



ASSESSING THE ROLE OF NURSES IN DISASTER PREPAREDNESS, EMERGENCY RESPONSE COORDINATION

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Abstract

This paper examines the significance of cultural competency within the field of nursing, specifically in relation to disaster planning and the coordination of emergency response efforts. Natural catastrophes have a substantial influence on people, families, communities, and the environment, necessitating healthcare professionals, especially nurses, to possess the necessary skills and knowledge to properly handle such circumstances. Nurses assume a pivotal role in crisis situations via the implementation of triage procedures, their provision of frontline care, and their indispensability in the face of catastrophic events. Nevertheless, there are difficulties in ascertaining the precise responsibilities and competencies of nurses in catastrophe scenarios, underscoring the need for more investigation into disaster nursing readiness. A "disaster nurse" is a role that involves three distinct stages: pre-event, during event, and post-event. Nurses are required to possess the requisite comprehension, competencies, and expertise to identify potential hazards, develop suitable methods for recuperation, and provide all-encompassing healthcare to people, families, and communities throughout the entirety of a calamity. Studies indicate that nurses often experience psychological unpreparedness and voice apprehensions about their competence in catastrophe scenarios. The preparedness of nurses for catastrophes is contingent upon several aspects, including their technical competencies, previous involvement in disaster management, and engagement in catastrophe simulations. During emergency response, nurses assume several roles, including their participation as members of the response team, triage officers, caretakers, coordinators, educators, and counselors. Nevertheless, the response to catastrophes may give rise to role conflicts and obstacles, perhaps leading to nurses exhibiting hesitancy or a lack of enthusiasm to actively participate in disaster-related tasks. In order to bolster the preparation of disaster nursing, it is imperative to develop fundamental skills for training and instruction, guarantee the efficacy of response endeavors, and integrate disaster nursing into nursing curriculum. Cultural competency plays a crucial role in the field of disaster nursing, as it empowers nurses to provide care that is attuned to the distinct requirements and perspectives of varied communities. Nurses may significantly contribute to the mitigation of catastrophe impacts and the provision of comprehensive care to impacted persons and communities by acknowledging the significance of cultural competency and effectively tackling the obstacles associated with disaster nursing preparation.

Keywords: cultural skills, nursing for disasters, emergency response, readiness, healthcare practitioners.

^{1,2,3,4,5,6,7,8,9,10,11,12}Ksa, ministry of health

DOI: 10.53555/ecb/2022.11.5.060

1. Introduction

The occurrence of natural catastrophes is prevalent on a global scale, exerting enduring impacts on people, families, communities, and the environment. Disasters are unfavorable circumstances that have a lengthy past, resulting in a significant loss of life, affecting millions of individuals each year and becoming more frequent as a result of climate change (1,2). It is an undeniable reality that the exceptional circumstances resulting from catastrophes are beyond our control. However, it is crucial that diverse entities, such as people, families, healthcare professionals, and community organizations, be well equipped to effectively address these situations (3).

Nursing professionals play a crucial role in crisis scenarios by implementing triage protocols, serving as frontline caregivers, and being indispensable in the event of a catastrophe [4]. According to Rokkas et al. (5), there are contradictions in the determination of the duties, needs, and abilities of nurses in the context of catastrophes. However, the World Health Organization (WHO) as well as the International Association of Nurses (ICN). Overall, the literature underscores the need for more research on disaster nursing preparedness. According to Li et al. (6), the primary areas of focus in disaster nursing research include psychosocial dimensions, including training, education, and instruction, practical application and tactics, as well as connections and communication. Multiple studies have shown that nurses see themselves as inadequately prepared before to their involvement in disasters and emphasize the need of comprehending the distinctions between standard nursing care and the care provided during catastrophes (7,8,9).

In the context of disaster preparation for medical facilities and the community, the preparation, instruction, behavior, and disaster competences of nurses play a pivotal role (10). According to the International Council of Nurses (ICN), the concept of a "disaster nurse" encompasses three distinct phases for the certification of nurses in the context of catastrophes. The first phase emphasizes the pre-event phase, when nurses acquire the understanding, abilities, and skills needed to recognize risks, formulate suitable disaster recovery strategies, and make necessary preparations for all potential catastrophes prior to their occurrence. Furthermore, it is essential for nurses to provide comprehensive care that encompasses physical, psychological, and competent aspects for individuals, families, communities, and vulnerable groups, including children and the elderly, throughout the duration of

a catastrophe. Nurses assume a significant position in the attainment of post-disaster rescue and restoration efforts. As to the International Council for Nursing (ICN) and the World Health Organization (WHO), it is essential for nurses to possess enough knowledge and skills in order to provide comprehensive care to individuals, families, and society, both in the immediate and extended periods (5).

Research has shown that nurses have psychological unpreparedness when they are requested to engage in catastrophe scenarios (11,12). This is mostly due to the fact that these events surpass their capacity for work, and they harbor concerns over personal harm throughout disaster relief operations or the welfare of their relatives (13). Furthermore, they express apprehension about their level of proficiency in participating in the occurrence of a catastrophe (14).

Nurses constitute a substantial cohort within the healthcare field and assume a significant role in the realm of disaster planning and response (15). The disaster readiness of nurses necessitates the possession of technical abilities, including fundamental scientific understanding, prior experience in disaster management, and participation in catastrophe exercises (16,17,18). Nurses may effectively address catastrophes by assuming crucial responsibilities, including serving as a part of the response team, triage officer, care giver, care and service coordinator, information or education providers, and counselor (19,20). Hence, it is essential for nurses to possess enough skills and readiness to properly handle unexpected occurrences during times of crises. The objective of this research was to assess the level of readiness among nurses for disasters and identify the elements that influence it.

2. Nurses' Responsibilities In Emergency Response

The six sub-themes identified are as follows: public and hospital expectations, general and specialized nursing roles, medical task assignments, special roles during pandemics such as influenza and biological terrorism, role conflicts during disasters, and willingness to respond to disasters. The public expects nurses to be well-prepared both personally and professionally, with established procedures that enable them to effectively serve in emergency situations (1). Furthermore, it is essential that the general public has the entitlement to anticipate a proficient and efficient reaction from healthcare practitioners, particularly nurses (21). Furthermore, it is expected that nurses in hospitals possess prior

knowledge of their responsibilities, tasks, and authorized individuals responsible for issuing directives in the event of a disaster. However, many hospital employees lack awareness of their role during a disaster (22). To enhance the field of disaster nursing on a national scale, it is suggested to establish a national committee tasked with defining the subject, creating catastrophe curriculum, and establishing disaster competences. In addition, it is imperative for nurses to engage in disaster preparedness planning in order to acquaint themselves with their obligations in disaster scenarios (23).

The roles of nurses, both general and specialized, involve delivering care in a significantly distinct setting compared to their typical practice during disasters (24). Moreover, it is crucial that nurses maintain their ability to provide care to a greater number of patients. Various writers recognize that nurses play a vital role in emergency response (25,26,27). In essence, it can be inferred that nurses possess an inherent capacity to provide aid during a calamity (28). They are regarded as the most indispensable assets in addressing disasters (17). Throughout the history of nursing, nurses have consistently played a crucial role in disaster response. It is imperative that nurses, even in the absence of direct involvement in disaster care, are compelled to participate. Specifically, nurses operating in regions prone to disasters must possess a comprehensive understanding of their professional responsibilities in the context of such events (29).

During a catastrophe, nurses are required to assume the responsibilities of medical professionals in various capacities. Particular duty throughout a pandemic influenza and biological terrorist activity: The responsibilities throughout an outbreak are contact tracing, carrying out event inquiries, performing monitoring and tracking, gathering samples, administering vaccinations, and teaching community members (30). Additionally, it is expected of nurses in hospital environments to be competent to recognize, handle, and treat infectious diseases (31). However, it is essential that nurses receive training in disaster healthcare so as to have access to medical duties in emergencies (29). Nurses may exhibit less willingness to engage in work amid a tragedy. Additional factors that might impact individuals' inclination to provide a response include a lack of foundational knowledge, a diminished impression of personal safety, and a diminished view of clinical competence (32,33). Furthermore, it is said that these variables would result in a dearth of nurses to offer care in the event of a crisis.

Nurses who choose not to respond to a disaster often experience feelings of shame regarding their jobs and colleagues, acknowledging the consequences of their decision. However, it is also plausible that nurses are capable of responding to disasters outside of regular working hours (34). The preparedness and knowledge of nurses regarding disasters play a significant role in this matter. The six sub-themes identified are the description of a disaster, fundamental skills and instruction, undergraduate nursing schooling and ongoing education applications, disaster exercises, education and workouts, and preparedness. It is recognized that nurses may have a different perception of a disaster compared to official definitions and classifications, such as the one provided by the CRED (35).

In a research conducted by Loke et al. (17), nurses provided a comprehensive description of their impression of a catastrophe using a four-fold approach. The majority of nurses ascribed distinct attributes to catastrophes. These traits might be characterized as unanticipated, abrupt, unexpected, or unpreventable, exhibiting an out-of-control and unmanageable nature, requiring immediate attention, presenting a severe crisis, or being an undiscovered illness with no existing therapy. Another method of characterizing a catastrophe is by its impact, such as the significant number of casualties, environmental destruction, negative psychological impacts, loss of family, and severe repercussions. Furthermore, it has been characterized that calamities need the provision of emergency care and services. Illustrations involve situations that need urgent medical treatment, provide an obstacle for expert services, or demand a substantial workforce to manage. A limited number of nurses provided a comprehensive definition of disasters, encompassing outbreaks, collisions, terrorist assaults, natural catastrophes, severe weather, and war.

In order to enhance preparedness, it is crucial to establish core competencies for training and education, as well as to ensure the effectiveness and efficiency of response efforts during a disaster. Identifying the fundamental skills and knowledge required to assist and safeguard oneself and others in the event of a catastrophe is a crucial first measure for becoming nurses for disaster reaction (36). When doing a comparative analysis of the information and experiences that form the foundation of these abilities in relation to nursing practice, it can be inferred that a significant number of them are fundamental components of a nursing curriculum (36). Moreover, it has been argued by some that nurses already possess the necessary abilities to effectively react to a crisis. These

qualities are believed to include human compassion, ingenuity, adaptability, effective communication, and managerial abilities (37).

However, Usher and Mayner (38) argue that employment in an emergency department or a comparable field is insufficient to possess the necessary skills to effectively react to a crisis. There are assertions made by some individuals that nurses employed in acute care possess distinct core competencies in the field of disaster nursing (39). Additionally, certain authors highlight the underrepresentation or insufficiency of disaster nursing in undergraduate nursing curricula, resulting in nurses and nurse practitioners being unable to meet the necessary competencies in this domain. Consequently, there is a pressing need to incorporate material in order to equip nurses with the necessary skills to effectively respond to disasters (1, 23,40). Nursing educators have the responsibility of adequately equipping nurses for catastrophe situations. This entails making necessary modifications to curriculum and addressing the growing need for disaster nursing education and training across all nursing cohorts (41).

Pourmand et al. (42) suggest a comprehensive nursing program consisting of seven courses to specifically handle chemical and biological warfare. In other contexts, the training of specialized abilities and expertise has faced criticism due to the limited likelihood of their retention until a chance to use them is provided (43). The literature extensively covers the topics of undergraduate nursing schooling and ongoing education courses for nurses. The integration of disaster preparedness and nursing material and experience into undergraduate nursing and continuing education program curriculum is crucial due to the need for nurses to possess awareness of catastrophes and be well prepared for them (44). It is important to recognize that all nurses, regardless of their level of education and training, may be summoned during a crisis. Consequently, it is essential that all nurses possess a basic level of knowledge and abilities to ensure the propriety of their reaction (17,45).

Education has a crucial role in fostering a sense of safety, competence, and desire to engage in emergency situations (32,34). However, it is important to customize education to align with the unique requirements of a given setting, including the capacity and anticipated responsibilities of nurses. According to Usher and Mayner (38), the current condition of disaster nursing competences in undergraduate nursing courses in Australia is insufficient or lacks comprehensive knowledge about their inclusion. Consequently, there is a need

for possibilities for professional growth to address this issue. One potential approach to ensuring the sufficient provision of expertise and abilities necessary during a disaster involves fostering collaboration and knowledge sharing among nursing schools, military medical communities, and other trained medical professionals, such as volunteers from organizations like the Red Cross or Red Crescent, as well as other medical response teams. An additional viable approach could involve the distribution of information and educational resources pertaining to disasters (35).

It is crucial for nurses to receive tailored education that aligns with their existing knowledge and skills to avoid redundant efforts or oversight of significant content. This is because nurses who possess greater expertise and knowledge are more inclined to employ advanced disaster nursing techniques (17,31). Furthermore, disaster drills, training, and exercises are integral components of disaster preparedness. It has been determined that the implementation of intense training and periodic exercise programs that simulate emergency plans in hospitals may enhance the emergency response skills of nurses (46,47).

It is advisable for all nurses to engage in regular drills for emergencies and disaster education. Nursing programs should partner with the local EMS to provide their students with hands-on experience in disaster response and to enhance collaboration between first responders and first responders. This is necessary because a large number of nurses will be required during a disaster. On the contrary, some individuals delineate certain medical duties and assert that these duties have to be customized to align with the nurses' prior knowledge and clinical expertise (24).

In order to adequately educate nurses to respond to catastrophes caused by various hazards and situations outside their work environment, it is essential to cover a wide variety of themes during disaster training (44). According to the findings of Goodhue et al. (28), it can be inferred that the presence of disaster training, in addition to having an assigned position in implementing a catastrophe strategy, is the variable that can be modified most easily and has the greatest influence on enhancing the probability of response during a disaster. The preparedness of nurses plays a crucial role in their ability and capacity to respond, as well as in the effective delivery of disaster response (48,49).

The concept of readiness may be categorized into two distinct perspectives: personal preparation and occupational preparedness. Considerable emphasis is placed on the readiness for bioterrorism, as it has been seen that being well prepared for such situations, including infectious diseases, yields

favorable outcomes for patients, families, and nurses themselves. This is exemplified by the prevention of secondary transmission (50,51). In addition, bioterrorism preparation equips nurses with the necessary knowledge and reaction measures to effectively handle other crises, hence minimizing the occurrence of misunderstandings (52). Given the significance of this matter, it is imperative that bioterrorism preparation be included into the curriculum of continuing education and nursing schools (44).

3. Work Setting

During a bioterrorism event, nurses will face tough circumstances at work, a fear-filled atmosphere, and complex infection prevention needs (53). Nurses anticipate a disorganized clinical setting with no clear chain of authority, insufficient safety gear, and limited freedom to leave throughout a disaster (54). Bal and Ada (55) presume that even in well-prepared healthcare facilities, there will be disorder, inadequate funding, casualties, disarray and disagreement over who is in charge, security breaches, and communication difficulties during a disaster. During a crisis, issues related to organizational and social assistance may arise due to difficulties in caring for children, elderly individuals, or pets during extended shifts and quarantine (56). Nursing care during a catastrophe is a distinct kind of care that arises due to the exceptional circumstances and the disruption of established routines. In the event of a catastrophe, the provision of care is carried out by a collaborative team consisting of nurses, clinicians, and EMS experts, each with distinct responsibilities (44). Therefore, nurses, particularly, perceive themselves as advocates for their patients, particularly those who are fearful or highly vulnerable. The qualities of compassion and solidarity are highly valued in their rescue work, which is further strengthened by the sense of community among their colleagues and the recognition they receive from the victims (18).

Nurses encounter conflicts and ethical dilemmas when operating in times of disaster. Nurses face conflicts in delivering dependent care due to increased staff requirements and allocation of resources (18,56). They also face challenges in identifying unaccustomed infectious agents, working extended hours, having little equipment, working in unfamiliar settings, providing care to infected patients, and fearing infection. Blackwood (57) concludes that tasks such as triage, quarantine, and mandatory medication administration may be ethically challenging during a disaster. If the level of uncertainty regarding the conditions

deteriorates, nurses may encounter feelings of discouragement and fear (16).

4. Emotional Responses

On one hand, nurses may experience feelings of guilt when taking leave, express concerns about causing pain and distress to their patients, feel overwhelmed by the magnitude of the tragedy, experience disgust or distress due to the nature of the injuries and the extent of the suffering, or feel apprehensive about their ability to cope. Conversely, nurses also experience enthusiasm and difficulty in their work, or see themselves as highly esteemed colleagues (58). They also express anger towards those in positions of power due to the expectation to meet the responsibility of providing care (16). In the case of bioterrorism, people are likely to experience fear, stress, nervousness, and disorientation. Fears may arise as a result of being subjected to an infectious substance the risk of spreading the illness to other individuals or their families, ignorance of disease agents, isolation protocols, and content resource accessibility (30). Other emotions that may surface include despair, separation, or ambiguity regarding disorder overall and evacuation in particular (16). Recent research challenges this notion by demonstrating that the performance of nurses may be negatively affected by factors such as insufficient rest, inadequate nutrition, irregular eating habits, and inadequate fluid consumption (58).

Additional sources of stress may include excessive information and workload, crises, confusion, unpredictability, disorder, service disruptions, deaths, diversions from crowds and media, deterioration of infrastructure, restricted availability of medical supplies, and the absence of power and drinkable water (50,52,55). Furthermore, inadequate expertise and abilities, along with a demanding workload and insufficient equipment, contribute to mental health issues in the aftermath of a disaster (14). Additionally, a disaster can result in personal trauma due to the loss of residences, places of employment, and intimate connections, as well as the suffering or death of patients. The decreased a readiness to react to a disaster and provide medical treatment to patients during an epidemic primarily stems from heightened concerns about infection and a lack of medical knowledge (44).

During a disaster, nurses are equally susceptible to injuries, property damage, or shifting. They will experience anxiety and worry for their own and their family's security. As a result, they will need to decide whether to report to work or take care of themselves, their family, or personal property. Other reasons for their reluctance to get involved

in a disaster include responsibilities towards kids or elderly people, having a second job, problems with transportation, or responsibilities to care for a pet. In their research, Goodhue et al. (28) determined that a minority of pediatric nurse practitioners, namely less than one third, would exhibit a definitive response in the event of a calamity.

One finding from the research conducted by OBoyle et al. (47) indicates that a significant number of nurses had a tendency to depart from hospitals or abstain from attending work in the case of a bio-terroristic incident. Not all nurses may exhibit a willingness to address the biological, chemical, or radioactive crises due to concerns over personal safety. Additionally, the absence of personal protective equipment may hinder the capacity of some nurses to react effectively (50). To enhance the inclination to address a disaster, it is imperative to provide nurses with comprehensive education regarding the hospital's expectations and the potential consequences of failing to respond to emergencies (47). Additional factors that may contribute to this inclination include ensuring the safety and well-being of family members, establishing a home disaster plan, receiving disaster training, being assigned a specific role in the workplace disaster plan, and possessing prior experience with disasters (24).

5. Conclusion

In summary, the significance of cultural competency in the field of nursing, especially in relation to disaster planning and coordination of emergency response, cannot be emphasized enough. The wide-ranging consequences of natural catastrophes extend to people, families, communities, and the environment. Consequently, it is essential for nurses to possess the requisite knowledge, abilities, and attitudes to provide proficient and culturally attuned care in such demanding circumstances.

In crisis situations, nurses have a crucial function as primary caregivers, carrying out triage procedures and delivering comprehensive treatment to people and communities impacted by catastrophes. Nevertheless, there are difficulties in precisely delineating the precise responsibilities and competencies of nurses in crisis scenarios, underscoring the need for more investigation and prioritization of disaster nursing readiness.

The term "disaster nurse" refers to a professional who is involved in three specific stages: before, during, and after a catastrophe. In the pre-event phase, it is important for nurses to have a comprehensive understanding, proficiency, and expertise in order to identify possible hazards,

devise suitable recovery methods, and undertake requisite preparations for probable catastrophic events. Nurses have the responsibility of delivering comprehensive care that encompasses the physical, psychological, and cultural requirements of people, families, and communities throughout the course of a disaster. Additionally, they play a substantial role in the context of post-disaster rescue and restoration efforts.

Numerous studies have shown that nurses often experience psychological unpreparedness when confronted with catastrophe situations. Individuals may have apprehensions about their degree of competence and possess anxieties over personal security or the welfare of their close relations. Addressing these issues and ensuring the provision of sufficient training support, and resources are important in order to strengthen the preparedness and self-assurance of nurses in their response to catastrophes.

The preparedness of nurses for catastrophes is impacted by a range of elements, including their technical competencies, previous involvement in disaster management, and engagement in disaster simulations. Ensuring that nurses acquire enough training and education in disaster healthcare, including cultural competency, is vital in order to proficiently carry out their responsibilities in emergency situations. Through the integration of disaster nursing into nursing curriculum, the establishment of fundamental competences, and the facilitation of continuous professional growth, nurses may enhance their readiness to provide comprehensive care and effectively cater to the distinct requirements of various populations impacted by disasters.

Ultimately, cultural competency is an essential component of nursing practice in locations affected by disasters. Nurses may provide care that is courteous, responsive, and successful by acknowledging and appreciating the many cultural origins and requirements of people and communities. The nursing profession may further improve its disaster preparation and emergency response capacities by engaging in continuous research, education, and cooperation. This will eventually lead to the development of more resilient and healthier communities in the event of natural calamities.

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