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Role of the Nurse During Disaster Preparedness: A Systematic Literature Review and Application to Public Health Nurses

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Walden University

College of Health Sciences

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Elizabeth Rivera-Rodriguez

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the review committee have been made.

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2017

Abstract

Role of the Nurse During Disaster Preparedness: A Systematic Literature Review and
Application to Public Health Nurses

by

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MSN, University of Phoenix, 2014

MPH, Southern Connecticut State University, 2011

BSN, College of New Rochelle, 1991

Proposal Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

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Abstract

After the 2001 attacks on the World Trade Center, public health garnered more attention. This event forced public health nurses to acquire new roles needed to respond to disasters. The purpose of this project was to synthesize the current evidence related to the role of nurses during disaster preparedness and apply that evidence to public health nurses. The practice question focused on the role of nurses during disasters which were not a part of their normal daily activity. The Fineout-Overholt, Melnyk, Stillwell, and Williamson hierarchy for grading evidence was the theoretical framework used. A systematic literature review was conducted to synthesize the current evidence and answer the proposed practice questions. After removing exclusion criteria, there were 3 articles evaluated and graded for levels of evidence. Much of the current literature offered recommendations for competencies, role identification for nurses during disaster preparedness by their employers, curriculum development, and training needed for nurses to identify their role during disasters. A suggested recommendation based on this project is to conduct a mixed methods study to help identify the specific role of the public health nurse during disasters. Obtaining a broader perspective of the role for the public health nurse during disasters can provide a better understanding of the new roles and duties they can assume. The social implication of these findings is that local health departments can identify the role of public health nurses during disaster preparedness and improve the nurse's response to disasters, thereby protecting the health of populations.

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Section 1: Nature of the Doctoral Project

Introduction

Nurses are the largest section of the health care workforce industry (Rebmann & Buettner Moher, 2008). As of April 2017, there were currently over 4 million licensed practical nurses (LPNs) and registered nurses (RN) working in the United States (Kaiser Family Foundation, 2017). RNs have a diverse working background that allows them to transition into various clinical settings. Many nurses work in a variety of professional settings such as acute care hospitals, emergency departments, neonatal facilities, correctional facilities, physician offices, and public health facilities (Bureau of Labor Statistics [BLS], 2015). There are 63% of nurses who work in a hospital setting and only 2.5% work in other settings (BLS, 2015).

The role of nursing has changed following the events of September 11, 2001. This disaster began to highlight the differences between the health care systems and public health systems responding to disasters. During disasters, individuals will seek treatment at hospitals for their symptoms, while others will turn to the public health system for potential prophylaxis if indicated. Nurses are perceived as first receivers in a hospital setting and first responders in a public health setting. Nurses are exposed to disasters in a variety of ways during their work day. The disaster can be a mass casualty incident involving several injured patients, where the hospital and the nurses exceed their capacity to respond and treat, or it can be an outbreak such as salmonella poisoning that has the hospital treating the sick patients' and conducting epidemiological investigations.

Both nurses and public health nurses are tasked to respond to the immediate needs of the affected population during a disaster (Keeney, 2004). A commonality among nurses and public health nurses is that during any disaster, they need to rapidly conduct an assessment to identify the priority needs of the patient or population. An exception to this is most nurses who work in a hospital environment have an identified role to play during disasters when it comes to patient care within the health care facility, versus the public health nurse who does not have a clearly defined role during disaster preparedness.

Disasters and emergencies have come to the forefront since the events of September 11, 2001, terrorist attacks, attacks at the Pentagon, bioterrorism attacks, natural or man-made attacks, and the subsequent Anthrax events (Gebbie & Qureshi, 2002). Nurses have unique roles during disasters; they participate in evacuations and conduct triage, screening activities, epidemiological investigations, vaccinations, and disease surveillance (Wall, 2015). Nurses have usually contributed during disasters to assist where needed with no clearly identified role. When a disaster occurs, on the scene there are makeshift triage stations and treatment sites set up. In the hospitals, the emergency rooms prepare to receive the injured in a more controlled environment than in the public field. The primary goal for the nurse is to meet the immediate needs of the patient.

The emergency disaster preparedness programs have had a significant impact on public health in general and how public health nurses prepare for and respond to such events. Emergency disaster preparedness is changing public health practice (Lurie, Wasserman, &

Nelson, 2006). A challenge for public health nurses was identifying what role they have during emergency disaster preparedness. The federal government has spent over \$5 billion dollars to help health departments prepare for and respond to emergencies and disasters (Lurie et al., 2006). Even with an influx of funding, public health has historically been underfunded and often ignored because much of the focus for disaster preparedness was placed on acute care hospitals (Parker, Barnett, Fewes, Blodgett, & Links, 2005).

Problem Statement

There are several articles related to nurses and disaster preparedness, yet very little evidence was found regarding public health nurses and their roles during disaster preparedness. There are disaster core competencies that have been developed for the public health nurse (Association of State and Territorial Directors of Nursing, 2007; Polivka et al., 2008), as well as competencies developed for emergency room nurses (Schultz, Koenig, Whiteside, & Murray, 2012). However, there is still not a clear definition of the role of the nurse during disaster preparedness. Nurses working in an acute care setting are expected to respond to public health emergencies with limited resources and staffing. When responding to situations outside of their comfort zone, nurses have a fear of responding to disasters, not knowing what to do, how to respond to the event, and fear for their loved ones (O'Boyle, Robertson, & Secor-Turner, 2006).

Historically, nurses have always provided services and responded to disasters (Gebbie & Qureshi, 2006). Today, nurses, particularly those in public health, do not respond to disasters or emergencies daily. This lack of consistent experience in this area highlights the need for public

health nurses to have a clearly defined role in disaster preparedness and acquire the necessary skills and knowledge to respond to disasters and emergencies outside of their daily activities (Association of State and Territorial Directors of Nursing, 2007). There is a large body of literature evidence that addresses the competencies and potential roles for nurses to respond to disasters preparedness.

Public health nursing is a specialty that concentrates on working to improve the overall health of the population. Public health emergency preparedness is not a new concept but it has changed significantly since September 11, 2001. Public health preparedness is the capability of a public health department, its community, and the individuals residing in the community to prevent, protect against, respond to, and recover from unpredictable emergencies (Nelson, Lurie, Wasserman, & Zakowski, 2007). Since 2001, the federal government has invested over \$5 billion dollars to preparedness activities (Nelson et al., 2007). Even though there has been and still is funding being allocated to public health preparedness, there is no real clear idea of how prepared the United States is. There are still some ambiguous preparedness goals and poor accountability systems for determining preparedness results (Nelson et al., 2007).

Gebbie and Querishi (2002) stated there is still a limited amount of information within the literature that addresses the role of the public health nurse in disaster preparedness. A systematic literature review using Cumulative Index to Nursing & Allied Health Literature (CINAHL), PubMed, Medical Literature (MEDLINE), the Cochrane Library, the Joanna Briggs Institute, National Institute of Nursing Research (NINR), Registered Nurse Association of

Ontario (RNAO), and Walden Library database was conducted to answer the question: What is the role of the nurse during disaster preparedness and its application to public health nurses? The articles selected for evaluation were compared against the Fineout-Overholt, Melnyk, Stillwell, and Williamson hierarchy of evidence evaluation tool.

Chaos and confusion can occur during disaster preparedness events. One area where there cannot be confusion is in the nurses' role during disaster preparedness. Disasters occur at any time, with little or no warnings. Public health departments have experienced various disasters that public health nurses have had to respond to and they were not always 100% prepared. Some examples of disaster preparedness events that nurses and public health nurses have been exposed to include Superstorm Sandy, Hurricane Katrina, H1N1, severe winter storms, and Ebola in the United States.

All nurses have a scope of practice and a set of standards they follow when performing their duties. Ball and McElligot (2003) stated that the scope of practice is related to the workplace conditions and the organizational environment. Public health is a specialty that also has a set of core competencies relevant to public health activities that public health nurses also follow, but again there is no clear role for the public health nurses outlined for disaster preparedness (Association of State & Territorial Directors of Nursing, 2007; Gebbie & Qureshi, 2002). There is no single response agency or organization that responds alone during disaster preparedness events. Each response agency or organization has a clearly defined role and responsibility during disasters and emergencies (Jakeway, LaRosa, Cary, & Schoefisch, 2008).

Public health nurses at times do not have a clear role and so they need clarification of roles and expectations to respond effectively (Jakeway et al., 2008).

This doctoral project is significant to the field of nursing because the public health nurses' role and responsibilities when responding to disasters need to be better identified and clarified before any response activities are undertaken. Disaster preparedness events are outside of the public health nurses' daily activities, so there needs to be some reassurance that public health nurses are educated about disaster preparedness, have defined and clear roles during disaster preparedness, and respond to large scale events outside of the daily routine. Disasters and emergencies have changed the landscape for operational changes and capabilities for public health and without clear direction, training, education, and role identification, public health nurses will not be able to fully respond to disasters when needed. Based on the literature, this writer will extrapolate, apply, and give recommendations on how this role can be applied to public health nursing.

Purpose Statement

The purpose of the doctoral project was to determine the role of the nurse during disaster preparedness and its application to public health nurses by conducting a systematic literature review. A systematic literature review was undertaken to explicate and organize the existing literature regarding the role of nurses during disasters and then apply this information to the specific role of public health nurses. Disaster preparedness has become a priority in the United States as evidenced by the recent responses to the Ebola event in Texas in 2014. Local public

health departments are the backbone of state health departments and are an integral part of any public health response (Balicer, Omer, Barnett, & Everly, 2006).

There have been observations regarding public health nurses' confusion concerning their role during new emerging infectious diseases and how to respond to those events. There is a frustration among the nursing staff that there is no clearly defined role for the public health nurse when responding to disasters and there is a lack of educational training to respond to disasters. The public health workforce has become a frontline first responder (CDC, 2016). The added role of the responder to emergency disaster preparedness has added a new layer to public health response activities. Emergency disaster preparedness also entails being prepared for and responding to natural or manmade disaster events. Nurses need to be knowledgeable about the role they play and the training needed to respond to emergency disaster preparedness events.

This doctoral project had the potential of identifying the role of nurses during disaster preparedness and how it can be applied to public health nurses. Findings from this doctoral project can also add to the body of nursing knowledge regarding public health nurses' roles, development of specific job role descriptions, and training and educational needs for disaster preparedness. Focus historically has been on emergency room nurses and their role in disasters. The public health nurses' role has not been clearly identified within the studies.

Nature of the Doctoral Project

This doctoral project used a systematic review of the literature. A literature review is the summation of information that supports the research question being asked (Rowley & Slack,

2004). The systematic literature review will assist in identifying, selecting, appraising, and synthesizing the information found from the literature on a subject matter (Bettany- Saltikov, 2012). Oermann and Hays (2011) stated that a systematic literature review attempts to give the author an answer to a clinical or research problem.

A proposed framework to conduct a systematic literature review will be based on Fineout-Overholt et al.'s method of critical appraisal of the evidence. Fineout-Overholt et al. (2010) stated that there is a hierarchy of literature evidence that can be categorized into seven areas. Level one is the highest area and analyzes systematic reviews and meta-analysis. Level two is random control trials. Level three is control trials without randomization. Level four is control and cohort studies. Level five is systematic reviews of descriptive or qualitative studies. Level six is descriptive or qualitative studies. Level seven is expert opinion or consensus.

A search for possible sources of evidence was conducted using the Walden University Library, with a timeframe of 2005 through 2015. The databases to be used for the systematic literature review included but are not limited to: CINAHL, (MEDLINE), MEDLINE with full text, Academic Search Complete, Cochrane Library, Joanna Briggs Institute, PubMed, TRIP database, SocIndex with full text, ProQuest, National Institute of Nursing Research, National Guidelines Clearinghouse, and PyschINFO. Other resources that were used included the Centers for Disease Control and Prevention (CDC), the National Association of County and City Health Officials (NACCHO), American Nurses Association (ANA), Registered Nurse Association of

Ontario (RNAO), and the American Public Health Association (APHA), as well as textbooks, books, federal guidelines, and state guidelines, if applicable.

Public health nurses are now charged with responding to disasters and preparing for them at any given moment in time. To be able to depict the role they have during disaster preparedness, this systematic literature review will assist the public health nurses and public health workforce to identify resources needed to assist them performing their job. The public health workforce is considered a frontline responder (CDC, n.d.) and they have the responsibility of meeting the needs of the population they serve by providing appropriate response activities and services. Because of new disasters, such as Ebola, Zika, anthrax, and bioterrorism events, public health nurses need more identifiable role expectations during emergency responses (Qureshi et al., 2002). This doctoral project sought to find the evidence within the literature to identify and clarify the role of the public health nurse during disaster preparedness.

Significance

Disasters can occur at any moment in time with little or no warning. No single response agency or organization can be accountable for responding to natural or manmade disasters or emergencies. Each response agency has clearly delineated roles and responsibilities during disasters and emergency. Police and fire departments have very specific roles and responsibilities during disasters to protect the community. Public health nurses also need to have specific roles clarified for disaster preparedness response activities when responding to the community's needs (Jakeway et al., 2008).

There are response agencies for disaster preparedness that are resources for local public health departments such as the Federal Emergency Management Agency (FEMA), the CDC, and the American Red Cross (ARC). These response agencies and organizations offer resources but are not necessarily focused exclusively on public health nurses' roles during disaster preparedness response activities. FEMA is an agency that supports the citizens and first responders of any community (FEMA, 2016). FEMA offers training and educational seminars, but they are not public health focused.

The CDC, the leading public health agency in the United States, has valuable resources for public health departments; their mission is to protect the health and safety of America against any foreign or domestic threats (CDC, 2016). While the CDC is the lead for public health activities and response, there is no direct oversight or directive as to what the exact role of the public health nurse has during disaster preparedness. The ARC is a humanitarian organization that has the mission to respond and assist in disasters to help alleviate the suffering of humans (ARC, 2017.).

The ARC is the subject matter expert in conducting sheltering activities and disaster response but offers no specific identified role for the public health nurse during disaster preparedness activities. Each of the mentioned response agencies or organization offers information and resources to the public health department and first responders. However, after reviewing the agency websites, there is no specific information about the role of public health nurses during disaster preparedness.

This doctoral project aimed to synthesize the current literature regarding the role of nurses during disaster preparedness and then apply this information to the role of the public health nurse. Careful depiction of the role of nurses during disaster preparedness will not only assist the public health nursing community, but also the population they serve and the stakeholders involved in disaster preparedness response activities. There are various core competencies that have been developed for public health nurses, yet it still needs to be proposed that having the appropriate roles explained and identified for public health nurses can assist in alleviating anxieties, uncertainties, and possible confusion when responding to disaster preparedness situations. Even for the seasoned nurse, assessing and adapting to altered standards of care is very challenging and confusing (World Health Organization [WHO] & International Council of Nurses, 2009).

Identification of roles and providing appropriate disaster preparedness training for nurses and public health nurses before disasters occur can help to establish an effective and coordinated public health response team (Mondy, Cardenas, & Avila, 2003). Public health is changing. Its infrastructure is being revamped to meet and address the needs of the United States. Along with this change, the bioterrorism implications for public health need to be identified, and training needs to be developed to meet the response needs of the population, and ensure an adequately prepared public health workforce (Mondy et al., 2003).

Summary

Disaster preparedness responses force nurses to make challenging decisions with very little resources and support and without a prepared nursing workforce and clear role; the risk of lost lives is probable. Nurses need to have a better understanding of their roles during disaster preparedness events. The lack of a clear role jeopardizes not only the nursing practice but the population they are serving during disaster preparedness. There are several roles that nurses can perform during disaster preparedness: triage, threat detection, direct patient care, eliminating injuries, and responding to emergencies (Labrague, Yboa, McEnroe-Petitte, Loblino, & Brennan, 2015). There are several studies that focus on nurses in general and their participation in disaster preparedness, but few studies on the role of public health nurses' role in disasters have been identified. Many of the studies conducted regarding nurses and disaster preparedness state that nurses lack skills and knowledge to effectively respond to disaster situations (Labrague et al., 2015).

Section 2 of the proposal will cover the following segments: a systematic literature review using Walden University's library, the hierarchy of evidence framework by Fineout-Overholt et al., how the role of nurses during disaster preparedness is relevant to nursing practice, and this writer's role within the DNP project regarding the role of nurses during disaster preparedness.

Section 2: Background and Context

Introduction

Disaster preparedness is a new specialty for public health professionals (Kapur & Smith, 2010). As disasters, emergencies, and large scale incidents disrupt public health, more information and training is needed for public health nurses to better identify their new roles and respond to these major events. Public health disasters are sometimes unpredictable in terms of when they will occur and where they will occur. Being prepared and ready to respond and mitigate situations assists public health nurses with their new roles and responsibilities.

Limited information is available regarding the exact role a public health nurse has during disaster preparedness. A benefit of further investigating the public health nurses' role will be very beneficial for the nursing community at large. Providing public health nurses with this information will assist them in their new emergency role and provide a positive outcome on the population they serve during disasters and emergencies.

Disaster preparedness is constantly changing. As new emerging infectious diseases appear or natural disasters occur, nurses must be ready to respond and prepare appropriately, but the question remains: What is the role of the public health nurse during disaster preparedness? The challenges public health nurses face is what exactly they need to know when responding to events, how they learn new skills to respond, and how they prepared to respond (Khalailah, Bond, & Alasad, 2012). Historically, public health nurses visited patients at home when ill, conducted community health promotion programs, and participated in health prevention

activities (Suen, Christenson, & Nicola, 1995). This new role of responding to disasters still is very challenging for the public health nurse.

This doctoral project can assist not only the public health nursing community but the nursing community in general to better identify and understand the roles they may play during disaster preparedness. Nurses have been a part of disaster preparedness response, but today's disasters and emergencies are more complex and the need for disaster education must be incorporated into workforce development so that public health nurses know what to do and how to respond during disasters or emergencies (Kuntz, Frable, Qureshi, & Strong, 2008). When public health nurses have a better understanding of their roles during disaster preparedness, they can better address the needs of the population.

The purpose of this doctoral project was to synthesize the current literature on the role of the nurse during disaster preparedness and apply the information to public health nurses. Section 2 will discuss the following: a) a systematic literature review utilizing Walden University's online library database, b) the DNP framework that will be used for the systematic literature review, c) definitions of terms, d) how the nurse's role during disaster preparedness is relevant to nursing practice, and e) the role of the DNP student regarding the nurses' role during disaster preparedness.

Concepts, Models, and Theories

Theoretical frameworks allow the author to provide a rationale about relationships among certain variables. This framework allows putting into context a problem being examined; it

provides a frame of reference for interpretation or generalization of the literature. A theoretical framework gives a systematic, logical, and clearly defined relationship among certain variables. To answer the research question, the framework that will be utilized for this systematic literature review is the hierarchy of evidence developed by Fineout-Overholt et al..

Fineout-Overholt et al. (2010) sets seven levels by which research articles are graded. The best research evidence is a level one which is indicative of a systematic literature review and/or meta-analysis, and the lowest level of evidence is level seven, which indicated articles written by opinion experts or editorials. These levels of evidence assisted this author in analyzing the articles that would support this evidence-based project and potentially help in proposing a change to the public health nursing practice.

This author conducted a search of the literature on the topic of the nurse's role during disaster preparedness. The database that was used was Walden University's online library. The databases include: CINAHL, MEDLINE, MEDLINE with full text, Academic Search Complete, Cochrane Library, Joanna Briggs Institute, PubMed, ERIC, TRIP database, SocIndex with full text, ProQuest, National Institute of Nursing Research, National Guidelines Clearinghouse, and PyschINFO. This systematic literature review included articles relevant to the nurses and public health nurses' role during disaster preparedness. Once articles were found, a comparison of the evidence was conducted to determine any duplication. Once they were screened, this author reviewed the articles for relevance to the project. The inclusive years for the systematic literature review search strategy were from 2005 through 2015.

The Boolean search terms that were used for the systematic literature review search were *nurses, public health nurses, disaster preparedness, roles, emergency preparedness, bioterrorism preparedness, emergencies, and disasters*. Exclusion criteria included: children, child, and pediatrics, articles published prior to 2005 and after 2015, and non-English published articles. Medical Subject Heading (MeSH) search terms strings utilized were *nurses & disaster preparedness & roles, nurses & emergency preparedness & roles, nurses & bioterrorism & roles, nurses & disasters & roles, public health nurses & disaster preparedness & roles, public health nurses & emergency preparedness & roles, public health nurses & bioterrorism & roles, public health nurses & disasters & roles, public health nurses and roles, and public health nurses & disasters*.

DNP Framework

The hierarchy of evidence is classified into seven levels of evidence:

- Level I: The validity of the evidence is found by conducting a systematic review of the literature or meta-analysis of all random control trial studies.
- Level II: The validity of the evidence is found by conducting one or more random control trial studies.
- Level III: The validity of the evidence is found by conducting a clinical control trail that does not randomize the treatment or control group.
- Level IV: The validity of the evidence is found using a case-control or cohort study.

- Level V: The validity of the evidence is found by answering a clinical question using qualitative or descriptive studies.
- Level VI: The validity of the evidence is found by using a single descriptive or qualitative study;.
- Level VII: The evidence is found in the opinions of authorities or expert committees.

Throughout this project, this writer conducted a systematic literature review following the outline provided in Section 3.

Definition of Terms

Bioterrorism: The biological agents are used as terrorism agents to intimidate and coerce governments or a certain segment of the population. The biological agents, such as viruses, bacteria, or germ agents, are used as deliberate weapons (CDC, 2007).

Disaster: Either natural or man-made disasters that have caused significant disruptions within a community that may necessitate the need for a multi-agency response. Disasters impact the community and environment and can result in death (Gebbie & Qureshi, 2002).

Emergency Preparedness: A set of skills, knowledge, and abilities that are needed to respond to emergencies related to but not limited to chemical, biological, radiological, nuclear, or explosive events (Baack & Alfred, 2013).

Emergency: Events that need immediate responses and can be responded to utilizing current community resources (FEMA, 2016.).

Public Health Nurse: Nurses who work to protect and promote the health of the community at large by using knowledge in nursing practice, social sciences, and public health (American Public Health Association, [APHA] 2003).

Public Health: The science of preventing disease, promoting health, and prevent infections and illness. Public health consists of 10 essential functions with core functions of assessment, policy development, and assurance (Turncock, 2011).

Registered Nurse: A healthcare professional, who graduated from a school of nursing, successfully passed state licensure to practice, and provided patient care working in a variety of settings (BLS, 2017)

Relevance to Nursing Practice

Today, nurses along with public health nurses do not respond to disasters or emergencies on a daily basis. Because of the nature of disasters and their unpredictability, nurses need to have a clearly defined role in disaster preparedness along with education and training for responding to disasters and emergencies (Association of State and Territorial Directors of Nursing: Public Health Preparedness Committee, 2007). Nurses, regardless of their clinical setting, may be required to respond to disasters, assume new roles, and accept new responsibilities when responding to disasters or emergencies. Jacobson et al., (2010) assessed the readiness and training of nurses, and only 10% of the respondents felt they were confident responding to bioterrorism events. The study concluded that nurses lack confidence in responding to events and lack emergency training. Disasters are unique, and because of the uncertainty of disasters, nurses

need to be able to adapt to different environments of care. Lenaghan, Smith, and Gangahar (2006) conducted a survey for the hospital staff at the Nebraska Medical Center related to emergency preparedness and bioterrorism, and showed that many of the hospital staff were unsure if their hospital was prepared to respond to a terrorist attack.

Public health has undergone several changes when it comes to disaster preparedness (Lurie, Wasserman, & Nelson, 2006). Nurses have a broad set of skills that they bring; they range from providing treatment to patients, preventing illness, and assuming leadership roles, to education to the patient and community. Nurses can quickly not only adapt to new environments but also assume different roles within disaster preparedness management (World Health Organization and International Council of Nurses, 2009).

Public health has a different mission and response to disasters than other agencies and first responders. Their role is focused on the population being monitored or served, not on individual patients. Public health has now had to change its response activities to meet unexpected disasters encountered over the years. New roles, new responsibilities, and cross-trainings that are outside of the daily activities have been implemented for public health nurses regarding disaster preparedness response (Wisniewski, Dennik-Chapman, & Pelteir, 2004). Because of this new role in disaster preparedness, public health nurses are now considered first responders (Baldwin, La Mantia, & Proziack, 2005). There have been changes to public health regarding disaster preparedness that now allow public health nurses to collaborate with other agencies outside of public health (Beaglehole & Dal Poz, 2003).

The basic public health professional core competencies do not address disaster preparedness and emergencies. Only 60% of state departments of public health and 26% of local public health departments use the core competencies (Association of Public Health Nurses [APHN], 2013). Disaster competencies and public health workforce competencies have been developed so that public health nurses and non-medical staff have some abilities and skills that allow them to respond rapidly and effectively during disaster preparedness (Rokkas, Cornell, & Steenkamp, 2014). The CDC (2011) has developed 15 national standards for public health preparedness capabilities. A problem with the 15 public health preparedness standards is that that state and local health departments are encouraged to incorporate into their preparedness planning for public health emergencies, but dependent on the size of the health department, there is no consistency among all health departments in terms of disaster preparedness activities. A gap identified with the public health preparedness capabilities is this tool is a self-assessment capability. The local health department needs to identify if they can perform the functions and task associated with each capability (CDC, 2011). There is no information that describes the actual role of the public health nurse during disaster preparedness.

The public health preparedness capabilities list is more of a tool for strategic planning and operational emergency response plan development than an actual framework that clearly identifies what the role of the public health nurse is during disaster preparedness. The World Health Organization and the International Council of Nurses (2009) identified a gap in the nursing practice related to the nurses' response and role during disasters and emergencies.

Because of this gap in practice they developed a set of core competencies related to disaster preparedness and response. The expectation in developing the disaster core competencies for nurses is to help clarify the role of nurses in disasters and help in developing some disaster training for nurses.

Context for the Doctoral Project

Much of the literature focuses on nurses in other clinical areas with limited literature on the exact role of public health nurses during disaster preparedness. Nurses when confronted with new responsibilities and unpredictable situations may be challenged in identifying infectious diseases and agents, working prolonged hours, and functioning in unfamiliar environments (Secor-Turner & O'Boyle, 2006). Rose and Larrimore (2002) revealed that a low percentage 23% of the respondents reported they were not confident in responding to chemical terrorism.

Depending on the nature of the disaster or emergency, public health agencies and hospitals may face a nursing shortage either by attrition or staff electing not to return to work to respond to the disasters. There are some reasons that nurses may not respond to disasters. They include fear of not knowing what is occurring, not knowing what to do, fear of personal safety, and fear of working with limited resources (Secor-Turner & O'Boyle, 2006). Planning strategies that include clear role identification, skills needed, and educational training are needed for all nurses to assist them when responding to uncertain roles and events. Nurses' primary role during disaster preparedness events should be to stabilize the victims, decreasing their risk to exposure, as well as adapt to unfamiliar roles and environments.

Role of the DNP Student

The Doctorate of Nursing Practice Essential VI is focused on health promotion, risk reduction, and disease prevention. Population health is focused on the community, environment, and aggregated health. The Doctorate of Nursing Practice (DNP) student can analyze epidemiological data, conduct biostatistics, and analyze environmental data that would allow the DNP student to develop, implement, and evaluate population health programs and response activities (American Association of Colleges of Nursing, [AACN], 2006). Along with the daily health prevention and promotion activities, the DNP student needs to be aware of the emerging diseases, emergency/disaster preparedness, and have knowledge of these events to provide response and prevention activities for the population (AACN, 2006). According to AACN (2006), the DNP student has a role in clinical scholarship that states “the scholar applies knowledge to solve a problem via the scholarship of application” (p. 11), by applying the knowledge.

My professional role is closely related to this doctorate project. I work for a local health department as a public health emergency response coordinator. My primary responsibility is to develop public health emergency response plans, develop just-in-time training modules, and conduct staff training related to disaster preparedness, especially for the public health nursing division. My motivation for this doctoral project is to determine what evidence is currently available and published that supports and clearly identifies the public health nurses’ role during disaster preparedness. There is no bias for this project, just a willingness to answer a question

that is asked frequently by my colleagues as to what exactly is their role during disaster preparedness activities. The Doctorate of Nursing Practice Essential VI- Clinical prevention and population health for improving the nation's health ties into this DNP project.

During my past practicum experiences, I identified a gap at the health department practicum site regarding the nursing policies and procedures. There were no policies or procedures in place to address any new emerging infectious diseases that were occurring. For example, the Ebola outbreak of 2014, there were no policies in place for the public health nurses regarding actions to take, isolation or quarantine activities, and how to educate the staff as well as the community about emerging infectious diseases. As an employee of a public health agency, I am very familiar with the day to day activities nurses have in the department. By having open discussions with the nursing staff, other health department employees, administrators, directors, and community stakeholders, I have identified a need to have a clearly defined role for the public health nurse during disaster preparedness activities. This DNP project can assist public health nurses in identifying their role during public health disaster preparedness events.

Summary

Disaster preparedness encompasses several different areas. Responders need to ensure that there are appropriate systems in place, resources available for response activities, and that assistance and treatment to the victims of disasters are conducted effectively (Magnaye, Munoz, Munoz, Munoz, & Muro, 2011). Nurses are expected to be able to respond to emergencies and

work according to their scope of practice. When nurses do not have clearly identified roles, this can cause confusion, potential injury to victims in disasters, and an uncoordinated disaster preparedness response. Because there is limited disaster nursing education training, this limitation makes it difficult for nurses to respond effectively to disasters. Disasters have serious consequences for public health; they can cause mass fatalities, mass injuries, increase in emerging infectious disease, and rapid spread of disease and can cause worsening of chronic health conditions (WHO, 2009).

Section 3: Collection and Analysis of Evidence

Introduction

The purpose of this doctoral project was to synthesize the current literature regarding the role of nurses during disaster preparedness and apply this information to the role of public health nurses. Nurses need new knowledge, skills, and competencies in relation to disaster preparedness situations. Disasters are a complex set of events that challenge the public health system's response activities (Baldwin et al., 2005). Disaster preparedness is a new specialty for the public health nurse (Kapur & Smith, 2010). Even though nurses have diverse backgrounds that can be used for disaster preparedness, it is still important to have identifiable roles during disasters.

Section 3 will discuss the practice-focused question, sources of evidence, and analysis and synthesis.

Practice-Focused Problem Inquiry

Disaster preparedness focuses on how healthcare and public health systems have the capability to protect, prevent, respond to, and recover from various emergency situations that overwhelm the capabilities of the agency responding. Public health nurses have a significant role during disaster preparedness that is not only consistent with their scope of practice (APHN, 2013) but also helps promote community preparedness and approaches to disasters in an all-hazards manner. There are articles written about the general nurse's role in disasters, yet there was limited research written specifically that addressed the specific role of the public health nurse during disasters. While nurses are ready, willing, and able to assist in disaster

preparedness, ensuring that they are well prepared to respond, trained to respond, and educated on disaster preparedness is essential. Role ambiguity needs to be clarified so that nurses and public health nurses have clear role expectations when responding to disasters.

- The purpose of this DNP project was to find current literature evidence that would support an answer to the practice-focused question. An approach to answering the practice-focused question was to conduct a systematic literature review. A systematic literature review allows a researcher to locate, select, evaluate, appraise, and synthesize evidence collected on a specific research topic (Bettany- Saltikov, 2012). A method to evaluate the evidence was to use Fineout-Overholt's et al. (2010) seven levels of the hierarchy of evidence with the articles collected, which encompass the following: Level 1 is a systematic or meta-analysis review.
- Level 2 looks at random control trial studies.
- Level 3 are non-randomized control trials.
- Level 4 are case-control studies or cohort studies.
- Level 5 are systematic reviews of qualitative studies or descriptive studies.
- Level 6 evidence in one qualitative study or descriptive study.
- Level 7 is evidence based on expert opinion or committees.

After reading the articles selected, each article was evaluated against the hierarchy of evidence and given a level from one to seven accordingly. Each article was summarized at each

level and nursing practice recommendations for future studies were developed if applicable. Even though this DNP project did not collect data for analysis, and was not involved with human subjects, an Institutional Review Board (IRB) application was required and so Walden University's IRB forms A and B were completed and submitted for review and approval. IRB approval was granted; approval number is 06-21-17-0388695.

Sources of Evidence

A systematic literature review was conducted using the Walden University Library. Ensuring that the systematic literature review had inclusion and exclusion criteria that were clearly stated allows readers and researchers to use the same criteria to assist in minimizing bias and the reader can make his or her own decisions with the data provided. Assessing the author's procedures, assumptions, evidence, and conclusions allows readers to form their own conclusions with the evidence provided.

The articles selected for systematic literature review were measured against the hierarchical levels of evidence and categorized accordingly as outlined by Fineout-Overholt et al. The scope of the systematic literature review included a list of databases that were used to search for articles. The grey literature was used since it can help minimize bias among the published studies. Per Grayson and Gomersall (2003), much of the grey literature for the social sciences arena comes from practitioner journals, public and private sector reports, and books.

The database searches were organized according to the subheadings of search strings that were generated from the literature on the topic of disaster preparedness. Ensuring that the search

strings developed assisted in operationalizing the practice-focused question problem, it was important to try and identify all studies that were conducted on nurses and public health nurses and their roles in disaster preparedness.

The key search terms and the combination of search terms used were: public health nurses, nurses, disaster preparedness, roles, emergency preparedness, bioterrorism, emergencies, and disasters. Search term strings developed were include: *nurses & disaster preparedness & roles, nurses & emergency preparedness & roles, nurses & bioterrorism & roles, nurses & disasters & roles, public health nurses & disaster preparedness & roles, public health nurses & emergency preparedness & roles, public health nurses & bioterrorism & roles, public health nurses & disasters & roles, public health nurses and roles, and disasters.*

The scope of systematic literature review yielded 778 articles. The systematic literature search included full-text articles from 2005 through 2015, with inclusion criteria to be English published articles, and full-text articles. The exclusion criteria set for the systematic literature review included: published articles prior to 2005 or after 2015, children, child, and non-English published articles. Exclusion criteria allowed the researcher to determine if the article meets the criteria set forth; this demonstrates that consideration has been given to these articles but they do not meet the criteria needed for inclusion (Higgins & Green, 2011). Three hundred twenty-nine articles were excluded based on duplicative articles, 421 articles were excluded based on the exclusion criteria developed, and there were 28 articles remaining for analysis and evaluation.

For the systematic literature review to be comprehensive and exhaustive, I collected as many studies that represented the identified topic, the role of the nurse during disaster preparedness and its application to public health nurses. Even when trying to be comprehensive and exhaustive, there was still a possibility that the systematic literature review may not have identified all studies related to the topic. Using a range of sources and a combination of search terms made the systematic literature review more comprehensive and exhaustive. Another component to ensure that the systematic literature review was comprehensive and exhaustive was to also review the bibliographies of selected articles to ensure no articles could have been missed. Synonyms, broad and narrow terms, and classification of terms for various databases were used in the search. Obtaining as many possible relevant articles in the beginning of the systematic literature review was important so that when the evaluation of the articles was conducted, only the most relevant articles were selected.

Analysis and Synthesis

The evidence that was collected during the systematic literature review was recorded, tracked, and organized using Microsoft Word's manage sources feature, along with a backup system of an external memory drive to house all the evidence collected. There were several different types of studies collected to synthesize the studies identified; this author attempted to identify any gaps and relevant data and communicate those findings to the reader. Analysis and synthesis allows identification of the main points of the study, differences in populations, and

differences in the described outcomes. The analysis will allow this writer to identify pattern, similarities, and differences between the selected studies (Booth, Papaioannou, & Sutton, 2012).

When collecting data for any research study, the integrity of the data needs to be addressed. Data can be incorrect or inconsistent and has the potential to distort the research's results. Since this practice-focused DNP project is a systematic literature review, there was no data that had to be collected or manipulated.

Summary

As disasters and public health emergencies are still occurring, such as the Ebola outbreak in 2014 and the Zika outbreaks in 2016, it is imperative for public health nurses to be knowledgeable about their roles and responsibilities during disaster preparedness. Regardless of the substantial funding poured into public health preparedness since the World Trade Center bombing in 1994 there are still very sporadic training for preparedness responses for public health nurses (Veenema et al., 2016). The literature search has yielded information about nurses in general and their roles in disaster preparedness from an acute care setting perspective, but limited research on the public health nurses' role was found. A better understanding of the roles for public health nurses will not only assist the public health nursing community but the overall nursing community as well. Section 4 of the doctoral project discussed the results obtained from the systematic literature review related to public health nurses and their roles during disaster preparedness.

Section 4: Findings and Recommendations

Introduction

Disasters threaten the lives of many people; they can occur suddenly with no warning or gradually. Nurses need to be prepared to respond to disasters. All nurses as well as public health nurses need to have clearly defined roles during disaster preparedness. Disasters cause the workforce to work outside of their daily activities and this makes it very challenging to provide effective care when nurses are unsure of their roles during disasters. Public health nurses can be on the front line of detecting biological agent exposures within the populations they serve. Since biological agent exposures mimic other illnesses and symptoms, it is crucial for nurses to know their role and be adequately trained to respond to disasters (Nash, 2016).

Much of the literature discussed how public health nurses need to follow core competencies and have disaster preparedness incorporated into the nursing curriculum, and how nurses need to be trained to respond to disasters. The public health nurse is trained for population health services. This entails conducting screenings, health education, and performing some outbreak investigations. There is still limited literature that describes the role of the nurse or public health nurse regarding disaster preparedness. Each health department varies in the services and responses it can provide to the community it serves.

The purpose of this DNP project was to synthesize the current literature on the role of the nurse during a disaster and apply that current information to the role of the public health nurse. A systematic literature review was conducted to identify evidence of the nurse's role during a

disaster. Fineout-Overholt's et al. hierarchy of evidence was used to analyze the selected articles. The following figure was used as a visual tool to demonstrate the levels of evidence and the type of databases where the evidence was found per the level of the hierarchy. The top of the pyramid level indicates the highest level of evidence. When one goes down the pyramid, the amount of evidence increases but the quality decreases.

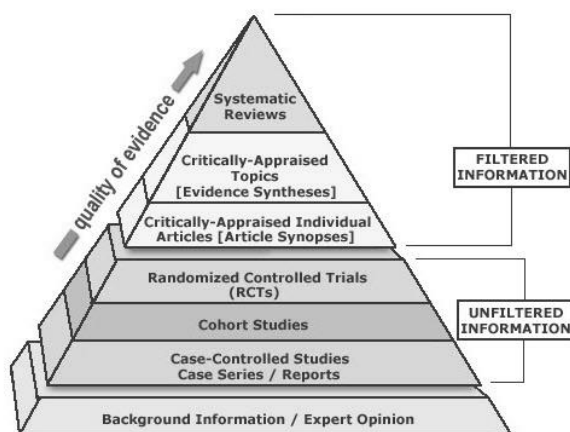


Figure 1. EBM Pyramid and EBM Page Generator, copyright 2006 Trustees of Dartmouth College and Yale University. All Rights Reserved.

Additional Exclusion

There were 28 articles left for review, and upon further evaluation an additional 25 articles were excluded from the review based on the findings of the articles (figure 2). Many of the articles were not relevant to public health nurses' roles during disasters. The articles referenced nurses in other clinical settings such as advanced practice nurses, pediatric nurses,

occupation health nurses, and nurses who worked in a radiation department. The databases selected for the systematic literature review were used to ensure that the literature included a wide variety of disciplines that were applicable to the nursing profession. Smith and Bazini-Barakat (2003) stated that there is still a need to redefine the role of the public health nurse so that they can effectively participate in and respond to disasters.

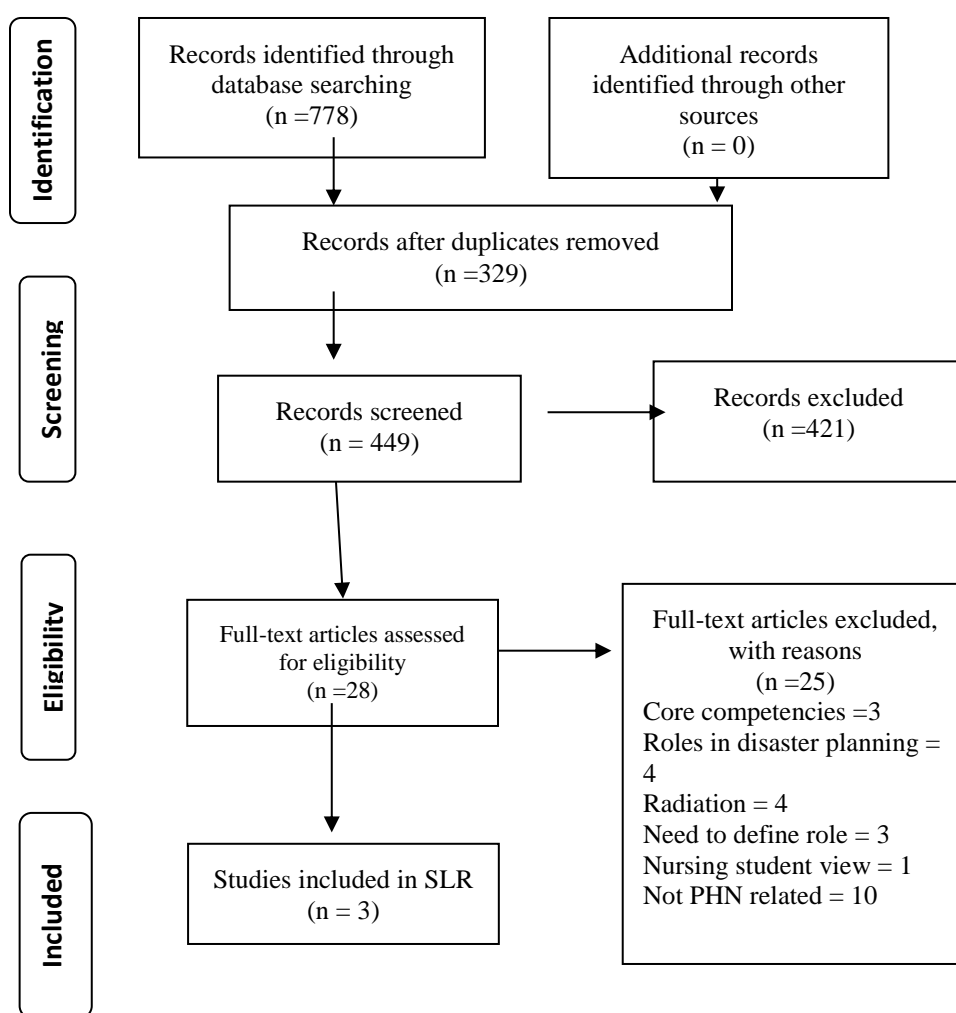


Figure 2: Inclusion Process Flowchart: Moher, Liberati, Tetzlaff, & Altman (2009).

Nic Philibin et al. (2010) wanted to clarify the role of the public health nurse in a community in Ireland. A descriptive qualitative study was used and the survey results showed that the nurses felt they were a “Jack of all trades”. The nurses performed a holistic approach but due to the varied assignments they were responsible for doing, many felt overloaded with work and this prevented them from completing their tasks. This study focused more on community nurses and labeled them public health nurses. These nurses performed direct patient care.

Akins, Williams, Silenas, and Edwards (2005) conducted a qualitative study regarding public health nurses and disease surveillance in Texas. The participants for this study were public health officials and not actual public health nurses. The findings of the study could not actually define the role of the public health during bioterrorism preparedness.

Summary of Evidence

There were a total of three articles analyzed for this project. The other articles were excluded from the systematic literature review for the following reasons: a) lack of relevance to public health nurses, b) core competencies were needed to define the role of the public health nurse, and c) education and training were needed for public health nurses to perform their role. There were no Level I, II, III, IV, V, or VI articles within the three articles remaining for review. The remaining articles were two Level VII articles and one policy guidance article. The articles were obtained from the literature found in the Walden University Library (Table 1). The inclusion criteria developed for this doctoral project consisted of studies published about nurses and public health nurses, from 2005 through 2015; full-text English only published articles. The

exclusion criteria developed had no articles prior to 2005 or after 2015, and non-English published studies.

Level VII Summarized Studies

While nurses, per Rowney and Barton (2005), are involved in all the phases of disaster planning, it is understood that public health nurses routinely have a role in community disease outbreaks and collaborate with the local hospitals. Yet, the actual role of the public health nurses is defined by their workplace. It was suggested by Levy and Sidel, as cited in Rowney and Barton (2005) that nurses use core competencies relevant to public health as well as emergency and bioterrorism core competencies to better prepare for their roles. The authors discussed how public health nurses have become front line workers but that public health nurses still in need more of a functionally defined role within the agency they work.

Putra, Petpichian, and Maneewat (2011) identified some roles that public health nurses perform during disaster management; they included assisting the population during emergency situations, assisting in identifying risks to vulnerable populations, and developing policies and procedures. The nurse's role during a response phase of a disaster was discussed as assisting in the evacuation of the area affected in the community, provide life-saving efforts, conduct triage, perform rapid need's assessments, promotion of sanitary food and water, and assist in infectious disease surveillance.

Nurses' roles during the recovery phase of disasters included providing care to victims of disasters, evaluate the disaster, and assist in editing agency disaster response plans. The authors

also stressed the need for the public health nurses to begin learning and incorporating competencies into their role during disasters. Public health nurses still need to obtain skills, and knowledge that will assist them in mass dispensing campaigns, perform case investigations, and how to appropriately use personal protection equipment (PPE).

Policy Guidance

Jakeway et al. (2008), described how public health nurses are an integral part of these disaster planning phases: mitigation, preparedness, response, and recovery. Public health nurses have specific skill sets that they use during disasters, yet to be part of the response, there are competencies that nurses must assume during emergencies. First, the public health nurses' role is consistent with their scope of practice. The competencies identified by Jakeway et al. provide a framework to help define the public health nurses' role in emergency preparedness. These competencies are tied into education, training, and drills and exercises. Jakeway et al. (2008) provided examples of roles and responsibilities that public health nurses can undertake in disasters as part of the nursing process. The competencies described potential roles that public health nurses can undertake.

Findings and Implications

The findings of the systematic literature review demonstrated that the current available evidence is insufficient to define the role of the public health nurse during disasters and new research needs to be conducted. The review of the available literature indicated that there is little evidence about the role of the public health nurse during disaster preparedness. The role of the

public health nurse has been theoretical and there are limited quantitative or qualitative studies regarding the role of the public health nurse during disasters. The literature showed very little progress and no new contributions to the role of the public health nurse during disaster preparedness activities.

The implications for this DNP project were that the systematic literature review did not obtain current evidence that could identify a clearly defined role for the public health nurse during disaster preparedness. Much of the literature discussed what a nurse or public health nurse should be familiar with during disaster preparedness. The nursing community at large needs to begin to look at disaster nursing as part of his or her current role regardless of the clinical setting. Since the terrorist attacks in 2001, along with the subsequent disasters that have occurred after, nurses need to be aware of the roles they are expected to undertake during disasters.

The literature did not define an actual role for the public health nurse during disaster preparedness events, the literature offered recommendations of suggested trainings that could assist the public health nurse with his or her new role during disaster preparedness. The implication for the nursing profession is to incorporate some disaster training into their current role. It is an opportunity to add to the body of their knowledge new information that nurses may need one day in an unfamiliar role. Taking ownership of one's own professional development can assist nurses to respond to emergencies. Nurses are generally flexible; they can adapt to change and deliver care as needed to provide services to the population. The vital link is obtaining education, training, and role clarification so nurses know what to expect in response efforts for disasters.

Limitation and Outcomes

There was a limited amount of evidence found during the systematic literature review concerning the role of the public health nurse during disaster preparedness. The systematic literature review looked at both the nurses and public health nurses and their role during disasters. The articles found discussed several different aspects of disaster response and disaster planning, but very little were found relating to public health nurses. Many articles were specific to nurses in the acute care environment. This systematic literature review also included articles around international nurses and their roles.

A positive social change can occur when nurses and public health nurses maintain current knowledge, skills, and abilities that will assist them during their response roles in disasters and emergencies. The role of the public health during disaster preparedness is determined by the health department they are employed by. The nursing shortage, limited financial resources, and limited response assets during disasters leave the nurse vulnerable. Preparedness is a local community response, ensuring that the public health nurse has clearly defined roles and expectations are just one step in the response activities. The findings of the systematic literature review did not emphasize what the actual role of the public health nurse will be during disasters. The public health nurse will perform some of his or her regular duties such as screening and some disease surveillance, but when disasters occur nurses are expected to work outside of their daily routine activities. This is where the chaos and confusion come into play when a nurse is not sure of what to do or the expectation needed for a response.

The nursing profession cannot ignore disaster preparedness. At some point in the nurse's career, regardless of the clinical setting, there will be an expectation for nurses to take on new roles, perform new tasks, and work alongside others who are familiar with how things need to be done.

Recommendations

A recommendation to address the limited literature in public health nursing practice is to conduct research studies that would help identify the actual role of the public health nurse during disaster preparedness. Developing a comprehensive study instrument that can be disseminated to public health nurses could help answer the question of their role during disasters. A questionnaire can be developed that can ask questions to the public health nurse regarding their perceived job roles, their actual job roles, and if they can perform their job roles, as an example. A mix-method approach may be a good option for the study since it collects both qualitative and quantitative data that can be analyzed (Grove, et al., 2013; Polit & Beck, 2014). Per Grove et al., (2013) using a mix-method study approach can assist the researcher to narrow the gap of understanding the role of the public health nurse during disaster preparedness.

Another recommendation would be to work with the local health department leadership, human resources department, and the collective bargaining units to re-evaluate the public health nurses' job description. At my practicum site the nurse's job description does not mention disasters; the only reference is sheltering during emergencies. Working together as an interdisciplinary team could assist the health department in making changes to the current public health nurses' job

description to clearly state the nurse's role during disasters and emergencies and their expectation for response activities.

A suggested recommendation would be to include public health nurses in the development of all health department emergency response plans. Being part of a disaster preparedness task force allows the nurses to give input into the emergency planning process. Incorporating the public health nurses into emergency response teams also can assist nurses to change their mindset about their roles. As disasters occur, public health nurses begin to perform tasks and activities outside of the daily routine. Many public health nurses either do not do well with sudden change or may not want to change. Providing educational opportunities and participation in drills and exercises also allows public health nurses to participate in new scenarios and learn new skills that may be needed when responding to disasters. Providing educational opportunities of various types will assist the public health nurses to move outside of their comfort zones and allow role playing that is beneficial for their new role in disasters.

Strengths and Limitations of the project

A strength of this systematic literature review was being able to obtain and review current evidence from multiple disciplines that could answer the practice focused questions being applied. Utilizing databases that included various disciplines casted a wider search net to answering the proposed practice focused question, what is the role of the public health nurse during disaster preparedness? Another strength to the project was that transferability of the information collected and how other health care professionals can begin to consider their new

roles during disasters and emergencies. The literature evaluated discussed several different events where health care professionals are expected to work outside of their daily role. Some events discussed in the literature included pandemic influenza, bioterrorism events, chemical, biological, radiological, and nuclear attacks. These events are outside of the daily role for nurses, becoming familiar and trained to respond to disasters and emergencies gives the nurse an opportunity to become better prepared to respond to disasters.

A limitation of this systematic literature review was not having the opportunity to conduct interviews with public health nurses or develop a survey questionnaire instrument to better obtain information that could answer the question what is the role of the public health nurse during disaster preparedness. Having the opportunity to conduct an interview could have given a more precise view of how public health nurses see their roles during disaster preparedness. Obtaining this specific information would have allowed a clearer and more accurate description of the role of public health nurses.

Summary

Disasters are evolving and changing, the effects of disasters have negative consequences on the population (Leaning & Guha-Sapir, 2013). Disasters occur locally and have a local response first, yet the public health workforce has unclear expectations of their roles during disaster response (Balicer, et al., (2006). The limited literature on the role of the nurse during disaster preparedness makes it difficult to apply the current literature to the public health nurse. The inability to have a clearly defined role for public health nurses during disaster preparedness

can have negative consequences on the population. Unclear roles and unclear expectations for public health nurses can cause chaos and confusion. Identifying clearly defined roles then educating the nurses to their roles can assist the nursing profession in meeting the needs of the population during disasters.

This systematic literature review demonstrated that there is still a lack of clearly defined roles for nurses during disasters. This topic needs to be further explored to help close the gap in clinical practice for public health nurses.

Section 5: Dissemination Plan

There is limited literature that identifies the role of the public health nurse during disasters. The systematic literature review identified that the current literature addresses suggestions as to what the nurse could or should be performing as a role during disasters. The current literature mentions core competencies that all nurses need to have when nursing during a disaster (Hsu et al., 2006; Jorgensen et al., 2010; & Mbewe & Jones, 2015).

After completing this DNP project and graduating, I plan to collaborate with the local and state nursing associations to disseminate this project. Focusing on public health nurses is important because they can identify potential disasters before they occur. I also plan to work with the local public health nurses association to disseminate this project so that the public health nurses can begin to think about their actual roles during disaster preparedness.

After graduation, I plan to reach out to the various peer-reviewed journals such as *Public Health Nursing*, *the American Journal of Nursing*, and the American Nurses Association to publish this project. Being published in a nursing journal allows for a broader audience to read my project. I plan to contact the Sigma Theta Tau Phi Nu chapter and present my project as a webinar for a live audience and offer continuing education credits. I will also reach out to two schools of nursing where I am adjunct faculty to work with tenured nursing faculty and develop a research study based on this DNP project.

Analysis of Self

This systematic literature review afforded me the wonderful opportunity to highlight a sector of the nursing profession which has historically been left behind. Conversing with public health nurses and learning that many did not know or understand their role during disasters opened an area that needed further exploration. Simple conversations opened opportunities to identify a gap in their clinical practice that needed to be addressed. Doing the practicum experience and working with public health nursing colleagues demonstrated to me the importance of answering the question regarding what is the role of the nurse during disaster preparedness and how can this be applied to public health nurses.

I currently work in public health in the emergency preparedness arena and I was not aware that the nurses were unfamiliar with their roles during disasters. I have developed emergency plans from not only a public health perspective but from a nursing perspective as well which did allow me to see how the nurses were not fully integrated into the disaster preparedness process. During the Ebola outbreak of 2014, it became apparent to me that the nurses were unfamiliar with their roles regarding new emerging infectious diseases. When I began to talk with them about disaster preparedness in general and the role they played in disaster response, many admitted they did not know what to do, how to do it, and who to answer to during disasters. When I began to research the current literature on the role of the public health nurse, there was limited current literature regarding their role.

Since the beginning of this DNP project, my research skills have been developed, and my ability to analyze the current literature about nurses and disaster preparedness has also been fined

tuned. These valuable skills will assist me as I continue to teach at nursing colleges and universities, mentor nursing students, and interact with nursing colleagues.

Summary

Public health nurses are now considered front line responders who need to know exactly what to do when called to respond to disasters. As disasters evolve, so must the nurse's role and knowledge about disasters. Being able to identify the role of the public health nurse is very valuable for the profession, and conducting a research study to obtain more concrete information can assist the nursing profession better define the role of the nurse during disasters.

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