WJEMSD

WASD
WORLD ASSOCIATION FOR SUSTAINABLE DEVELOPMENT

World Journal of
ENTREPRENEURSHIP, MANAGEMENT
AND SUSTAINABLE DEVELOPMENT

ISSN: 2042-5961 (Print) | 2042-597X (Online)

WJEMSD V19 N3/4 2023

OPEN ACCESS

DOI: 10.47556/J.WJEMSD.19.3-4.2023.5

REVIEW

The Power of Alignment of Factors Associated with Nursing Activities in Humanitarian Aid and Disaster Relief in Saudi Arabia: An Integrative Review

Dr Nazik M.A. Zakari, PhD, MSN, BSN
Associate Professor and Vice Dean
Department of Nursing, College of Applied Sciences
AlMaarefa University, Dariyah
Riyadh, Kingdom of Saudi Arabia
ORCID: https://orcid.org/0000-0002-4667-8541
Email: nzakari@mcst.edu.sa

ABSTRACT

PURPOSE: This study aims to synthesise the evidence that alignment exists and demonstrate the factors influencing nurses to become involved in humanitarian aid and disaster relief.

DESIGN/METHODOLOGY/APPROACH: The study utilises a systematic analysis standard and examines the Health and Medical Complete, PubMed, Google Scholar, and Cumulative databases between 2010 and 2022. Keywords were used such as nursing activities, humanitarian aid activities, disaster relief, and disaster preparedness.

FINDINGS: Out of a total of 1,430 articles found, 950 were considered duplicates and were thus disregarded. There were 65 incompatibilities found after reviewing the complete texts of 480 articles. Eleven papers were found to be within the study's parameters and eligibility criteria. Key themes identified perceived competency, ICN alignment, and relief factors. Social dimensions of alignment among Saudi nurses were well established in terms of their role in taking care of individuals and communities.

ORIGINALITY/VALUE OF THE PAPER: This study concludes that the structure alignment outcomes emphasis must be placed on preparing Saudi nurses to anticipate leadership compactness in disaster planning.

KEYWORDS: *An Integrative Review; Alignment; Saudi Arabia; Nursing; Disaster Preparedness; Disaster Relief; Humanitarian Aid*

CITATION: Zakari, N.M.A. (2023): The Power of Alignment of Factors Associated with Nursing Activities in Humanitarian Aid and Disaster Relief in Saudi Arabia: An Integrative Review. *World Journal of Entrepreneurship, Management and Sustainable Development*, Vol. 19, No. 3/4, pp. 49–64.

RECEIVED: 15 February 2023 / **REVISED:** 12 May 2023 / **ACCEPTED:** 15 May 2023 / **PUBLISHED:** 1 October 2023

INTRODUCTION

Saudi Arabia is one of the pioneers in developing an assistance programmes specifically to aid communities affected by catastrophic events resulting from either natural disasters or conflicts (i.e., war). The country's contributions surpass those made by members of the OECD (Saudi Ministry of Interior, 2023). Saudi Arabia offered US$158 million for humanitarian purposes to Bangladesh after Cyclone Sidr; this was significantly more than the US$20 million provided by the United States (Smith, 2010). In 2017, 335 natural disasters were recorded in the Emergency Events Database (EM-DAT); these impacted more than 95.6 million individuals and claimed 9,697 lives. These 335 disasters resulted in over US$335 billion in damages. Tragically, this statistic only increased in 2020, with 389 natural disasters reported in EM-DAT, resulting in 15,080 lives lost and affecting 98.4 million individuals. The disasters in 2020 caused an estimated US$171.3 billion in damages (CRED, 2010).

Nursing is the largest healthcare profession needed during and after a disaster; they are therefore crucial in disaster management. However, nurses who provide humanitarian aid often face a variety of challenges in a time of limited resources, including cultural differences, language barriers, and even moral and ethical concerns. Despite these difficulties, nurses gain valuable professional and personal growth from the experience. Working in such challenging environments requires nurses to expand their duties and scope of responsibilities (Agazio, 2010). As the number of disasters continues to rise, there is an increased awareness of the important role that nurses play in responding to disasters, both domestically and internationally (Gebbie *et al*., 2012). Slepski and Littleton-Kearney highlighted the importance of adequately prepared nurses in responding confidently and effectively to disaster victims. Additionally, nurses are essential in disaster management planning, strategy, evaluation, and policy development (Slepski and Littleton-Kearney, 2010).

It is crucial to prioritise enhancing the disaster competencies of healthcare workers, particularly nurses, to comply with the United Nations' international policies for disaster readiness. In line with these international standards, a framework was established by the International Council of Nursing (ICN) to manage disaster nursing competencies for nurses. Competency for nurses refers to the capacity to exhibit a great degree of practice based on knowledge, skill, and judgement, acquired through both education and practical experience. Disaster preparedness among nurses is closely linked to their education and training in disaster response systems. Effective disaster response requires not only competent nurses but also a clear command structure within the healthcare system (WHO, 2009). In the fields of business and education research, alignment is a common theme, and constructive alignment theory has been used in higher education to develop curricula. However, its use in nursing skills curricula for disaster preparedness is not well documented (Biggs and Tang, 2011; Parisi, 2013). By aligning

disaster nursing actions with ICN's core competencies, it is possible to identify gaps and promote national disaster competency. It was challenging to differentiate between experiential knowledge and practical knowledge of these core competencies in this review, but aligning disaster nursing activities with the four stages and ten dimensions of global core competencies can help bridge this gap (Chegini *et al*., 2022).

Nurses who are willing to serve in disaster events should have the necessary knowledge and abilities to undertake such situations. However, there is a limited number of studies on disaster nursing activities in Saudi Arabia, with only a few studies available that focus on evaluating disaster management information, skills, and preparedness. Furthermore, few studies have examined nursing activities carried out during humanitarian aid and disaster relief in Saudi Arabia. Nursing professionals in Saudi Arabia need to increase their familiarity with disaster competencies (Alshehri, 2017). As a subset of the healthcare workforce, nurses are ideally suited to have access to, and be trained in, disaster management (Schultz *et al*., 2012). However, most nurses lack knowledge on disaster management (Al Thobaity *et al*., 2015). Al Thobaity *et al*. (2016) stated that there are three essential components of disaster education: competency, obstacles, and role definition.

Considerations unique to each culture were taken into account while identifying parameters related to nurses' core competency in the area of disaster response in this study. ICN developed a paradigm including three phases of disaster for nurse competency (pre-event, during event and post-event), with the goal of ensuring that nurses are prepared to function in any situation (WHO, 2009). In the initial, pre-event phase, nurses' knowledge, skills, and capacities are crucial for carrying out response plans successfully. In the second and third stages, nurses are responsible for providing their patients with adequate physical, emotional, and holistic care.

PROBLEM STATEMENT

It is crucial to recognise the limited amount of research, training, and education available for disaster nursing. To ensure that disaster nursing activities are aligned with appropriate standards, it is necessary to adhere to key competencies established by both the ICN and World Health Organization (WHO) (WHO, 2009). Some nurses have specialised knowledge in areas including emergency medicine, and health counselling for managing disasters. It is critical for nurses to respond rapidly to emergencies such as natural disasters and pandemics in order to save lives and lessen the severity of their effects (Putra and Petpichetchian, 2011). This study intends to investigate the available information and illustrate the skills and factors that are associated with the participation of Saudi Arabian nurses in humanitarian help and disaster relief. Based on the literature study, the following research questions are framed:

1. What actions have been reviewed in Saudi Arabia's nursing in disasters?
2. How do nursing disaster competencies and nursing actions in humanitarian aid and disaster relief relate?

METHODOLOGY

Study Design

This research used an integrated review methodology to analyse existing literature on nursing's role in disaster and humanitarian help in Saudi Arabia. The amount and quality of study on the issue are evaluated based on both empirical and theoretical literature. This framework is essential for nursing professionals to make decisions based on evidence. Whittemore and Knafl (2005) developed a five-stage framework. The systematic review and meta-analysis procedures were based on the Preferred Reporting Items for Systematic and Meta-Analysis standards (PRISMA): furthermore, it conforms to PRISMA standards (Hong *et al*., 2018). This study's methodological rigour provides an exhaustive account of disaster- and humanitarian-related nursing interventions in Saudi Arabia.

Search Strategy and Outcome

The researcher examined the MEDLINE (PubMed), Google Scholar, SCOPUS, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) bibliographic databases. To capture a large number of prospective studies, a publishing window between 2010 and 2022 was applied. The search technique was focused on the use of multiple primary keywords, including nursing activities OR nursing involvement OR humanitarian aid activities OR disaster relief activities OR disaster preparedness OR disaster competency OR disaster nurse role OR disaster management AND Saudi Arabia AND hospitals AND communities. This search method was applied uniformly across all databases to guarantee standardisation of results and conformity with the purpose and scope of this review (Hong *et al*., 2018).

The database search returned 1,430 articles. Once duplicates were excluded, 480 articles were screened. Of these, 65 articles had full texts pulled and were assessed as per the inclusion and exclusion criteria. A total of 11 research articles were included in Figure 1.

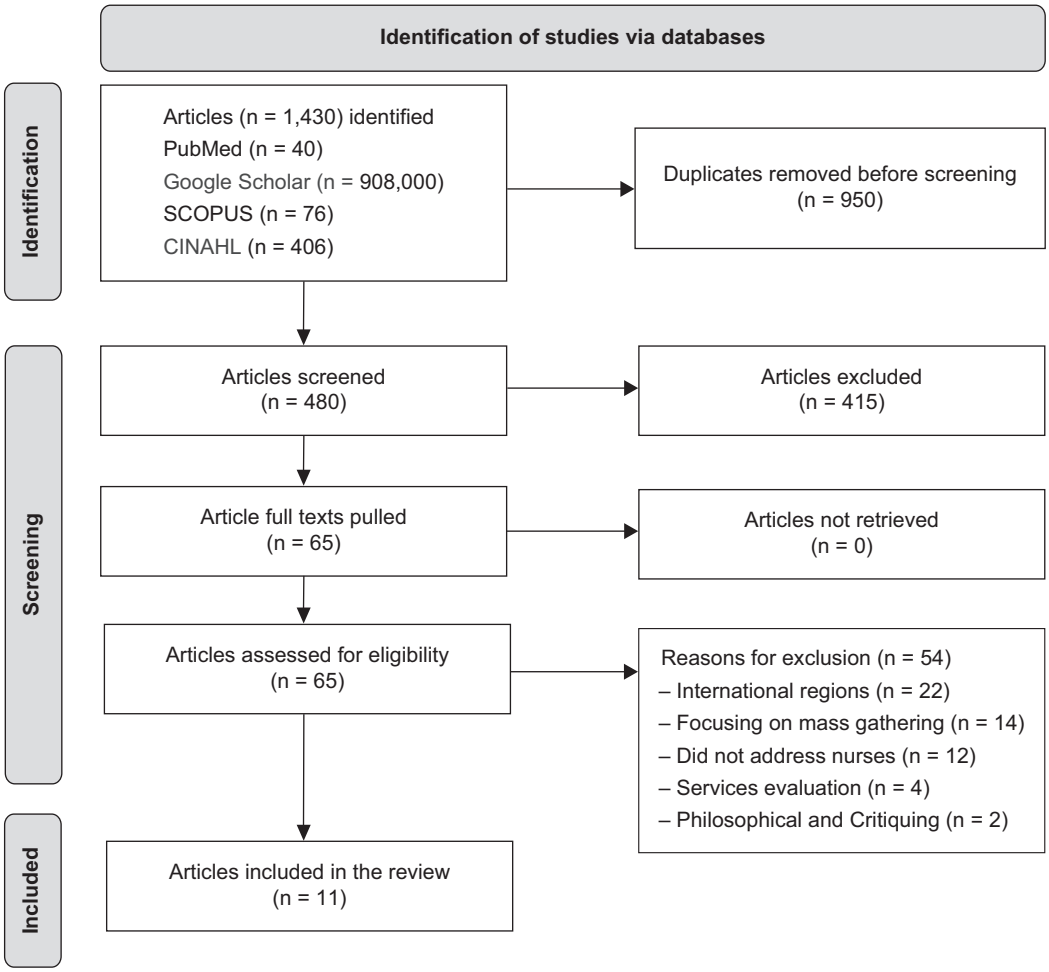

Figure 1: PRISMA Flow Chart
Source: Adapted from Page *et al*. (2021)

Inclusion and Exclusion Criteria

In this study, specific inclusion and exclusion criteria were utilised to identify and eliminate relevant articles. Original publications published in peer-reviewed English language journals from 2010 on disaster-related themes and nursing activities in Saudi Arabia were included, as were articles that assessed nurses' perceived preparation or competency. Articles related to mass gathering incidents, that conducted services evaluation or studied other workers apart from nurses, and philosophically

focused articles were excluded. Further, articles with systematic reviews or case report study designs were excluded. This review considered studies that listed the core competencies of disaster nursing and important domains of nursing competencies. The researcher extracted relevant data that were related to the study's aim.

Data Appraisal and Synthesis

Extracted data from the articles were reviewed and grouped into three themes based on their similar meanings. These themes were chosen to align with the purpose of the integrative review and research questions. The first theme was nursing disaster competency (perceived or observed); the second was the alignment of disaster competency with nursing activities; the third was nursing roles in humanitarian aid disaster reliefs.

This study utilised a mixed methods design to evaluate the articles identified for inclusion (Hong *et al*., 2018). Table 1 highlights the evidence for the review and outlines the screening items for quantitative methods. Eleven studies matched the requirements for methodological rigour; these studies were cross-sectional, non-experimental, and quantitative (Table 2). Most of the articles focused on the psychometric properties of various instruments, while only two articles described the development of an instrument that had not been validated before the survey (Medina *et al*., 2021). Some of the popular instruments used in the reviewed studies were the Disaster Preparedness Evaluation Tool (DPET), Emergency Preparedness Information Questionnaire (EPIQ), self-regulation survey, and the Practice Environment Scale-Nursing Work Index (PES-NWI).

Table 1: Modified Mixed Methods Appraisal Tool (MMAT)

Classification of Study Schemes	Approaches Quality Guidelines	Retorts		
		Yes	No	Unclear
Screening Items	Clarity of research question(s)	11	0	0
	Data collected and used to address the proposed research question(s)	11	0	0
Quantitative	Sampling methodology relevance to the research question(s)	11	0	0
	Representation of the target population in the sampling	9	2	0
	Suitability of Measurements	9	2	0
	Non-response bias low	8	3	0
	Appropriateness of the statistical approach to answer the research question(s)	11	0	0

Note: According to MMAT recommendation all articles were included

Source: Constructed by author

Table 2: Integrative Review Research Finding

Author (s)	Aim	Setting	Methodology
Al Harthi *et al*. (2021)	To identify the determinants that impact disaster nursing in Saudi Arabia and examine potential factors for enhancing it.	Taif/Saudi Arabia	The research adopted a cross-sectional design and included a non-random convenience sample of 569 nurses who completed a 40-item self-developed questionnaire. Descriptive statistics and principal component analysis (PCA) were used for data analysis.
Sultan *et al*. (2020)	To evaluate the preparedness of Saudi nurses in the southern area both theoretically and practically.	Najran/Saudi Arabia	The research used a descriptive quantitative design and involved a random sample of 200 nurses. The Emergency Preparedness Information Questionnaire (EPIQ) was used with Cronbach's alpha to assess reliability, while Spearman's rho was employed to examine co-variation. The mean comparison was tested.
Asiri *et al*. (2022)	To determine the degree of disaster preparation among nurses in the Aseer area.	Aseer region/Saudi Arabia	The study employed a descriptive design and included a non-probability sample of 200 participants selected randomly from a list of 5 hospitals. A standardised disaster knowledge indicator scale was used with a reliability coefficient of 0.92. Descriptive analysis, Cronbach's alpha, Chi-test, and T-Test for equality of means were used to analyse the data.
Alshehri (2017)	To investigate the level of readiness of nurses employed in health services in Saudi Arabia to respond to disasters.	Riyadh/ Saudi Arabia	The research utilised a descriptive study design and included a non-probability sample of 72 nurses. An adapted questionnaire was used in this research. Descriptive statistics were employed.
Medina *et al*. (2021)	To evaluate the extent of knowledge aligned with WHO standards and identify the education programme required to improve knowledge and competencies	One city in Saudi Arabia	The study employed a descriptive evaluative design and included a non-probability sample of 286 nurses. The questionnaire used was adapted from the WHO. Descriptive statistics were employed to evaluate the level of knowledge. ANOVA was conducted to test for differences among the groups.
Al Thobaity *et al*. (2015)	To assess the degree of disaster-related knowledge of nursing workers in Saudi Arabia and to determine the origins of their knowledge and abilities in managing disasters.	Jeddah, Taif, and Tabuk/ Saudi Arabia	This research employed a quantitative, non-experimental, descriptive design and involved a non-probability sample of 384 nurses. The Disaster Preparedness Evaluation Tool (DPET) was implemented for data collection. Descriptive analysis was conducted to examine the data. T-test was utilised to compare the means of the two clusters.

(continued)

Table 2: Integrative Review Research Finding *(continued)*

Author (s)	Aim	Setting	Methodology
Baker (2021)	To investigate the extent of Medina's nurses' preparedness in terms of their understanding of disaster management.	Medina/ Saudi Arabia	The research employed a non-experimental, cross-sectional descriptive design and used probability-stratified random sampling to select a total of 330 nurses. The Emergency Preparedness Information Questionnaire (EPIQ) was employed as the data collection tool. Descriptive and inferential statistics were used.
Brinjee *et al.* (2021)	Assessing the impact of education and training on nurses' disaster response capabilities, and identifying the most critical disaster competencies.	Taif, Saudi Arabia	The study utilised a non-experimental, descriptive cross-sectional research design; a purposive sample of 210 participants was selected. The survey was developed by the authors. Principal component analysis (PCA) was used to analyse the data, and one-way ANOVA was employed to identify differences in experiences between different groups.
Ibrahim (2014)	To explore the disaster and emergency preparedness knowledge, attitudes, practices, and familiarity among nurses in Saudi Arabia.	Medina/ Saudi Arabia	A descriptive cross-sectional study design was utilised in this research. A non-probability sample consisting of 252 nurses was used. The research instruments included demographic data, a knowledge questionnaire, an attitudes checklist, and the Emergency Preparedness Information Questionnaire (EPIQ). Both descriptive and inferential statistics were utilised to analyse the data.
Baker *et al.* (2019)	To examine the extent of disaster preparation among Saudi nurses using a self-regulatory survey.	Medina/ Saudi Arabia	A quantitative descriptive design was utilised in this study and a non-probability sample of 350 nurses was included. A self-regulation survey was used to measure the disaster attentiveness activities. Descriptive and inferential statistics were used.
Abuadas and Albikawi (2022)	To examine the factors that impact nurses' readiness to manage disasters.	Southern region Saudi Arabia	This research utilised a cross-sectional study design with a convenience sample of 370 nurses to investigate the relationship between contextual factors, disaster preparedness, the practice environment, and self-regulation among nurses. To measure these constructs, the researchers employed various tools, including the Contextual Factors in Disaster Nursing Instrument. Descriptive and inferential statistics were used.

Source: Constructed by author

While three articles were evaluated to have strong methodological quality, the risk of non-response bias was not clearly stated (Asiri *et al*., 2022). Furthermore, two articles utilised principal component analysis (PCA) for their data analysis (Al Harthi *et al*., 2021; Brinjee *et al*., 2021). All articles considered in the study adhered to the suggestion of the Mixed Methods Appraisal instrument.

RESULTS

There was a lack of consistency in the intended competencies across the articles. The articles followed a systematic approach to employ a variety of methods, including technology, to bolster their results. Several of the papers made use of frameworks in a variety of ways, employing low to high fidelity tools, with data analysis focused on disaster management and tailored to the nurses' degree of engagement in disaster relief activities. Despite the lack of uniformity in competencies, the researcher identified three key themes in the findings: perceived or observed nursing disaster competency, alignment with the ICN disaster competency, and factors related to disaster relief efforts in humanitarian aid.

Nurses have the potential to do more, but their abilities are often under-utilised due to the changing nature of the healthcare system. It is crucial that the understanding of how nurses provide care is informed and led by nurses (Baker *et al*., 2019), taking into account the competencies and limitations set by professional standards. To assess nurses' perceived disaster competencies, of the sample, 46% of the participants were evaluated using the EPIQ and the DPET tools (Ibrahim, 2014; Abuadas and Albikawi, 2022). Seven of the eleven articles showed different levels of perceived competencies (Sultan *et al*., 2020; Medina *et al*., 2021). Al Thobaity *et al*. (2015) found that nurses felt confident about the information they believed they had regarding disaster preparedness after participating in catastrophe drills. However, when examining nurses' capabilities in disaster management, participating in disaster planning and locating pertinent research regarding disaster preparedness were their least competent skills. Alshehri (2017) performed research showing that nurses had inadequate catastrophe competencies, despite having experience working in disaster settings. Participants' lack of prior catastrophe experience translated into low self-esteem in post-disaster scenarios. Researchers concluded that nurse managers might improve their disaster preparedness by frequently assessing their staff's mastery of a set of fundamental skills (Alshehri, 2017).

In addition, there is a need for additional study to explore the challenges that hinder nurses from being well prepared for disasters and to create ways for adequately preparing nurses across the entirety of the disaster management cycle (Schober *et al*., 2020). Baker (2021) conducted research on the incident command structure as well as the 10 competency components of nurse readiness.

Research participants were found to have average levels of preparation across all measured competence categories. It was found that familiarity with accessing essential resources was the most common factor, with the lowest mean values being found for the ethical and psychological concerns associated with triage (Baker, 2021). Study participants appeared to lack assurance in their actual talents, skills, and self-evaluation of performance, especially in crucial first-aid treatments such as breathing and oxygen administration during an emergency (Sultan *et al*., 2020).

According to Medina *et al*. (2021), nurses in Saudi Arabia lack knowledge in various aspects of disaster management, including commanding management, co-ordination, assessment, surge capacity, sustainability of important services, logistics support, and post-disaster rehabilitation. Overall, most of the reviewed articles indicate that Saudi Arabian nurses have an understanding to manage disasters.

ICN has developed a competency framework for disaster nursing with four themes and ten domains that correspond to the different phases of a disaster. The four phases of disaster nursing are Prevention, Preparedness, Recovery and Response (Schober *et al*., 2020). This framework is used to identify competency gaps and innovative solutions for nurses. The alignment process is guided by the structural and social alignment dimensions that focus on preparedness and response areas, as well as on nurses' understanding of their roles and commitment to disaster relief (Chief Nursing and Midwifery Officers Australia, 2021). Several studies have identified various competencies required for disaster management that can be used to develop national disaster competencies in nursing education. Nurse managers and educators may need to modify existing competencies or develop new ones to address any identified gaps. The constructive alignment approach can be used to support the development of these competencies (Al Thobaity *et al*., 2015; Alshehri, 2017).

The matrix presented in Table 3 includes a strong social alignment aspect that focuses mainly on competencies related to readiness and response, including individual, family, and community care. The second area of focus is psychological and vulnerable population care, followed by communication, information sharing, education, and preparedness. However, the matrix lacks the structural alignment dimension. The results of the alignment process could greatly benefit disaster nursing programmes by equipping them with the specific knowledge, skills, and abilities necessary to be an effective disaster nurse in any disaster stage. The alignment outcomes provide various options to filter, sort, and present data graphically for generating targeted and useful reports. Disaster nursing competencies are meant to be universally applicable; however, the content may be adapted for diverse cultures (Schober *et al*., 2020).

Table 3: Depicted Matrix of Alignment Nursing Competencies: Structural or Social

Modified Four Areas and Ten Scopes of the ICN Context of Tragedy Nursing Capabilities						
	Reviewed Articles					
ICN Context of Tragedy Nursing Capabilities	Abuadas and Albikawi, 2022	Baker, 2021	Sultan *et al.*, 2020	Ibrahim, 2014	Asiri *et al.*, 2022	Al Thobaity *et al.*, 2015
Prevention/Mitigation						
Rule Formulation and Forecasting						
Containing Hazard Minimisation	0	0	0	0	0	0
• Prevention of Disease	1	1	1	1	1	1
• Promoting Wellness	0	0	0	0	0	0
Readiness						
Moral Conduct	1	1	1	1	1	1
• Lawful Practice	0	0	0	0	0	0
• Answerability	0	0	0	0	0	0
Communication and Information	1	1	1	1	0	0
Education and Preparedness	1	1	1	0	0	0
Reaction						
Care of the Society	1	1	1	1	1	1
Individual and Family Support	1	1	1	1	1	1
Caring for Mental Health	1	0	0	0	0	1
Fragile Societies Care	1	1	1	0	0	0
Recuperation						
Long-term Recovery	1	1	1	1	1	1
• Individual	1	1	1	1	1	1
• Family	1	1	1	1	1	1
• Community	0	0	0	0	0	0

Source: Constructed by author

According to the self-regulation scale developed by Baack and Alfred (2013), only 36% of the reviewed articles (four out of eleven) examined factors associated with disaster relief and humanitarian aid preparedness among Saudi Arabian nurses. One article identified critical influences, such as nurses' disaster expertise, managerial skills and assistance, and nursing care effectiveness, while factors such as perceived knowledge, self-regulation, nursing at work prior training and experience with natural disasters, and nurse-physician relationship were not linked to disaster management among nurses (Abuadas and Albikawi, 2022). The second article identified two factors connected to activities that must be completed before and after a disaster occurs, each involving several issues. The first factor included experience and communication approach factors that impact disasters before they occur, while psychological support was found to be important after a disaster occurs (Al Harthi *et al.*, 2021). Four elements, including incident management systems

(IMSs), disaster triage, commitment, and disaster exercises, were found in two papers as having a substantial influence on nurses' engagement in disasters (Brinjee *et al*., 2021; Baker *et al*., 2019).

DISCUSSION

Saudi Arabia is recognised as a pioneer in establishing humanitarian aid and disaster relief programmes. However, the country still depends heavily on foreign skilled workers, incurring an expense of about US$60 billion yearly. The WHO advises all countries to train healthcare workers in disaster preparedness, regardless of the frequency of occurrences. Most reviewed articles show that nurses have limited or moderate preparedness in all dimensions of disaster competencies. The highest to the lowest mean values of nurses' disaster preparedness were attributed to low confidence, access to critical resources, and psychological support. These findings emphasise the necessity for ongoing efforts to enhance disaster training and ensure adequate preparedness of nurses (Al Thobaity *et al*., 2015; Alshehri, 2017; Baker, 2021; Ibrahim, 2014; Medina *et al*., 2021).

Saudi Arabia is now recognised as an important contributor to international humanitarian aid efforts, and nurses might have a crucial influence in shaping the country's policies on humanitarian aid and disaster management. Disaster nursing is a complex and evolving field in Saudi Arabia, and nurses need to establish their professional credibility by promoting professionalism and following a foundational framework for evidence-based practice. However, the conduct and reporting of disaster competency among reviewed articles vary significantly, as disaster nursing is a new and rare specialty among nurses. Despite these challenges, it is essential to continue efforts to expand disaster education and response frameworks and ensure that disaster nursing teams have the necessary competence and skills to effectively mitigate disasters. By doing so, Saudi nurses can actively participate in enhancing the country's preparedness for disasters and improving its capacity to respond to humanitarian needs around the world.

This review found that the social dimension of alignment among nurses was well established in terms of their role in taking care of individuals and communities, but more effort is required to focus on the structural alignment dimension of disaster competencies. There was a clear lack of preparedness competencies related to legal practice and accountability, as well as a lack of attention to prevention and mitigation competencies. Risk reduction and health promotion are two domains that require more attention to enhance nurses' potential for disaster skills in the upper levels of management. This study highlighted that nurse managers and educators have not been collaborating to design novel ways to improve disaster risk preparation and the entire response to catastrophes. Therefore, addressing these alignment results is crucial to fill the gaps and improve research on disaster management; this will help achieve Saudi Arabia's Vision 2030, particularly Goal 3 that focuses on reducing health risks.

As a relatively young field of nursing, catastrophe nursing faces obstacles such as inadequate training, little data, and hazy responsibilities. Due to a lack of a national paradigm, few assessment tools, little catastrophe experience, and a dearth of expertise and training opportunities, nurses

confront significant problems in administering humanitarian aid and disaster relief. In order to meet these difficulties, nurses will need to develop their skills in clinical decision-making, education, and management. Despite these obstacles, the study shows that humanitarian nurses can adjust to new and hard conditions, and that learning about the requirements of the recipient country is an important part of the journey. These difficulties have been noted by a number of researchers (Abuadas and Albikawi, 2022; Al Thobaity *et al*., 2016; Gebbie *et al*., 2012).

CONCLUSIONS

In Saudi Arabia, disaster nursing is a complex area that is always expanding in terms of the competencies required, the regulations that govern it, the range of its practices, and the clinical guidelines that must be followed. For nurses in Saudi Arabia to be taken seriously as professionals, they must demonstrate and advocate for professionalism. Disaster nursing is a sub-specialty of the nursing profession that requires a specific set of guidelines and procedures within a professional practice model to provide the highest level of patient safety and the best possible quality of care. Due to the novelty and rarity of disaster competency training for nurses, there is considerable heterogeneity in its implementation and reporting throughout the studied literature. Professionals in the field of humanitarian help and disaster relief lack access to a sweeping assessment that covers all essential areas of expertise. Most recent studies have concentrated on how nurses feel about their own readiness in the face of catastrophes.

Based on the findings of this analysis, policy-makers are encouraged to create a unified framework to better support nurses' contributions to relief efforts, NHEOC, and other areas of humanitarian assistance and disaster response. National nursing authorities should establish a group to identify disaster nursing's core competencies in order to advance the profession. Researchers found that Saudi Arabian nurses were more likely to assume risks for disaster and humanitarian help.

In light of the United States' one-of-a-kind disaster management system, this study sheds light on the present situation of disaster nursing. Therefore, further research is needed to establish the minimum level of nursing expertise necessary to meet disaster nursing standards and NHEOC programme criteria. The ability of nurses to prepare for and respond to disasters on a local level can be improved by putting more emphasis on disaster skills. In order to accomplish this goal, baccalaureate nursing education should increase and standardise disaster nursing abilities and skills while also revising competencies to improve the positive effects of nursing on community health outcomes. In order to effectively mitigate health risks, nurses should be included in, and provided with, the resources necessary to implement any crisis management strategy.

Evidence suggests that despite some initiatives on the part of educational institutions, there has been scant integration of disaster management capabilities for nurses. The country's needs must be taken into account while designing a comprehensive disaster management system. Nurses are urged to take the initiative in translating research results into practice and policy, and to take part in disaster preparation planning so that they may better understand their duties in the event of

a disaster. Many aspects of disaster management and mitigation were discussed by Al Harthi *et al*. (2021), such as pre- and post-disaster measures. They also advocated for nursing law that was clearer and for an evaluation instrument to be used in emergency situations.

ACKNOWLEDGEMENTS

The author would like to acknowledge the support provided by AlMaarefa University while conducting this research.

REFERENCES

Abuadas, M.H. and Albikawi, Z.F. (2022): Predictors of disaster preparedness among registered nurses in Saudi Arabia: A structural equation modelling analysis. *Australasian Emergency Care*, Vol. 25, No. 2, pp.132-139.

Agazio, J. (2010): Army nursing practice challenges in humanitarian and wartime missions. *International Journal of Nursing Practice*, Vol. 16, No. 2, pp.166-175.

Al Harthi, M., Al Thobaity, A., Almalki, M. and Al Ahmari, W. (2021): Improving disaster readiness and the response of nurses in Saudi Arabia. *Risk Management and Healthcare Policy*, Vol. 14, pp.4537-4544.

Al Thobaity, A., Plummer, V., Innes, K. and Copnell, B. (2015): Perceptions of knowledge of disaster management among military and civilian nurses in Saudi Arabia. *Australasian Emergency Nursing Journal*, Vol. 18, No. 3, pp.156-164.

Al Thobaity, A., Williams, B. and Plummer, V. (2016): A new scale for disaster nursing core competencies: Development and psychometric testing. *Australasian Emergency Nursing Journal*, Vol. 19, No. 1, pp.11-19.

Alshehri, B. (2017): Emergency nurses' preparedness for disaster in the Kingdom of Saudi Arabia. *Journal of Nursing Education and Practice*, Vol. 7, No. 3, pp.101-114.

Asiri, M.I.A., Sayed, S.A., Almalki, M., Alfaki, M. and Assiri, A.N.A. (2022): Level of disaster preparedness among emergency nurses in Aseer region, KSA. *Journal of Research in Medical and Dental Science*, Vol. 10, No. 3, pp.01-09.

Baack, S. and Alfred, D. (2013): Nurses' preparedness and perceived competence in managing disasters. *Journal of Nursing Scholarship*, Vol. 45, No. 3, pp.281-287.

Baker, O.G. (2021): Preparedness assessment for managing disasters among nurses in an international setting: Implications for nurses. *International Emergency Nursing*, Vol. 56, p.100993.

Baker, O.G., Alamri, A.A. and Aboshaiqah, A.E. (2019): A descriptive study to analyse the disaster preparedness among Saudi nurses through self-regulation survey. *Journal of Nursing Management*, Vol. 27, No. 7, pp.1479-1484.

Biggs, J. and Tang, C. (2011): *Teaching for quality learning at university*. Society for Research in Higher Education and Open University Press, Berkshire.

Brinjee, D., Al Thobaity, A., Almalki, M. and Alahmari, W. (2021): Identify the disaster nursing training and education needs for nurses in Taif City, Saudi Arabia. *Risk Management and Healthcare Policy*, Vol. 14, pp.2301-2310.

Center for Research on the Epidemiology of Disasters (CRED) (2010): *International disaster database (EM-DAT)*. Universite Catholique, Brussels, Belgium.

Chegini, Z., Arab-Zozani, M., Kakemam, E., Lotfi, M., Nobakht, A. and Aziz Karkan, H. (2022): Disaster preparedness and core competencies among emergency nurses: A cross-sectional study. *Nursing Open*, Vol. 9, No. 2, pp.1294-1302.

Chief Nursing and Midwifery Officers Australia (2021): *Advanced nursing practice–guidelines for the Australian context*. Australian Government, Canberra, Australia 20pp.

Gebbie, K.M., Hutton, A. and Plummer, V. (2012): Update on competencies and education. *Annual Review of Nursing Research*, Vol. 30, No. 1, pp.169-192.

Hong, Q.N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.P., Griffiths, F., Nicolau, B., O'Cathain, A. and Rousseau, M.C. (2018): The Mixed Methods Appraisal Tool (MMAT), Version 2018 for information professionals and researchers. *Education for Information*, Vol. 34, No. 4, pp.285-291.

Ibrahim, F.A.A. (2014): Nurses knowledge, attitudes, practices and familiarity regarding disaster and emergency preparedness–Saudi Arabia. *American Journal of Nursing Science*, Vol. 3, No. 2, pp.18-25.

Medina, J.M., Aljohani, M.S.E. and Alhefnawy, K.A.H. (2021): Knowledge of nurses in hospital preparedness in emergency response in Saudi Arabia: Basis for staff program development. *American Journal of Nursing*, Vol. 9, No. 3, pp.85-93.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E. and Chou, R. (2021): The PRISMA 2020 Statement: An updated guideline for reporting systematic reviews. *International Journal of Surgery*, Vol. 88, p.105906.

Parisi, C. (2013): The impact of organisational alignment on the effectiveness of firms' sustainability strategic performance measurement systems: An empirical analysis. *Journal of Management & Governance*, Vol. 17, pp.71-97.

Putra, A. and Petpichetchian, W. (2011): Public health nurses' roles and competencies in disaster management. *Nurse Media Journal of Nursing*, Vol. 1, No. 1, pp.1-14.

Saudi Ministry of Interior. (2023): *National information center* [Online]. Riyadh, Saudi Arabia: Ministry of Interior, Kingdom of Saudi Arabia. Available at: http://www.moi.gov.sa/wps/portal. Accessed 5 January 2023.

Schober, M., Lehwaldt, D., Rogers, M., Steinke, M., Turale, S., Pulcini, J., Roussel, J. and Stewart, D. (2020): *Guidelines on advanced practice nursing*. International Council of Nurses. Available at: https://www.icn.ch/system/files/documents/2020-04/ICN_APN%20Report_EN_WEB.pdf. 44pp.

Schultz, C.H., Koenig, K.L., Whiteside, M., Murray, R. and National Standardized All-Hazard Disaster Core Competencies Task Force. (2012): Development of national standardized all-hazard disaster core competencies for acute care physicians, nurses, and EMS professionals. *Annals of Emergency Medicine*, Vol. 59, No. 3, pp.196-208.

Slepski, L.A. and Littleton-Kearney, M.T. (2010): Disaster Nursing Educational Competencies. In: Powers, R. and Daily, E. (Eds): *International Disaster Nursing* (pp.549-560). Cambridge: Cambridge University Press.

Smith, K. (2010): *Government aid to Pakistan floods: The usual suspects* [Online]. Global Humanitarian Assistance, Development Initiatives. Available at: http://www.globalhumanitarianassistance.org/government-aid-to-pakistanfloods-the-usual-suspects-1151.html.

Sultan, M.A.S., Khorram-Manesh, A., Carlström, E., Sørensen, J.L., Sulayyim, H.J.A. and Taube, F. (2020): Nurses' readiness for emergencies and public health challenges—the case of Saudi Arabia. *Sustainability*, Vol. 12, No. 19, p.7874.

Whittemore, R. and Knafl, K. (2005): The integrative review: Updated methodology. *Journal of Advanced Nursing*, Vol. 52, No. 5, pp.546-553.

World Health Organization (WHO). (2009): *International Council of Nursing (ICN). ICN Framework of Disaster Nursing Competencies*. Geneva: WHO.

BIOGRAPHY

Dr Nazik M.A. Zakari, PhD, MSN, BSN holds a doctorate in nursing leadership and management from George Mason University in the United States and has more than 30 years of experience. She has contributed to nursing and other healthcare programme accreditation, evaluation, strategic planning, risk management planning, and curriculum development. She serves as a mentor for Leadership for Change at the Ministry of Health and the WHO. She served as Vice Dean of the College of Nursing at King Saud University for six-years prior to her appointment as Vice Dean of Applied Sciences at AlMaarefa University in 2018.

