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Understanding the Beliefs, Perceptions, and Experiences of Disaster Preparedness in Nurses: A Mini-
Focused Ethnography

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Introduction

Disasters can occur anytime, anywhere. Indeed, the frequency of natural disasters occurring has been increasing yearly (Centre for Research on the Epidemiology of Disasters, 2022). Regardless of disaster type, nurses fulfil significant roles in disaster response by fostering community resilience through the provision of care and participating in recovery efforts (National Academies of Science, Engineering, and Medicine [NASEM], 2021, p. 247). The importance of nurses’ work in disasters was highlighted during the COVID-19 pandemic and recognized by NASEM (2021) in their Future of Nursing 2020-2030: Charting a Path to Health Equity report. However, this report also noted that nurses are not well-prepared to respond to disasters. This mini-study (Focused Ethnography) sought to understand nurses’ beliefs, perceptions, and experiences of disaster preparedness to inform future disaster education/training programs and better prepare nurses to respond to inevitable future disasters.

Background and Significance

As a major component of the health workforce, nurses worldwide may be called upon to respond to the health needs of a community that experiences a disaster. An encompassing definition of disaster is any hazardous natural, human-made, or technological incident that causes severe disruption of a community’s or society’s functioning, exceeding its capacity to cope using its own resources, leading to one or more of the following: human, material, economic and environmental losses (United Nations Office of Disaster Risk Reduction, n.d.; International Red Cross and Red Crescent Societies, n.d.). Recent disasters include the 2023 Turkey-Syria earthquake, the war in Ukraine, Hurricane Ian, and the COVID-19 pandemic.

Nurses are on the frontline of disaster preparation, response, and recovery efforts (NASEM, 2021, p. 250). The roles nurses fulfil during disasters range across all levels of nursing, from the staff nurse to administrator, and in all community to inpatient settings. Nursing roles include providing direct patient care to triage and allocation of resources; staffing disaster shelters for community members with health needs or point-of-distribution sites for vaccinations; and developing emergency operation plans for activation and execution of these plans (NASEM, 2021, pp. 249-251). NASEM (2021) noted that nurses
in their disaster roles are in positions to mitigate health inequities experienced by vulnerable populations and exacerbated by disaster conditions (pp. 254-257). However, they acknowledge that nurses are not well-prepared to respond to disasters even though there are identified roles. They called for better disaster preparedness training/education so nurses can understand and meet their communities’ needs during disasters (pp. 265-266).

Previous studies have found that many nurses consider themselves unprepared for disasters, while those who reported themselves as prepared had previous disaster training or disaster experience (Labrague et al., 2018; Said & Chiang, 2020). Common areas of deficiencies identified by these studies included knowledge, skills, abilities, and psychological attributes necessary for disaster response. Notably, these studies measured the disaster preparedness of nurses based on their self-report, with measurement tools that varied in their content, and reliability and validity were not provided in all instances (Labrague et al., 2018). Thus, what nurses have previously reported about their own preparedness must be further explored to identify potential learning gaps so that nurses can be better prepared for future disasters. The purpose of this mini-focused ethnography was to explore the beliefs, perceptions, and experiences of disaster preparedness of nurses. In addition, a mini-study was conducted to identify the efficacy of this phenomena of interest for future studies.

**Method**

**Research Question**

The research question for this mini-study was: what are the beliefs, perceptions, and experiences of disaster preparedness for nurses?

**Design**

This mini-study was conducted as a focused ethnography. A focused ethnography allows the researcher to explore the emic or insider perspective “of the natives’ point of view, yet in a very specific sense: specified with respect to certain situations, activities and actions….It only aims at certain elements of (partly embodied) knowledge relevant to the activity on which the study focuses” (Knoblauch, 2005, Features of Focused Ethnography section, para. 12). A focused ethnography design was applicable to this
study as it sought the perspectives, beliefs, perceptions, and experiences of nurses working in the Greater New York City area relevant to disaster preparedness. Due to the intended mini-study nature, three to five participants were sought as participants in the study.

**Sample selection**

Recruitment occurred via gatekeepers who identified potential participants and provided them with a flyer containing instructions on contacting the researcher, by word of mouth, and snowball method. The following inclusion criteria were identified for this mini-study: Registered nurses who (1) are licensed in the state of New York, (2) are at least 20 years of age, (3) are working in a direct patient care role (acute care, home health, outpatient settings) in the Greater New York City area – defined as New York, Kings, Richmond, Queens, Bronx, Westchester, Nassau, and Suffolk counties (4) have access to a computer, smartphone, or tablet with internet access. Exclusion criteria consisted of nurses who have ever served as members of the military or U.S. Public Health Service or work or have worked in the public health field. These nurses were excluded because they would have received education/training on disaster preparedness as part of their training in their primary roles.

**Data collection and analysis**

After the researcher confirmed that a participant met the inclusion criteria, a consent form was provided to the participant via a link to Qualtrics. Once the researcher received the signed consent, a meeting was set for a date, time, and place of the participant’s choosing. Data collection (semi-structured interviews) were conducted over Zoom. At the initial meetings, demographic data were collected from participants via the completion of an electronic form accessible through Qualtrics. Data collected included age, gender, years of nursing experience, specialty area of nursing, previous disaster preparedness experience, and previous experience working in disasters. Upon completion of the demographic form, the researcher conducted a semi-structured interview utilizing open-ended questions. After the interviews, Starbucks gift cards worth $20 were provided to participants for their participation.

Data was analyzed using Leininger’s Four Phases of Qualitative Data Analysis (McFarland et al., 2012). Data collection and analysis occurred concurrently throughout the study, from the beginning of
data collection through analysis of all data collected. For the first phase, the interviews were audio and video recorded and later transcribed. During the interviews, the researcher noted observations of the participant’s settings, actions, and reactions and constructed field notes to provide context to the interviews. For the second phase, the researcher utilized NVivo20, a qualitative data manager and analysis software program. The researcher reviewed transcribed interviews and coded similar data related to the inquiry domain. Phase three involved the researcher scrutinizing the data for saturation of ideas and recurrent patterns of similar and different meanings. Due to the limited nature of this mini-study, data saturation was not met. Thus, data analysis did not progress to phase four, where data interpretation and synthesis of findings would occur through theme identification and meaning confirmation.

**Ethical Considerations**

Participants were treated with respect according to the ethical guidelines for the conduct of research. If participants had experienced any discomfort during the interview, the interview would have been paused and resumed at the participant’s discretion. Voluntary informed consent was obtained before data collection. Participants were made aware that they could withdraw from the mini-study without reason at any time, and any data collected prior to their withdrawal would have been destroyed. Privacy was maintained by ensuring personal identifying information was not attached to the data and data was kept on a password-protected computer.

**Results**

Of the participants (n=3; male = 2, female = 1), two had > 20 years of experience working in emergency departments, while one participant had < 2 years in a telemetry unit. Two participants had previous disaster experience and training from their workplaces. In the initial phase of analysis, nine categories were identified: (1) Communication, (2) Current work environment, (3) Description of being unprepared, (4) Description of being prepared, (5) Disasters experienced, (6) Experience of being in disasters (7) Preparedness needs or experience (8) Sources of support (9) View of nursing and disaster preparedness. Further analysis resulted in two patterns: (1) Knowledge of nurse role expectations as important to disaster preparedness (2) Feeling competent as sign of successful preparedness.
Knowledge of nurse role expectations as important to disaster preparedness

Participants shared what they believed was necessary to be prepared for disasters. From the findings, knowing what they are expected to do during a disaster is important to their preparedness. Participant 1 conveyed that preparedness should include “knowing the uh, the procedures, you know what we’re supposed to do.” Participant 3 voiced similar beliefs regarding preparedness:

“…knowing well having an expectation. You don’t, you never know what you’re going to get, but like having an expectation of like what kind of relief you’ll have to provide” and “if there was to be something that happened like, what, what should I do or like what am I supposed to do?”

Both participants described that role expectations included knowing where to respond and who to communicate with:

“… where everybody knows what they’re supposed to do, where they’re supposed to go, who they’re supposed to uh, uh, communicate with. Uh, everyone’s supposed to have a job that’s clearly defined. So, they should know what they’re supposed to do” (Participant 1)

“… again just kind of having the idea of what your expectations are. Um, where you could go, what you need, like all those things, and having what you need, knowing where to go, where your resources are, who’s available to you, who to call like phone numbers things like that”

(Participant 3)

For context, Participant 1 works in an emergency department, has over 20 years of experience and had previous experience with disasters and disaster preparedness training from the workplace. Participant 3 has less than two years of experience, works in a telemetry unit, and has previous disaster education from a lecture in an undergraduate nursing course.

Feeling competent as sign of successful preparedness

Participants shared what they thought would indicate they had been prepared for a disaster. They expressed competence as having performed their jobs efficiently during a disaster. Exploring this sentiment, participants describe the emotional aspects of feeling competent, emphasizing being able to perform under disaster conditions and meeting patients’ needs. Participant 2 emphasized that “…you
know, we never let our patients see us sweat” while Participant 3 voiced “being able to put it to the test when you know there is chaos around you.” Participant 1 described being able to manage patient surges:

“knowing that patients were treated within a reasonable amount of time, that um you know, we didn’t feel that uh any patient got lost in the shuffle uh that. Uh, you know, nurses didn’t feel uh overwhelmed with they weren’t able to handle uh what they were given. Sure, they’re going to be busy, but that they didn’t feel that they couldn’t handle what they were given” (Participant 1)

Additionally, Participant 2 described being successfully prepared as how nurses would evaluate their performance after the disaster – “I think there’s less rehashing of Oh, I could have done that better”.

Participant 1 echoed the sentiment as nurses being able to say they did not feel uncomfortable or confused about performing their duties in a disaster:

“They should feel comfortable uh, and not confused… they should be able to talk about it, and not just stand there confused like, Oh, my God, I didn’t know what to do! I, You know everything just rushed by me. Um...Everything should have been at least familiar to them…they should be able to say, Oh, yeah, I remember we talked about this, and remember, you know, this was, you know, something we discussed that this was gonna happen. Um! It shouldn’t be all brand new.” (Participant 1)

Discussion

The pattern of knowledge of role expectations as important to disaster preparedness emerged from data collected from participants who had remarkable differences in years of nursing experience, the care setting they worked in, and previous experience with disaster or disaster education/training. In previous studies, knowing what nursing roles are during disasters and, thus, their role expectations, was essential to disaster preparedness. Said and Chiang (2020) included studies with nurses from many disciplines in their systematic review. They noted that nurses perceived insufficiencies with disaster preparedness were self-reported as due to a lack of knowledge of “disasters in general,” “disaster policies, plans, and role of hospitals during disasters,” and “their roles during disasters” (section 3.3.1). Even if nurses had known about their workplace disaster plans, this did not equate to knowing what their roles
and role expectations would be during a disaster. Labrague et al. (2018) remarked about the nurses in the studies they reviewed that despite being “cognizant of the existence of a workplace disaster protocol/plan, they were unclear of their role and most of them felt incapable regarding execution of the disaster plan” (p. 51).

The pattern of feeling competent as sign of successful preparedness emerged from data provided by the three participants, who shared how they would know if they were prepared for a disaster. Competency in nursing practice is defined by the American Nurses Association (2018) as “an expected level of performance that integrates knowledge, skills, abilities, and judgments” (p. 3). Interestingly, common across the participants’ responses, was an emphasis on the feeling of being able to perform at their expected level in their nursing roles, i.e., not feeling “uncomfortable,” “confused,” or “overwhelmed,” and the sense of being familiar or up to the challenge of working in disaster conditions. Accordingly, the contrasting feelings then would be a sense of incompetence as an indication of being unprepared, similar to how nurses expressed “feeling generally unprepared and insecure in responding effectively to disasters” (Labrague et al., 2018, p. 51).

Knowledge of role expectations and feeling competent are interconnected. If nurses knew what their disaster roles would entail, and what would be expected of them in these disaster roles, they would have a barometer against which to measure if they could fulfill their expected roles, i.e., competently. Traditional nursing roles and care priorities may change during disasters based on a community’s need and availability of resources. As there was no consensus on what should be included as disaster nursing competencies, the International Council of Nurses (ICN, 2019) published an updated version of a core competency framework for disaster nursing. ICN recognized that all nurses, regardless of their specialty area of practice, should have some basic competency in fulfilling their potential varied nursing roles during disasters. This framework describes the essential competencies required of all practicing nurses. It differentiates these competencies from those required of nurses who may work in more advanced disaster roles, such as disaster management and response roles.

**Implications**
NASEM (2021) called upon nursing schools, hospitals, and healthcare organizations to better prepare nurses for disasters. Schools of nursing can “increase content in general disaster preparedness” and “consider hazard-specific content to build capacity for nurses to respond to the kinds of emergencies that are most likely in the geographic area where they will live and practice” (p. 264). Leaders of hospitals and healthcare organizations can ensure their disaster response plans include the varied roles nurses may fill and the necessary accompanying training for their nurses to be capable of filling these roles. Additionally, any disaster training/education curriculum should consider utilizing non-traditional classroom methods, such as drills, simulation, and tabletop exercises (Loke et al., 2021).

**Conclusions**

Nurses’ perception of being prepared for disasters emanates from knowing their role expectations during disasters and feeling competent in their roles. Schools of nursing and healthcare organizations must better prepare nurses to respond to future disasters. They should prepare nurses with knowledge of their potential roles in disasters and ensure they can perform competently. Disaster preparedness training/education curricula should consider these factors in their design to facilitate better future nursing disaster preparedness.
References


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