent both frequency and percentages for geographic location, nursing background, age (generation), years of nursing, years of teaching, perceived importance of disaster, and previous disaster experience. More than half of the nurses surveyed have been nurses for 30 years or more (52%) and fall into the baby boomer (born between 1946-1964) category (60%). Of the total sample, 26.8% have been teaching community health nursing for 0-10 years and 87% have a community/public health background.

<u>Geographic Location</u>	<u>Frequency</u>	<u>%</u>
Alabama	2	1.6
Arizona	1	0.8
California	1	0.8

Colorado	3	2.5
Connecticut	1	0.8
Florida	3	2.5
Georgia	1	0.8
Idaho	1	0.8
Illinois	10	8.2
Indiana	3	2.5
Iowa	5	4.1
Kansas	1	0.8
Kentucky	2	1.6
Maryland	4	3.3
Massachusetts	3	2.5
Michigan	1	0.8
Minnesota	3	2.5
Mississippi	5	4.1
Missouri	4	3.3
Nebraska	1	0.8
New Jersey	3	2.5
New Mexico	2	1.6
New York	12	9.8
North Carolina	5	4.1
Ohio	5	4.1
Oregon	1	0.8

Pennsylvania	5	4.1
Rhode Island	1	0.8
South Carolina	2	1.6
Tennessee	2	1.6
Texas	17	13.9
Utah	2	1.6
Virginia	2	1.6
Washington	2	1.6
Wisconsin	5	4.1
Wyoming	1	0.8
<u>Nursing Backgrounds</u>	<u>Frequency</u>	<u>%</u>
Ambulatory	17	13.9
Community/Public Health	107	87.7
Critical Care	13	10.7
Emergency Services	15	12.3
Medical Surgical	21	17.2
Maternal Child	20	16.4
Operating Room/PACU	6	4.9
Pediatrics/Neonatal	10	8.2
Psych/Mental Health	9	7.4
Other	30	24.6
<u>Years as a Nurse</u>	<u>Frequency</u>	<u>%</u>
0-5 years	3	2.5

6-10 years	5	4.1
11-15 years	6	4.9
16-20 years	9	7.4
21-25 years	13	10.7
26-30 years	23	18.9
Greater than 30	63	51.6
<u>Years as a Community Health Nurse Educator</u>	<u>Frequency</u>	<u>%</u>
0-5 years	33	27.0
6-10 years	32	26.2
11-15 years	17	13.9
16-20 years	13	10.7
21-25 years	11	9.0
26-30 years	6	4.9
Greater than 30	10	8.2
<u>Generation</u>	<u>Frequency</u>	<u>%</u>
Millennials	9	7.4
Generation X	38	31.1
Baby Boomers	74	60.7
Silent	1	0.8

Descriptive Statistics of the Main Variables

The descriptive statistics for the main variables include the mean, standard deviation, and actual ranges of the main variables of the study. The 44 disaster familiarity questions (EPIQ) were measured on a Likert scale with 1=very familiar and 5= not familiar. The Self-Determination theory questions were measured on a similar Likert scale with two of the questions with 1=extremely likely and 7=extremely likely and one question with 1=very committed and 5=not at all committed.

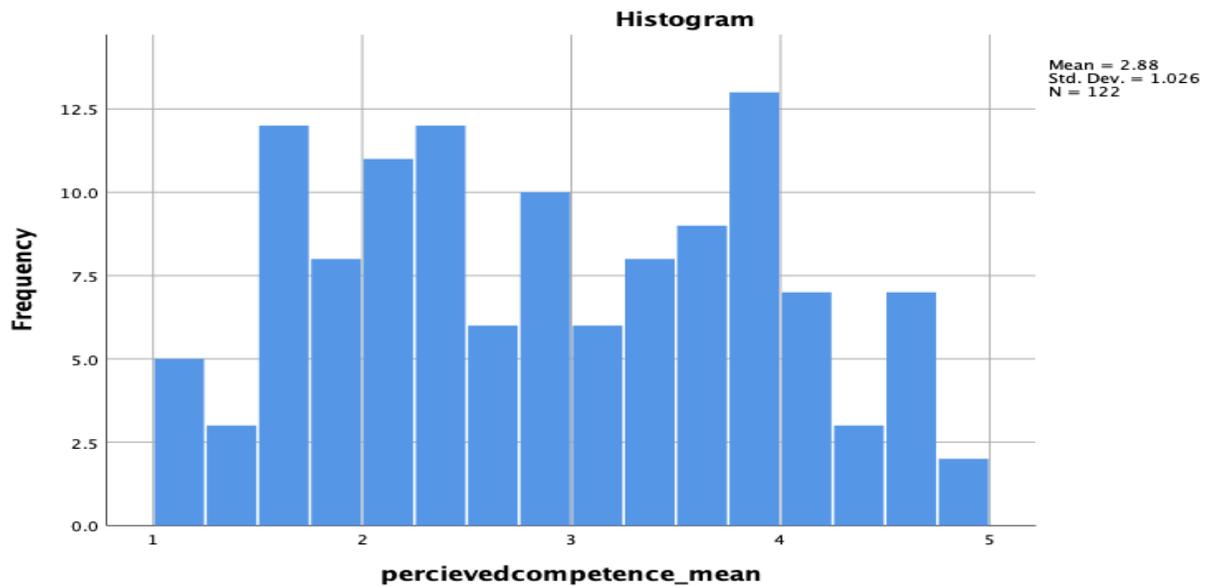
Findings

Research Question 1: What is the perceived competence of community health nurse educators

regarding their disaster preparedness?

The 44 disaster familiarity questions (EPIQ) were measured on a Likert scale with 1=very familiar and 5= not familiar. The community health nurse educators' perceived competence in disaster preparedness was measured using the EPIQ mean score [n=122; M=2.88; SD=1.026; Range=1-5]. With a median in the range of scores being a score of 2.89, the mean of 2.88 suggests that the overall perceived competence of community health nurse educators relating to their familiarity with disasters is that they are somewhat familiar. Figure 1 shows the disaster preparedness perceived competence of all respondents.

Figure 1: Disaster Preparedness Perceived Competence

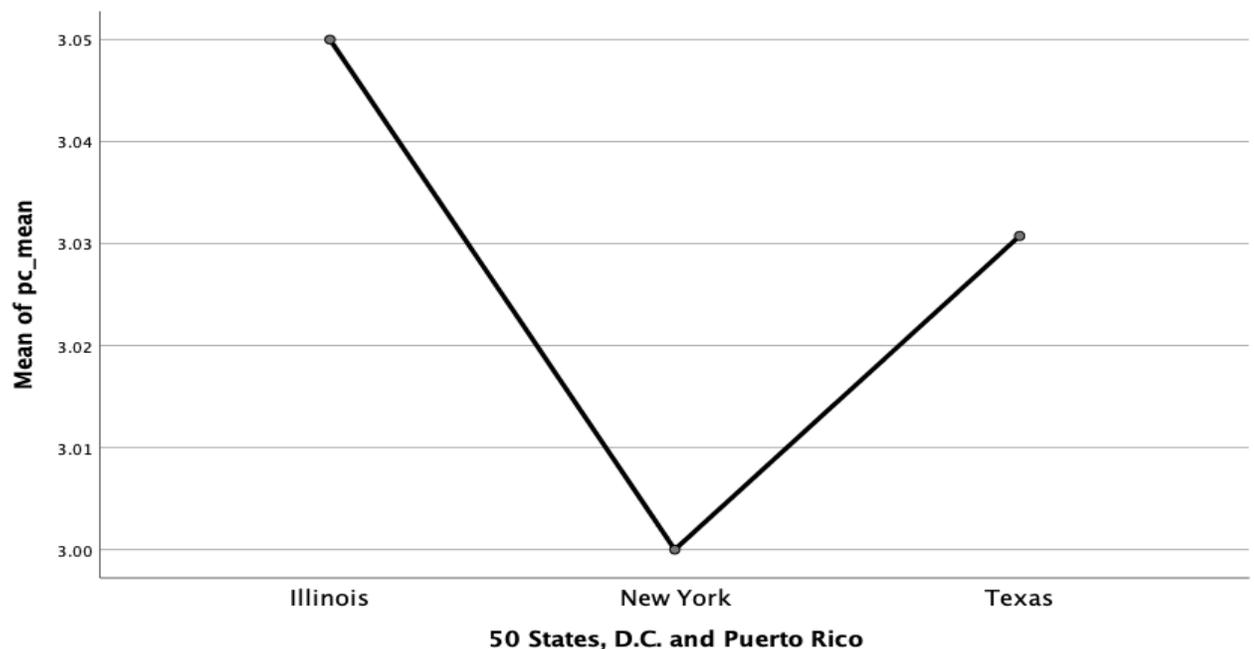


Research Question 2: Which of the variables-(individual differences); geographic location, nursing background, age (generation), years of nursing, years as a community health nurse educator, perceived importance of disaster content in courses, previous disaster experience, and self-regulation most influence community health nurses perceived competence in disaster preparedness?

Community health nurse educators' perceived competence in disasters was measured using the 44-item EPIQ scale. Geographic location was included by using a drop-down box that included all of the US states. A total of 36 states were represented in the study. States that had the most survey responses were Texas (13.9%), Illinois (8.2%), and New York (9.8%). An interesting point to note is that both Illinois and Texas community health nurse educators reported less familiarity with disaster preparedness than New York Community health nurse educators. An One-way ANOVA analysis was applied to Texas, Illinois, and New York to compare and examine the significant

difference among the three states. There was no statistical significance between states ($F=.007$, $p=.993$). Even though mean scores of states are close to each other, based on the mean results of each of the three states (Illinois=3.05, New York= 3.00, Texas=3.03), community health nurses in Texas are a little more familiar with the surveyed components of disaster preparedness than Illinois. Figure 2 shows the disaster preparedness mean according to the three highest responding states.

Figure 2: States with Highest Response Rate (TX, IL, NY)



Geographic location was also grouped into regions and an ANOVA analysis was run to see how this would impact perceived competence in disaster nursing. The breakdown for this analysis was 1=Midwest region, 2= Southern region, 3=Northeast region, and 4= Western region. The Midwest region included; Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin. The Southern region included; Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. The Northeast region included;

Connecticut, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island.. The Western region included; Arizona, California, Colorado, Idaho, New Mexico, Oregon, Utah, Washington, and Wyoming. The results were not statistically significant ($F=0.57$, $P=0.63$). However, the data showed that the region with the highest perceived competence in disaster nursing preparedness lived in the Western region. The Western region accounted for the smallest number of responses, so that is important to consider. See Table 2 for specific data.

<i>Geographic Regions</i>			
<u>U.S. Region</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>
Midwest	38	2.90	1.11
South	41	2.80	0.98
North	29	3.05	1.04
West	14	2.65	1.02

The nursing background of community health nurse educators was depicted on the survey as a choice between the following specialty areas; ambulatory care, community health, critical care, emergency services, medical-surgical, maternal-child, operation room/PACU, pediatrics/neonatal, psych/mental health, or other. Community health nurse educators were able to pick more than one background to reflect their nursing experience. Table 3 shows the nursing backgrounds data.

<i>Nursing Backgrounds</i>			
<u>Background</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>
Ambulatory Care	3.02	.948	17
Community Health	2.86	1.01	107
Critical Care	2.81	1.13	13
Emergency Services	2.57	1.15	15
Medical-Surgical	2.82	1.01	21
Maternal-Child	2.96	1.03	20
Operation Room/PACU	2.64	1.02	6
Pediatrics/Neonatal	2.73	.80	10
Psych/MentalHealth	2.88	1.03	9
Other	2.84	1.05	30

Age was represented in the survey as a choice of generations; Millennials (born between 1981-1996), Generation X (born between 1965-1980), Boomers (born between 1946-1964), and Silent (born between 1928-1945). A One-way ANOVA analysis was conducted and showed no significant difference between generations and perceived competence in disaster preparedness ($F=.640$, $p=.591$). Boomers reported greater familiarity (mean=2.77, $SD=1.066$) with disaster preparedness than the other three groups. Millennials reported familiarity with disaster preparedness (mean=2.98, $SD=1.099$), which is the second most familiar of the groups. It is important to note the number of participants in each generational group; Millennials $n=9$, Generation X $n=38$, Boomers $n=74$, and Silent $n=1$. Due to the small sample in the Millennial and Silent

generations further, the next analysis was conducted without those two groups. An independent t-test was run to see if there was significance between generation x and boomers and there was no statistical significance ($t=1.346$, $p=.314$). Figure 3 shows the mean disaster preparedness perceived competence among the generations.

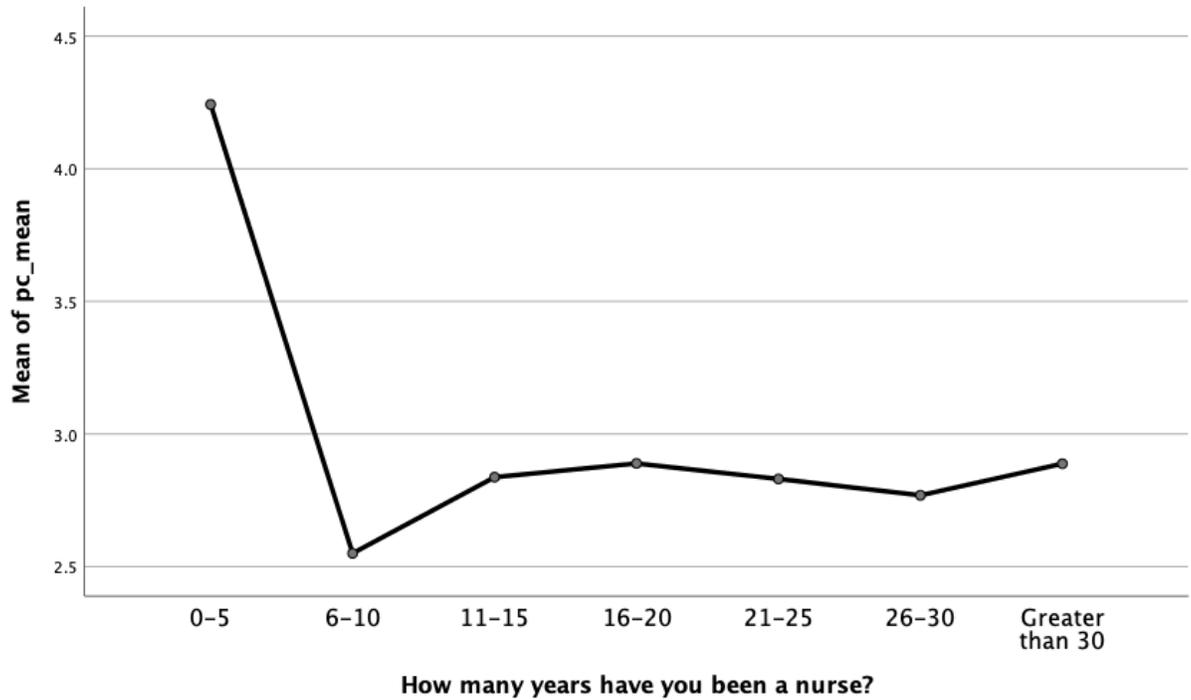
Figure 3: Generation



The number of years each community health nurse educator had been a nurse was also examined in relation to perceived competence of disaster preparedness. This was represented on the survey as a choice in five year increments up to thirty; 0-5, 6-10, 11-15, 16-20, 21-25, 26-30, and greater than 30. A One-way ANOVA was conducted to complete this analysis. There was no statistical significance ($F=1.022$, $p=.415$) between years of nursing between the groups and perceived competence in disaster preparedness. The group that reported the most familiarity was those who had between 6-10 years of nursing experience ($n=5$, $mean=2.55$) followed by those who had between 26-30 years of

nursing experience (n=23, mean=2.77). Figure 4 shows the disaster preparedness perceived competence mean according to years as a nurse.

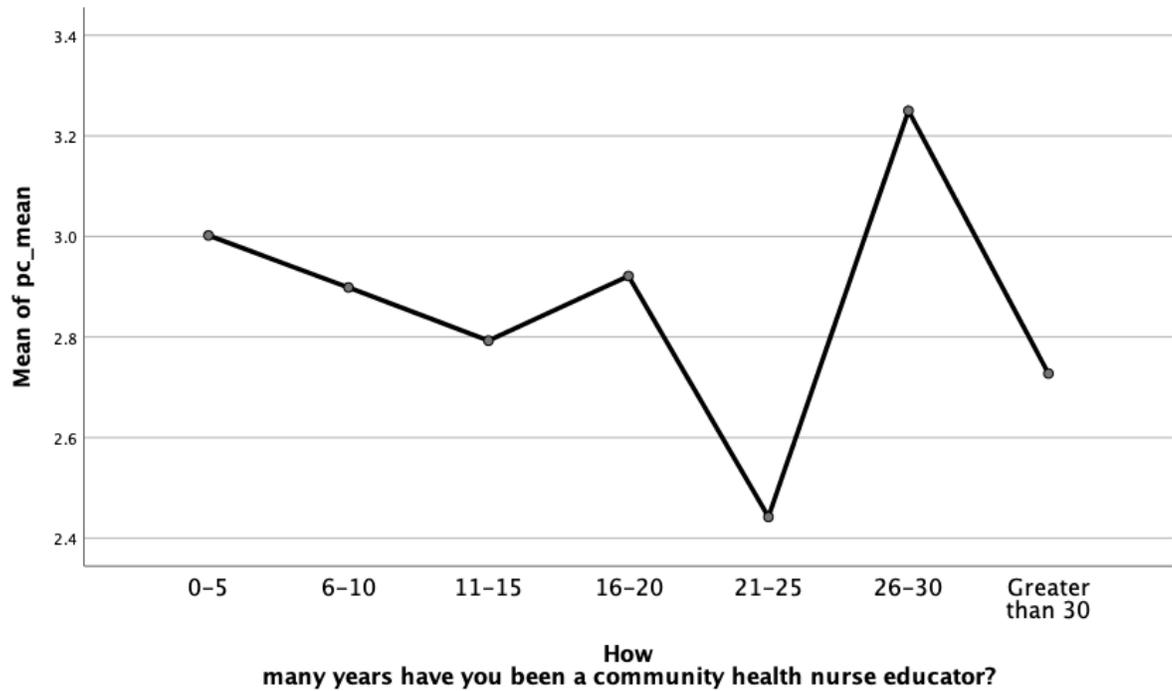
Figure 4: Years of Nursing Experience



Years of nursing experience was also grouped into 10 year increments and an ANOVA analysis was run to see the impact on perceived competence in disaster nursing. The breakdown for this analysis was 0-10 years, 11-20 years, 21-30 years, and greater than 30 years. The results were not statistically significant (F=0.32 P=0.81). However, the data showed that the lower the years of nursing experience, the lower the perceived competence in disaster nursing preparedness. See Table 4 for more detailed data.

<i>Groups RN Experience</i>			
<u>Years RN Experience</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>
0-10 years	8	3.18	1.26
11-20 years	15	2.87	0.98
20-30 years	36	2.79	1.04
Greater than 30 years	63	2.89	1.02

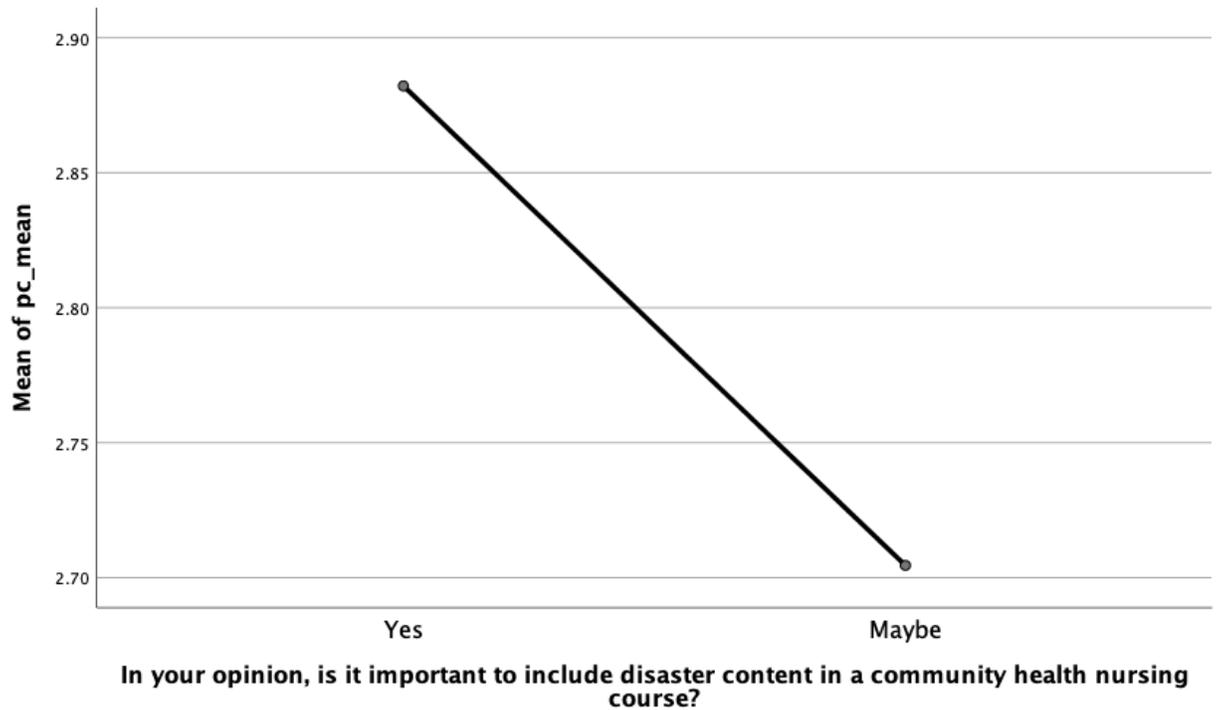
Community health nurse educators' years of community health teaching experience was included on the survey in five-year increments similar to the years of nursing. This is a categorical variable and was categorized into five year increments including; 0-5, 6-10, 11-15, 16-20, 21-25, 26-30, and the last category being greater than 30 years. A Oneway ANOVA was conducted to complete this analysis. There was no statistical significance ($p=.736$) between years as a community health nurse educator and perceived competence in disaster nursing preparedness. The group reporting the most familiarity with disaster preparedness were those who had been community health nurse educators for 21-25 years ($n=11$, $mean=2.44$) followed by those who had greater than 30 years' experience as a community health educator ($n=10$, $mean=2.73$). Figure 5 shows the disaster preparedness perceived competence mean according to years of experience as a community health nurse educator.

Figure 5: Years as a Community Health Nurse Educator

Years of community health nurse educator (CHNE) experience were also grouped into 10 year increments and an ANOVA analysis was run to see the impact on perceived competence in disaster preparedness. The breakdown for this analysis was 0-10 years, 11-20 years, 21-30 years, and greater than 30 years. The results were not statistically significant ($F=0.31$, $P=0.82$). However, the data showed that the lower the years of CHNE experience, the lower the perceived competence in disaster nursing preparedness. See Table 5 for more detailed data.

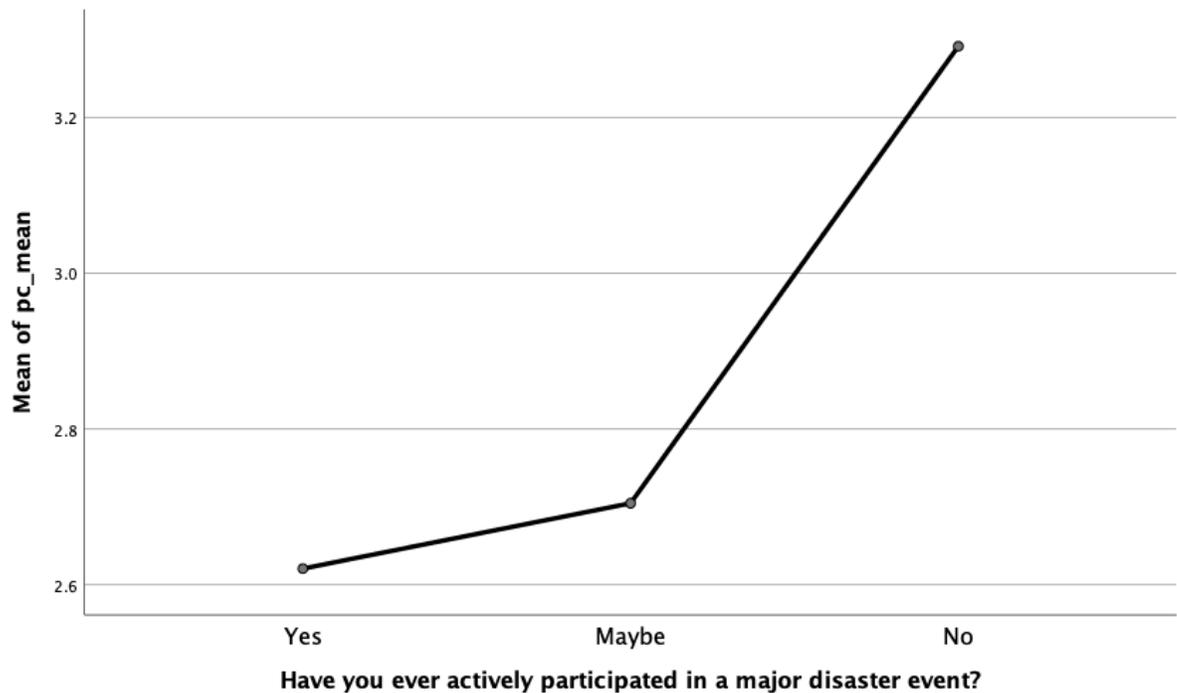
<i>Groups CHE Experience</i>			
Years CHE Experience	N	Mean	SD
0-10 years	65	2.95	0.98
11-20 years	30	2.85	1.03
20-30 years	17	2.73	1.18
Greater than 30 years	10	2.73	1.15

Community health nurse educators were asked whether they felt it was important to teach disaster preparedness in their courses with the response choices being yes, maybe, and no. A Oneway ANOVA was conducted to complete this analysis. Since no one answered no to this question the statistical analysis was conducted using only yes and maybe responses. There was no statistical significance found between the perceived importance of teaching disaster and the perceived competence of disaster preparedness ($F=.115$, $p=.735$). The majority of the sample population responded that, yes, it is important to teach disaster in their courses ($n=118$), with a small amount responong maybe ($n=4$).

Figure 6: Importance of Including Disaster Content in Course

The sample population were asked if they had ever participated in a disaster and if that influenced perceived competence in disaster preparedness. The choices were yes, maybe, and no. 72 replied yes, 4 replied maybe, and 46 replied no. A Oneway ANOVA was conducted to analyze the data. Having participated in a disaster previously was significant in perceived competence in disaster preparedness between groups ($F=6.62$, $p<.05$). If community health nurse educators had actively participated in a major disaster event in the past, they reported a greater perceived competence in disaster nursing preparedness ($p=.001$).

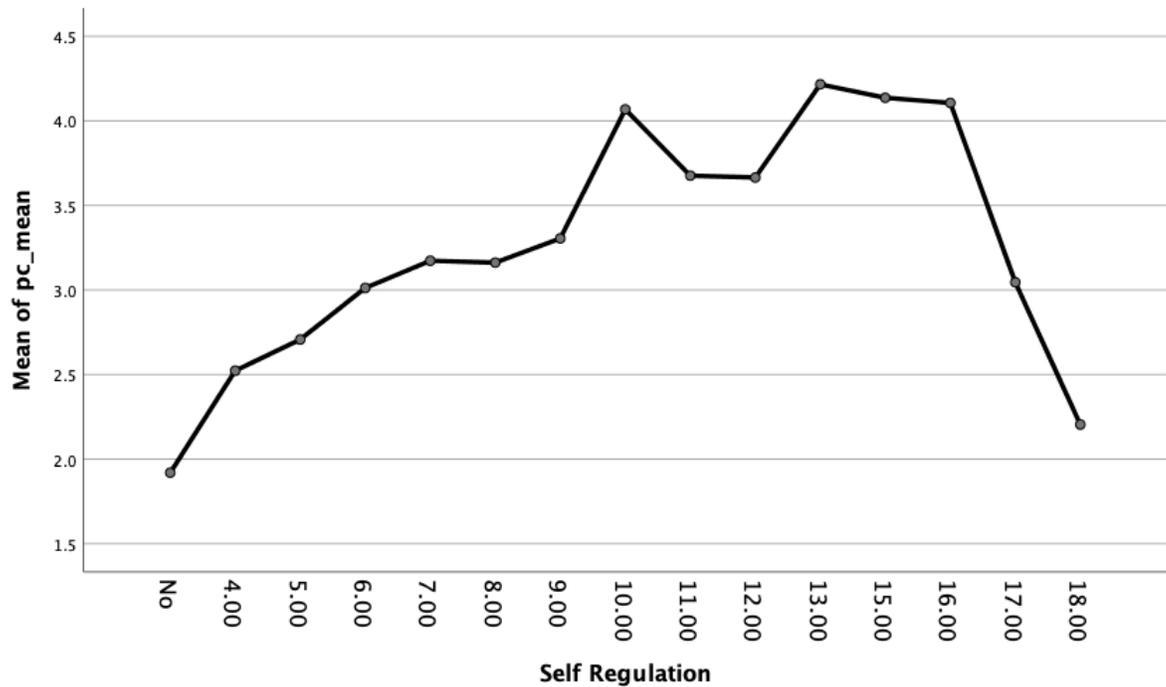
Figure 7: Active Participation in Previous Disaster



The Self-Determination theory questions were measured using a Likert scale with two of the questions with 1=extremely likely and 7=extremely unlikely and one question with 1=very committed and 5=not at all committed. Self-regulation was incorporated into the survey with three questions; How likely would you say you are to get involved and prepared for disasters in your community, how committed are you to participating in emergency preparedness measures in your community, and How likely are you to assume the risk of involvement in a disaster situation? A oneway ANOVA analysis revealed that

Self-regulation and perceived competence in disaster preparedness are statistically significant ($p=.001$). The higher the level of self-regulation the more familiar community health nurse educators are with disaster preparedness.

Figure 8: Self-Regulation



Research Question 2, Sub Question 3: Is there a relationship between self-regulation scores and perceived competence in disaster preparedness?

Self-regulation was examined using three questions in the survey; How likely would you say you are to get involved and prepare for disasters in your community, How committed are you to participating in emergency preparedness measures in your community, and How likely are you to assume the risk of involvement in a disaster situation (bio-terrorism event, pandemic etc.)? A one-way ANOVA was used to answer this question. There was a statistically significant correlation between self-regulation scores and perceived competence scores ($F=5.38$, $p<.001$). The more familiar community health nurse educators are with disaster preparedness, the higher their level of self-regulation.

Research Question 2, Sub Question 4: is there a relationship between perceived competence in disaster preparedness and the perceived importance of disaster nursing education?

A one-way ANOVA was conducted to examine these variables. There was no statistical correlation between a community health nurse educator's perceived importance of teaching disaster content in their community health course and their perceived competence in disaster preparedness.

Research Question 3, Sub Question 5: Is there a relationship between perceived competence in disaster preparedness and actively participating in a major disaster event?

A one-way ANOVA was conducted to examine these variables. There was a statistical correlation between a community health nurse educator's perceived competence in disaster preparedness and a history of actively participating in a major disaster event ($F=6.63$, $P<.05$). There was a 0.67 higher score in perceived competence in disaster preparedness of community health nurse educators who had previously participated in a disaster.

Chapter 5: Summary and Conclusions

Summary

This descriptive correlational research study was the first to examine the relationships between and among disaster preparedness perceived competence, self-regulation and community health nurse educators. The sample population completed the Emergency Preparedness Information Questionnaire (EPIQ) for measurement of disaster preparedness familiarity (Wisiewski, Demmik-Champion, & Peltier, 2004), Self-Regulation, and demographic data along with 2 researcher generated questions.

The aim of this study was to examine the disaster preparedness of community health nurse educators. Concepts of the Self-Determination theory were used to guide this study. The theory asserts that there is motivation behind choices that individuals make. People become self-determined to make a change or learn something new when they feel competent, connected, and autonomous; this study focused mainly on the feeling of competence and how that influences the levels of familiarity of various components of disaster preparedness. As mentioned in a research study conducted by Charney et. al (2019), confidence and competence impact willingness to act in a disaster. This information explained how concepts such as competence and self-regulation can impact a persons actions. The current study showed that when self-regulation was higher in a community health nurse educator, and the community health nurse educator had previous experience in a disaster their perceived competence in disaster preparedness was also higher. Due to this, is reasonable to infer that when a community health nurse educator has a high level of perceived competence in disaster preparedness, they too will be more likely to act in a disaster situation.

Many of the demographic variables in this study were not statistically significant including; geographic location, nursing background, age, years as a nurse, and years as a community health nurse educator. This is reasonable considering what the literature has shown to date regarding nurses and healthcare providers feeling unprepared for a disaster. The study done by Charney et al. (2019), specifically showed that health care profession students did not feel their programs of study included adequate disaster preparedness content in the curricula. This leads back to the lack of cohesive and coordinated disaster preparedness education in academic programs including programs of nursing. Differing demographics do not appear to play a role in the perceived competence of nurses, of any kind, in disaster preparedness and seems to be a nationwide problem.

Another important aspect of the study to note is that 121 respondents reported that disaster preparedness content is important to include in community health nursing curriculum. This shows that along with recommendations from national nursing organizations and leading public health experts, community health nurse educators realize the need for inclusion of this essential content. As leaders in schools of nursing and universities, community health educators are poised to demand change in this area of nursing. As seen in the current COVID 19 pandemic, universities are realizing the need for a stronger public health presence on campus. Better prepared community health nurse educators can provide recommendations, advice, and expertise in this area, not only to educate students, but to educate university leaders and administrators in times of crisis.

The population sample for this study consisted of 122 people who met the inclusion criteria for the study and who completed the survey. The sample included registered nurses who were currently in the role of a community health nurse educator. The background of

the majority of the sample (n=107) included community health nursing although various other nursing backgrounds were represented. Thirty-six states were represented in the study. The majority of the sample (n=74) fell in the Boomer generation (born in 1946-1964). The study was conducted via electronic survey made available by a link distributed on the ACHNE listserv and then shared among the ACHNE members colleagues. Participants were directed to the Qualtrics website that included the University of Missouri St. Louis information affiliated with the researcher and the letter of participation.

Conclusions

Results of this study showed a statistical significance in community health nurse educators mean perceived competence in disaster preparedness and previous disaster experience ($p < .05$). It is not surprising that educators who had actively participated in a disaster previously would feel more competent in disaster preparedness and management. This shows that the ability to practice during a disaster leads to nurses who are more familiar with the various components of disaster work.

The research study also showed a positive correlation between perceived competence in disaster preparedness and self-regulation ($F=5.38$, $p < .001$). If a community health nurse educator reported being more likely to get involved and prepared for disasters, were committed to participating in emergency preparedness measures, and were likely to assume the risk of involvement in a disaster situation; their familiarity with components of disaster preparedness (perceived competence) was higher. Therefore, a community health nurse educator with higher self-regulation would be expected to have higher disaster preparedness perceived competence than those with low self-regulation.

Significant relationships were found between the independent variables of the participants previous disaster experience and disaster preparedness and perceived competence and self-regulation, supporting the self-determination theory. The empirical evidence of this research study was congruent with Deci's Self-determination theory that states that motivation drives individuals to take on certain challenges and learning. Although, disasters occur more today than they have previously, they are still not something that healthcare providers think of as happening to them often. The need for cohesive and coordinated disaster curriculum in schools of nursing has been expressed by leading disaster nursing experts for years. This was most recently declared in the Johns Hopkins Bloomberg School of Public Health Recommendations for Improving National Nurse Preparedness for Pandemic Response: Early Lessons from COVID-19 (2020). Starting by providing community health nurse educators with appropriate training and educational tools can help fill the gap in their knowledge. Only then can educators adequately provide disaster preparedness content and hands on learning experiences that will allow nursing students to gain experience and increase their competence in disaster preparedness.

Limitations

Limitations related to many aspects of research studies such as; design, sample, and instrumentation should be considered when interpreting data. Inclusion criteria limited participation in the is research study to community health nurse educators only. As this study limited participation to nurses who were from a particular professional association or the colleagues of members of that association, the sample may not be reflective of community health nurse educators in states without participation and other associations.

Additionally, participants were required to be community health educators further limiting eligibility for participation in the study and enhancing probability of not being homogenous. A future study could focus on community health nurse who do not necessarily teach the content.

A second limitation is that this research was conducted at the beginning and middle of worldwide pandemic. The sample population of this research study were busy reformatting classes, investigating new clinical experiences, and working on task forces/pandemic planning committees. This particular group of nurses were potentially strapped for time as other educators were but more so because of the specialty area under which disaster preparedness content falls. Schools of nursing in many states were moved to online and typical practicum experiences were eliminated due to the pandemic. Many nurses were also on COVID 19 overload. Dealing with it in the workplace and classrooms might have made nurses less likely to want to respond to a disaster preparedness survey. The other limitation related to conducting this research during a pandemic, is that those who answered the survey during the midst of the pandemic (the second survey) might report better than usual scores due to recent trainings/webinars required during the pandemic. Even just reading the news reports and listening to public health professionals might have swayed respondents to feel better prepared than they actually were.

A third limitation of this study was the use of the self-report instrument. Self-report instruments are based on participant perception of their knowledge and understanding of the content and questions. A participant's perception of knowledge may not reflect actual knowledge and misunderstanding of directions and questions by participants could result in incorrect responses or incomplete surveys leading to inaccurate results. The sample of

this study was accessed via ACHNE, a professional organization. Participants belonging to a prof org may have been hesitant to report their lack of familiarity to some of the disaster components for fear that they were things they felt they should know.

A fourth limitation of the study is that greater than half (n=72) of the sample reported having previous experience working in disasters. Using a sample with a greater number of nurses without previous disaster experience may have yielded different results.

Recommendations for Future Research

Continued research on the disaster preparedness competence of community nurse educators is recommended. This study found a positive significant relationship between previous disaster experience and perceived competence in disaster preparedness and self-regulation and perceived competence in disaster preparedness. Future research should explore the relationships between disaster competence and other concepts related to community health courses to gain a better understanding how to further improve disaster preparedness competence among nurses.

The limitations of this study can help to guide future studies. A study that is sent to all schools/colleges of nursing that include a community health nursing course would be helpful. Not focusing solely on a community health nursing association would broaden the responses. Replicating this study when there is not a current pandemic may show a more accurate depiction of the familiarity of community health nurse educators in disaster preparedness. An exam that showed the true preparedness of individuals might be beneficial as opposed to the perceived competence (familiarity) of disaster preparedness. Lastly, surveying nurses who have never participated in a disaster previously might provide more information on nurses without a background in disaster preparedness.

A plan is in the works to conduct a secondary study from this data to examine the differences between the first survey responses (the beginning of the pandemic) and the second survey responses (the later stages of the pandemic). It will be interesting to see if there were differences between the perceived competence of community health nurse educators at those two points of the pandemic. Since the survey covers aspects of communicable diseases this study would be relevant to COVID research, as well.

Implications

The results of the study lead to several key implications for policy and practice. This research further explains the extent of a lack of disaster preparedness content in nursing programs. With the knowledge from previous research studies finding that nursing students feel unprepared for a disaster, this study takes things a step further by examining the preparedness of the educators who teach the content. Trainings and education are needed for community health nurse educators along with adequate disaster competencies to incorporate into their community health course. Community health nurse educators also should have a seat at the table to discuss how this curriculum should be taught.

The relationships between disaster preparedness competence and previous disaster experience suggests that education and experiential learning may be a good way to teach disaster preparedness. Educators who have experienced a disaster themselves, may be the most competent to teach the content. Those who are more likely to get involved and prepare for disasters, are committed to participating in emergency preparedness measures, and are more likely to assume the risk of involvement in a disaster situation will also be more familiar with disaster preparedness.

The study showed that even community health nurse educators, who teach disaster content, do not feel extremely familiar with many aspects of disaster preparedness. These results tell us that the education that is occurring in nursing courses and in the field of nursing, are not adequate.

Practice and Education

Practice and education policies are key in making change to any academic program. The recent guidelines set forth by the Johns Hopkins Bloomberg School of Public Health make recommendations that are aimed at several key stakeholders, one being institutional of higher education and professional nursing education organizations to prepare nurses for emergency preparedness (Johns Hopkins, 2020).

Short term recommendations include:

1. Schools of nursing should develop and implement robust metrics for evaluating nurse preparedness and apply them across academic and lifelong learning programming.
2. State boards of nursing should establish a requirement for continuing education for public health emergency preparedness and response.
3. Schools of nursing, in collaboration with state boards of nursing, should develop a plan for continuity of clinical education during public health emergencies to ensure the integrity of the nursing workforce.

Long-term recommendations include:

1. American Association of Colleges of Nursing should release revised curricular Essentials and a tool kit for schools and universities to facilitate the inclusion of

emergency preparedness and response content across all baccalaureate and graduate academic programs.

2. The Accreditation Commission for Education in Nursing and the Nursing Commission for Nursing Education Accreditation, the 3 nursing accrediting bodies, should require the inclusion of teaching and simulation on emergency preparedness and response.
3. Academic nursing should formulate a proactive response to the changing infectious disease landscape by offering certificates and digital badges in emergency preparedness and response.

Along with these academic requirements created by leading disaster nursing experts in coordination with Johns Hopkins, proper training and professional development should be provided for community health nurse educators. In the spirit of lifelong learning, these trainings should be offered yearly and as often as changes to best practice occur.

Community health nurse educators are on the frontlines of healthcare's response in a disaster. It is vital that university administration, curriculum developers, state boards of nursing and faculty members understand the importance of disaster preparedness competence and promote the education and training of this population of nurses as well as its importance to a well-rounded nursing curriculum. This study found support for Deci's self-determination theory and represents an opportunity to include this critical content in all programs. Community health nurse educators can stress the importance of the nurse's role in disaster preparedness to administrators and state boards of nursing and provide students with the self-determination to take the risks involved in learning and acting in a disaster. None of this can happen, though, until we make sure that our disaster preparedness

leaders, community health nurse educators, have the preparedness training they need to be true content experts. Only then, can we prepare our nursing students for the next disaster that is sure to come.

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