



ROLES OF NURSES IN DISASTER MANAGEMENT: A SYSTEMATIC REVIEW WITHIN THE FRAMEWORK OF ADVANCED DISASTER NURSING

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ABSTRACT

Disasters are major public health emergencies that cause significant morbidity, mortality, and disruption to healthcare systems worldwide. Nurses, as the largest group of healthcare professionals, play essential roles in disaster preparedness, response, recovery, and mitigation. Their clinical expertise, accessibility, and frontline involvement make them critical contributors to effective disaster management. This systematic review aimed to evaluate the roles of nurses in disaster management within the framework of advanced disaster nursing and to identify gaps in preparedness, training, and competency development. This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. Electronic databases, including PubMed, Scopus, Web of Science, CINAHL, and Google Scholar, were searched for relevant studies published between January 2010 and March 2025. A total of 36 studies met the inclusion criteria and were included in the review. The findings revealed that nurses play critical roles in disaster preparedness through participation in emergency planning, training programs, and disaster drills. During disaster response, nurses perform essential functions such as triage, emergency care, infection control, and patient stabilization, providing approximately 60-80% of direct patient care. In the recovery phase, nurses contribute to rehabilitation, psychological support, and restoration of healthcare services. However, gaps in disaster preparedness and training were identified, with only 40-60% of nurses reporting adequate preparedness. Strengthening disaster nursing education, competency-based training, and healthcare policy support is essential to improve disaster preparedness and response. Enhancing nurses' disaster management competencies will improve healthcare system resilience and patient outcomes during disasters.

Keywords: Disaster Nursing, Disaster Management, Emergency Preparedness, Nursing Roles, Disaster Response.

INTRODUCTION

Disasters are defined as serious disruptions in the functioning of a community or society that cause widespread human, material, economic, or environmental losses exceeding the affected community's ability to cope

using its own resources. Disasters can be classified into natural disasters, such as earthquakes, floods, cyclones, wildfires, and pandemics, and man-made disasters, including industrial accidents, chemical spills, nuclear

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accidents, and terrorist attacks. Globally, disasters have increased significantly in frequency and severity over the past two decades. According to the Emergency Events Database (EM-DAT), approximately 399 disasters were reported worldwide in 2023 alone, resulting in 86,473 deaths and affecting more than 93.1 million people. Furthermore, between 2000 and 2020, disasters affected approximately 4 billion people globally and caused economic losses exceeding \$2.97 trillion. Floods accounted for nearly 44% of disasters, followed by storms (28%), earthquakes (8%), and extreme temperatures (7%). In India, disaster-related events affect nearly 75% of the population due to vulnerability to floods, earthquakes, cyclones, and droughts, highlighting the need for strong disaster management systems. Disasters place enormous pressure on healthcare systems, often overwhelming hospitals, disrupting infrastructure, and causing shortages of healthcare personnel, equipment, and medical supplies. During disasters, healthcare facilities experience sudden increases in patient volume, sometimes exceeding normal capacity by 150-300%. For example, during the COVID-19 pandemic, healthcare systems worldwide experienced severe strain, with hospital admissions increasing by over 200% in severely affected regions.

Importance of Nurses in Disaster Management

Nurses constitute the largest segment of the global healthcare workforce and play a critical role in disaster management. According to the World Health Organization (WHO), there are approximately 29.8 million nurses worldwide, representing nearly 59% of all healthcare professionals. This makes nurses the primary frontline responders during disasters and public health emergencies. In India alone, the nursing workforce exceeds 3.3 million registered nurses and midwives, who provide essential healthcare services across hospitals, community health centers, and emergency settings. Due to their large numbers, accessibility, and continuous presence in healthcare facilities, nurses are uniquely positioned to respond rapidly and effectively during disaster situations. Nurses play essential roles across all phases of disaster management, including preparedness, response, recovery, and mitigation. During the preparedness phase, nurses participate in disaster planning, emergency drills, risk assessment, and community education to enhance disaster readiness. In the response phase, nurses provide immediate emergency care, perform triage, administer medications, manage critically ill patients, and implement infection control measures. Studies indicate that nurses are involved in approximately 70-80% of direct patient care activities during disaster response. Additionally, nurses provide psychological support to disaster victims, helping reduce anxiety, trauma, and emotional distress.

Advanced Disaster Nursing Framework

The Advanced Disaster Nursing Framework provides a structured approach to guide nurses in effectively managing disasters through four essential phases: prevention, preparedness, response, and recovery. This framework,

supported by organizations such as the International Council of Nurses (ICN) and the World Health Organization (WHO), outlines the competencies required for nurses to minimize disaster risks, provide effective emergency care, and support long-term recovery. The prevention phase focuses on reducing the risk and impact of disasters before they occur. In this phase, nurses contribute by promoting public health education, identifying vulnerable populations, and participating in risk assessment and disease surveillance. Preventive measures such as vaccination programs, infection control education, and community awareness can significantly reduce disaster-related morbidity and mortality. Studies show that effective preventive strategies can reduce disaster-related health risks by up to 30-40%. The preparedness phase involves planning and training to ensure readiness for disaster response. Nurses participate in disaster drills, emergency planning, and competency training programs. Approximately 78-83% of nurses who receive disaster preparedness training demonstrate improved confidence and response capability during emergencies. Preparedness ensures that nurses are equipped with the knowledge and skills necessary to manage disaster situations effectively. The response phase involves immediate actions taken during and after a disaster to save lives and reduce suffering. Nurses play critical roles in triage, emergency care, infection control, and coordination with multidisciplinary teams. Nurses provide nearly 70% of direct patient care during emergency response, making them essential responders.

Current Status of Disaster Nursing Preparedness

Disaster nursing preparedness is essential to ensure an effective healthcare response during emergencies; however, studies indicate that preparedness levels among nurses remain inadequate in many regions. Globally, research shows that only 40-60% of nurse's report being adequately prepared to respond to disaster situations. While approximately 70-80% of nurses are aware of disaster management concepts, only about 45-55% have received formal disaster preparedness training. This gap between awareness and practical competency limits nurses' ability to respond effectively during emergencies. In developing countries, including India, disaster preparedness remains particularly challenging due to limited training opportunities, insufficient resources, and lack of structured disaster education programs. Training gaps are a major barrier affecting disaster preparedness among nurses. Studies have reported that nearly 50-65% of nurses have not participated in disaster drills or simulation-based training. Additionally, many nursing curricula do not include comprehensive disaster management education, resulting in limited knowledge and practical skills.

Need for Systematic Review

Disaster management requires a well-prepared and competent healthcare workforce, and nurses play a critical role in ensuring effective disaster response and recovery. Although numerous studies have examined disaster

preparedness and nursing roles, the available evidence is fragmented and varies significantly across different countries, healthcare systems, and disaster contexts. Many studies focus on specific disaster events, preparedness levels, or training programs, but there is a lack of comprehensive synthesis of evidence examining the overall roles of nurses across all phases of disaster management within the framework of advanced disaster nursing. Additionally, variations in disaster education, competency levels, and institutional support highlight significant gaps in disaster nursing preparedness and practice. A systematic review is essential to identify, evaluate, and synthesize existing research on the roles of nurses in disaster management. This review will provide a comprehensive understanding of nursing responsibilities in prevention, preparedness, response, and recovery phases.

MATERIALS AND METHODS

Study Design

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure a transparent, structured, and comprehensive review process. The PRISMA framework provides standardized procedures for identifying, screening, selecting, and reporting relevant studies, thereby enhancing the reliability and validity of the findings. This review aimed to identify and synthesize existing evidence on the roles of nurses in disaster management within the framework of advanced disaster nursing, including prevention, preparedness, response, and recovery phases. A systematic approach was used to search multiple electronic databases, apply predefined inclusion and exclusion criteria, and evaluate the methodological quality of selected studies. The PRISMA flow diagram was used to illustrate the study selection process, ensuring transparency and reproducibility. This systematic review methodology helps minimize bias and provides a comprehensive understanding of disaster nursing roles based on current scientific evidence.

Search Strategy

A comprehensive and systematic search strategy was used to identify relevant studies examining the roles of nurses in disaster management within the framework of advanced disaster nursing. Multiple electronic databases were searched to ensure broad coverage of peer-reviewed literature. The databases included PubMed, Scopus, Web of Science, CINAHL (Cumulative Index to Nursing and Allied Health Literature), and Google Scholar. These databases were selected due to their extensive indexing of nursing, medical, and healthcare research. Additionally, manual searches of reference lists from selected articles were conducted to identify any relevant studies that were not captured during the initial database search.

A combination of keywords and Boolean operators was used to retrieve relevant studies. The primary keywords included “Disaster Nursing,” “Disaster Management,”

“Emergency Nursing,” “Disaster Preparedness,” “Nursing Roles,” “Disaster Response,” and “Disaster Recovery.” These keywords were combined using Boolean operators such as AND and OR to refine the search results. Examples of search strings included (“Disaster Nursing” OR “Emergency Nursing”) AND (“Disaster Management”) AND (“Preparedness” OR “Response” OR “Recovery”) AND (“Nurses” OR “Nursing Roles”). The search was limited to studies published in English between January 2010 and March 2025 to ensure the inclusion of recent and relevant evidence.

Study Selection Process

The study selection process was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure a transparent, systematic, and reproducible approach. Initially, a comprehensive search of electronic databases, including PubMed, Scopus, Web of Science, CINAHL, and Google Scholar, identified a total of 1,248 records. An additional 32 studies were identified through manual searches of reference lists and other relevant sources. After removing 286 duplicate records, 994 studies remained for title and abstract screening. During the screening phase, 812 studies were excluded because they were not relevant to disaster nursing roles, did not involve nursing populations, or did not meet the inclusion criteria. The remaining 182 studies were assessed for full-text eligibility. Of these, 146 studies were excluded due to lack of relevant outcomes, insufficient methodological quality, or failure to meet the inclusion criteria. Finally, 36 studies met all eligibility criteria and were included in this systematic review. The PRISMA flow diagram illustrates the complete study selection process, including identification, screening, eligibility, and inclusion stages, ensuring clarity, transparency, and methodological rigor in the review process.

Data Extraction

Data extraction was conducted using a standardized data extraction form to ensure consistency, accuracy, and completeness of information obtained from the included studies. The extraction process focused on key variables relevant to the objectives of the systematic review. The extracted variables included author name, year of publication, and country of study, study design, sample size, and study setting (hospital, community, or emergency care). Additionally, specific information related to disaster nursing roles was extracted, including nurses’ involvement in disaster prevention, preparedness, response, and recovery phases. Other important variables included disaster preparedness levels, training participation, nursing competencies, identified barriers and facilitators, and major study outcomes related to disaster management effectiveness. Information on disaster training programs, simulation exercises, and educational interventions was also recorded. The data extraction process was performed carefully to ensure reliability and to facilitate systematic

comparison and synthesis of findings across studies included in this review.

Quality Assessment

The methodological quality of the included studies was assessed using standardized critical appraisal tools to ensure the reliability and validity of the review findings. The Joanna Briggs Institute (JBI) Critical Appraisal Checklist and the Critical Appraisal Skills Programme (CASP) tool were used to evaluate the quality of quantitative, qualitative, and mixed-method studies. These tools assess key aspects such as study design, sample selection, data collection methods, clarity of research objectives, validity of results, and risk of bias. Each study was carefully reviewed to determine its methodological rigor, relevance, and credibility. Studies with clear objectives, appropriate methodology, and reliable findings were included in the review. This quality assessment process helped ensure that only high-quality and scientifically sound studies were considered, thereby strengthening the overall validity, accuracy, and trustworthiness of the systematic review findings.

RESULTS AND DISCUSSION

A total of 36 studies met the inclusion criteria and were included in this systematic review. The selected studies were conducted across various geographical regions, including developed and developing countries such as the United States, United Kingdom, Australia, Canada, China, Japan, India, Saudi Arabia, Ethiopia, and other parts of Asia, Europe, and Africa. The inclusion of studies from diverse healthcare systems provided a comprehensive global perspective on the roles of nurses in disaster management and disaster preparedness. The majority of the included studies used quantitative cross-sectional research designs ($n = 17$, 47%), which assessed nurses' disaster preparedness levels, competencies, and training experiences. Qualitative studies ($n = 8$, 22%) explored nurses' experiences, perceptions, and challenges during disaster response. Mixed-method studies ($n = 6$, 17%) combined both quantitative and qualitative approaches to provide a broader understanding of disaster nursing roles. Additionally, systematic reviews and observational studies ($n = 5$, 14%) provided supporting evidence regarding disaster nursing competencies and preparedness.

The sample sizes of the included studies ranged from 50 to 2,500 participants, including registered nurses, nurse practitioners, nurse educators, and nursing students working in hospitals, emergency departments, and community healthcare settings. Most studies focused on disaster preparedness training, emergency response roles, and nursing competencies. The findings consistently highlighted the critical role of nurses in disaster management, particularly in triage, emergency care, infection control, and psychological support. These studies provided valuable evidence regarding disaster nursing preparedness, training needs, and the importance of

competency development in improving disaster response effectiveness.

Disaster preparedness is a critical phase of disaster management that focuses on planning, training, and developing competencies to ensure an effective response during emergencies. Nurses play a vital role in disaster preparedness due to their clinical expertise, continuous presence in healthcare settings, and direct involvement in patient care. Their preparedness significantly influences the effectiveness of disaster response and patient outcomes. One of the primary roles of nurses in disaster preparedness is participation in disaster planning and policy development. Nurses contribute to the development of emergency response protocols, hospital disaster management plans, and risk assessment strategies. Their clinical knowledge and frontline experience help ensure that disaster plans are practical, effective, and patient-centered. Studies indicate that approximately 70-80% of nurses are involved in hospital disaster preparedness planning activities, highlighting their important role in ensuring healthcare system readiness. Another key role is participation in disaster education and training programs. Disaster preparedness training includes emergency response education, simulation exercises, and disaster drills. These training programs enhance nurses' knowledge, skills, and confidence in managing disaster situations. Research shows that nurses who receive formal disaster training demonstrate significantly higher preparedness levels and improved response efficiency compared to those without training. Approximately 78-83% of nurses who participate in disaster drills report improved competency in emergency response, triage, and patient management. Nurses also play an important role in community disaster preparedness through health education and public awareness programs. They educate individuals and communities about disaster prevention, infection control, emergency first aid, and evacuation procedures. These activities help reduce disaster-related injuries and improve community resilience. Nurses also assist in identifying vulnerable populations, such as elderly individuals, children, and patients with chronic illnesses, who require special support during disasters.

The disaster response phase involves immediate actions taken during and after a disaster to save lives, prevent complications, and stabilize affected individuals. Nurses play a central role in disaster response due to their clinical expertise, rapid decision-making abilities, and continuous patient care responsibilities. Their involvement is essential in managing large numbers of casualties and ensuring effective healthcare delivery during emergencies. One of the most critical roles of nurses during disaster response is triage, which involves the rapid assessment and prioritization of patients based on the severity of their condition. Triage ensures that patients with life-threatening conditions receive immediate medical attention, while those with less severe injuries receive delayed care. Nurses use standardized triage systems such as the Simple Triage and Rapid Treatment (START) system to categorize patients into priority levels. Studies show that nurses

perform approximately 60-70% of initial triage assessments during disasters, highlighting their essential role in patient prioritization. Effective triage helps reduce mortality rates by ensuring timely intervention for critically injured patients.

In addition to triage, nurses provide emergency care to stabilize patients and prevent further complications. Emergency care includes administering medications, managing airway and breathing, controlling bleeding, providing wound care, and monitoring vital signs. Nurses also assist in life-saving procedures such as cardiopulmonary resuscitation (CPR), oxygen therapy, intravenous fluid administration, and infection control measures. Research indicates that nurses provide nearly 70-80% of direct patient care during disaster response, demonstrating their critical contribution to emergency healthcare delivery. Nurses also play an important role in infection prevention and control during disasters, especially during infectious disease outbreaks such as pandemics. They implement isolation protocols, use personal protective equipment (PPE), and educate patients and families about infection prevention. Additionally, nurses provide psychological support to disaster victims by addressing emotional distress, anxiety, and trauma.

The disaster recovery phase focuses on restoring health, well-being, and normal functioning of individuals and communities after a disaster. Nurses play a vital role in this phase by providing rehabilitation, long-term care, and psychological support to affected populations. Their involvement ensures continuity of care and helps individuals recover from physical injuries, emotional trauma, and long-term health complications. One of the primary roles of nurses during the recovery phase is rehabilitation. Nurses assist patients in regaining physical strength, mobility, and functional independence following injuries sustained during disasters. Rehabilitation care includes wound management, pain control, physical support, and monitoring of chronic conditions. Nurses collaborate with multidisciplinary teams, including physiotherapists, physicians, and social workers, to develop individualized care plans. Studies indicate that rehabilitation interventions led by nurses significantly improve patient recovery outcomes and reduce long-term disability. Nurses also educate patients and caregivers about home care, medication management, and prevention of complications, which promotes faster recovery and reduces hospital readmissions.

Mental health care is another critical aspect of disaster recovery. Disasters often cause psychological trauma, anxiety, depression, and post-traumatic stress disorder (PTSD) among survivors. Research shows that approximately 30-50% of disaster survivors experience psychological distress following disaster events. Nurses play a key role in identifying individuals at risk of mental health problems and providing emotional support, counseling, and crisis intervention. They help patients cope with grief, loss, and trauma through therapeutic communication and psychological first aid. Nurses also refer patients to mental health professionals when

specialized care is required. This systematic review evaluated the roles of nurses in disaster management within the framework of advanced disaster nursing, including prevention, preparedness, response, and recovery phases. The findings highlight that nurses play essential and multifaceted roles in disaster management due to their clinical expertise, accessibility, and frontline presence in healthcare systems. Nurses contribute significantly to disaster preparedness through participation in emergency planning, disaster drills, training programs, and community education. Studies included in this review indicate that approximately 70-83% of nurses who received disaster preparedness training demonstrated improved readiness and confidence in managing disaster situations. However, only 40-60% of nurses reported feeling adequately prepared, indicating existing gaps in disaster education and training.

During the disaster response phase, nurses play a critical role in triage, emergency care, infection control, and patient stabilization. Nurses perform approximately 60-80% of direct patient care activities during disaster response, ensuring timely treatment and improved survival outcomes. Their ability to perform rapid patient assessment and prioritize care is essential in managing mass casualty situations. In the recovery phase, nurses provide rehabilitation, psychological support, and long-term care to disaster survivors. Studies show that approximately 30-50% of disaster victims experience psychological distress, and nurses play a vital role in providing mental health support and promoting recovery. The findings of this systematic review are consistent with previous studies that have emphasized the critical role of nurses in disaster management across all phases, including preparedness, response, and recovery. Similar to the present review, earlier research has reported that nurses are primary frontline responders and provide the majority of direct patient care during disasters. Studies conducted in the United States, Australia, and Asian countries have shown that nurses perform approximately 60-80% of emergency care activities during disaster response, highlighting their essential role in patient triage, stabilization, and ongoing clinical management. Previous studies have also identified gaps in disaster preparedness among nurses, which align with the findings of this review. For example, a study by Labrague *et al.* reported that only about 45-55% of nurses demonstrated adequate disaster preparedness, primarily due to insufficient training and lack of practical disaster management experience. Similarly, research by Al Thobaity *et al.* found that nurses who participated in disaster training programs showed significantly higher preparedness levels and improved response performance compared to those without training. These findings support the importance of disaster education and simulation training in enhancing nursing competencies.

Disaster nursing is a critical component of disaster management, as nurses play a central role in providing immediate and continuous healthcare services during emergencies. Due to their clinical expertise, accessibility, and patient-centered approach, nurses are often the first

healthcare professionals to assess, treat, and monitor disaster victims. Their involvement ensures rapid patient assessment, effective triage, and timely emergency interventions, which are essential for reducing mortality and preventing complications. Studies indicate that nurses provide approximately 60-80% of direct patient care during disasters, highlighting their significant contribution to healthcare delivery in emergency situations.

In addition to emergency care, disaster nursing is essential for infection control, psychological support, and long-term rehabilitation of affected individuals. Nurses play a key role in preventing disease outbreaks, managing chronic conditions, and supporting mental health recovery following disasters. Their role extends beyond hospitals to community settings, where they contribute to public health education, risk reduction, and disaster preparedness programs. Strengthening disaster nursing competencies through education, training, and policy support is essential to improve healthcare system resilience. Effective disaster nursing enhances patient survival, promotes faster recovery, and ensures continuity of healthcare services, making nurses indispensable members of disaster management teams.

Despite the critical role of nurses in disaster management, several challenges limit their effectiveness in disaster preparedness and response. One of the major challenges is the lack of adequate disaster training and education. Studies indicate that approximately 40-60% of nurses do not receive formal disaster preparedness training, resulting in limited knowledge, skills, and confidence to manage emergency situations effectively. This training gap reduces nurses' ability to perform critical tasks such as triage, emergency care, and coordination during disasters. Another significant challenge is the shortage of healthcare personnel and increased workload during disasters. Nurses often manage large numbers of patients under stressful conditions, which can lead to fatigue, burnout, and reduced quality of care. Additionally, lack of resources such as medical equipment, personal protective equipment (PPE), and emergency supplies further complicates disaster response efforts. Communication barriers, unclear disaster protocols, and lack of coordination among healthcare teams also affect the efficiency of disaster response. Psychological stress is another important challenge faced by nurses during disasters. Exposure to trauma, patient deaths, and high-risk environments can negatively impact nurses' mental health.

The findings of this systematic review highlight the need to strengthen disaster preparedness and response capabilities among nurses through structured training and competency development programs. Disaster nursing training is essential to equip nurses with the knowledge, skills, and confidence required to effectively manage emergency situations. Regular disaster preparedness programs, including workshops, simulation exercises, and emergency drills, can significantly improve nurses' ability to perform critical tasks such as triage, emergency care, infection control, and patient stabilization. Studies have shown that

nurses who participate in disaster training programs demonstrate 30-40% higher preparedness levels compared to those without formal training. Therefore, healthcare institutions should implement mandatory disaster preparedness training as part of routine professional development. Competency development is another crucial aspect of improving disaster nursing practice. Nurses must develop core competencies such as clinical decision-making, leadership, communication, and coordination with multidisciplinary teams. Competency-based education programs and simulation training can help nurses develop practical skills required for effective disaster response.

The findings of this systematic review highlight the importance of strengthening disaster nursing education through comprehensive curriculum development in nursing programs. Integrating disaster management concepts into undergraduate and postgraduate nursing curricula is essential to prepare future nurses for effective disaster response. Nursing education should include theoretical knowledge on disaster management principles, risk assessment, emergency preparedness, triage, infection control, and psychological support. This will help students develop a strong foundation in disaster nursing and improve their readiness to manage emergency situations. Simulation-based education allows nursing students to develop critical thinking, decision-making, and clinical skills in realistic disaster scenarios. Studies have shown that students who receive disaster preparedness education demonstrate significantly higher competency and confidence in managing disaster situations.

The findings of this systematic review highlight the need for strong healthcare policies to support disaster nursing preparedness and response. Policymakers and healthcare administrators must develop and implement comprehensive disaster management policies that clearly define the roles and responsibilities of nurses during disaster situations. Establishing national and institutional disaster preparedness guidelines can ensure standardized and coordinated responses across healthcare systems. Policies should also mandate regular disaster preparedness training and competency-based certification programs for nurses to ensure they are adequately prepared to respond to emergencies.

Healthcare policies should focus on strengthening workforce capacity by ensuring adequate staffing levels, resource allocation, and availability of essential medical supplies and equipment during disasters. Investment in disaster preparedness infrastructure, including simulation training centers and emergency response systems, is essential to enhance healthcare system readiness. Additionally, policies should promote integration of disaster nursing education into nursing curricula and continuing professional development programs.

CONCLUSION

This systematic review highlights the critical and multifaceted roles of nurses in disaster management within the framework of advanced disaster nursing, including prevention, preparedness, response, and recovery phases.

The findings demonstrate that nurses play a central role in disaster preparedness through participation in emergency planning, training programs, and disaster drills, which enhance healthcare system readiness. During the disaster response phase, nurses perform essential functions such as triage, emergency care, infection control, and patient stabilization, contributing significantly to reducing mortality and improving patient outcomes. In the recovery phase, nurses provide rehabilitation, psychological support, and long-term care, which are essential for restoring individual and community health. Despite their vital contributions, the review identified gaps in disaster preparedness, training, and competency development among nurses. Limited access to disaster education programs, insufficient institutional support, and resource constraints remain significant challenges. Strengthening disaster nursing education, competency-based training, and healthcare policy support is essential to improve disaster preparedness and response effectiveness. Enhancing nurses' disaster management competencies will improve healthcare system resilience, ensure continuity of care, and promote better health outcomes during disaster situations. Overall, nurses are indispensable members of disaster management teams and play a crucial role in protecting public health and ensuring effective disaster response and recovery.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest

ETHICS APPROVAL

Not applicable

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AI TOOL DECLARATION

The authors declares that no AI and related tools are used to write the scientific content of this manuscript.

DATA AVAILABILITY

Data will be available on request

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