



Assessment of Knowledge Preparedness Nurses for Disaster Management in Primary Health-Care Centers in Al-Hilla, Iraq

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Authors

Abdul Hussein A.F.^{1*} PhD,
Khalaf Awad A.² PhD

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¹Nursing Department, Al-Kut University College, Wasit, Iraq

²Nursing Department, Al-Maarif University College, Ramadi, Iraq

*Correspondence

Address: Nursing Department, Al-Kut University College, Wasit, Iraq

Phone: -

Fax: -

ali.f.alsaadi@alkutcollege.edu.iq

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ABSTRACT

Aims It is vital to examine nurses' disaster management capacity to determine their readiness levels, particularly in a Hilla where disasters are common. This study aimed to assess healthcare providers of their knowledge and preparedness for disaster management.

Instrument & Methods This descriptive-cross-sectional study was conducted from June to October 2021, to investigate the knowledge preparedness of nurses for disaster management in primary healthcare clinics. The instruments were constructed by the researcher to fulfill the study's goals using non-probability sampling. The purposive sample was chosen from 200 people who worked in emergency departments of primary health care institutions, and data was collected using two study tools (questionnaire and demographic data). The instrument's reliability was confirmed by test and retest, and the instrument's validity was determined by a panel of specialists. Graphic information (frequency, percentages, arithmetic mean, and standard deviation), as well as illative information, were employed to interpret the data (sufficiency in a relative).

Findings In terms of gender, most of the participants were male, 31-41 years old, married, and had no prior experience of a real disaster. The subjects had a strong knowledge of all studied items. The overall assessment of the preparedness of Nurses' compliance in disaster management was high.

Conclusion The majority of nurses had a strong awareness of disaster preparedness.

Keywords Nursing Assessment; Emergency Preparedness; Disaster

CITATION LINKS

[1] Managing disaster knowledge: identification of knowledge factors and ... [2] Epidemiology, causes, clinical manifestation and diagnosis, prevention and control ... [3] Prevalence, nosocomial infection and psychological ... [4] Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus ... [5] The contribution of indigenous knowledge to ... [6] Using geographic information system technology to ... [7] Evaluation of emergency department performance-a systematic review on recommended ... [8] Crowding measures associated with the quality of emergency department care ... [9] Building community disaster resilience through ... [10] Investigating humanitarian logistics issues ... [11] Lessons from the humanitarian disaster logistics ... [12] Snapshots in time: using real-time evaluations ... [13] Review of hospital preparedness instruments for national ... [14] Hospital disaster preparedness tools ... [15] Iraq Casualties: US military forces and Iraqi civilians, police ... [16] Development and validation of a questionnaire to measure Iranian nurses' knowledge ... [17] Improving communication resilience for effective disaster ... [18] Coordination in disaster: A narrative ... [19] Nurses' knowledge, skills and preparedness for disaster ... [20] Analysis of critical success factors of humanitarian supply ... [21] Conducting systematic literature review in operations ... [22] Strategies of social media use in disaster ... [23] Disaster risk management for ... [24] Preparing for disasters: education and management strategies ... [25] Preparing public health nurses for pandemic ...

Introduction

The worldwide number of natural and man-made disasters have greatly increased in recent years. Since disaster strikes without warning, all healthcare providers, especially nurses, must be prepared with appropriate skills and resources for disaster procedures and management during the three phases of disaster: pre-disaster, during a disaster, and post-disaster. Knowledge levels need to be evaluated to plan effective educational programmes [1]. Disasters are complex physical, social, economic, and political events that occur throughout the world every day and have a significant impact on individuals, families, and communities. Factors such as fast population increase and climate change have made more people vulnerable to disasters since the twentieth century [2-4]. Disasters are occurring more often over the world, resulting in more than 75, 000 deaths per year and affecting more than 200 million people directly. According to the Asian Disaster Reduction Center, disasters are the most common cause of death and injury in Asia and are "a major interruption of society's functioning, producing extensive human, material, or environmental losses that surpass the affected society's ability to adapt using solely its resources" [5]. In their report on health disaster preparedness, mitigation, and response in the Eastern Mediterranean Region, the World Health Organization (WHO) underlined the necessity for disaster planning. They suggested a multi-hazard strategy that included some essential factors. The key points are the relevance of disaster risk management; the requirement for dedicated resources; and the importance of strong coordination and cooperation within the healthcare sector for disaster mitigation and preparedness [6]. Because disasters strike without warning, all healthcare staff must be prepared with the essential knowledge and competencies for disaster management before the crisis happens to put the WHO policy into effect. They must recognize when they are unable to provide proper care for a large number of victims and seek outside help to prevent further mortality and morbidity. This involves the creation of effective disaster management plans and procedures. Regardless of the type of emergency, good general preparation will help healthcare providers respond more effectively [7, 8]. Individual performance measurements are metrics that reflect an action's effectiveness and/or efficiency. A performance measuring system is made up of a collection of such performance measurements, allowing for a more comprehensive evaluation of performance. In order to ensure strategy alignment with operations, In health care, well-known performance measuring frameworks like the Balanced Scorecard and Business Excellence have

been employed. Although a large majority of performance measurement initiatives fail due to poor design or practical implementation challenges, effective implementation and adoption have been recorded [9]. Nurses play an important part in disaster response. They are, however, a section of the healthcare industry that is frequently unprepared for disasters [10, 11]. There is also a scarcity of data on how nurses view disaster education and preparedness information. Although nurses should have adequate knowledge and abilities in crisis management, it is vital to analyze nurses' present levels of preparation before discussing the nursing curriculum. Although there are few techniques to assess nurses' disaster readiness [12, 13].

This study aimed to determine how prepared healthcare practitioners are for disaster management.

Instrument and Methods

This descriptive cross-sectional study was conducted from June 1, 2021, to October 17, 2021, to investigate the knowledge preparedness of nurses for disaster management in primary healthcare clinics. The instruments were constructed by the researcher to fulfill the study's goals using non-probability sampling. The purposive sample was chosen from 200 people who worked in emergency departments of primary health care institutions, and data was collected using two study tools (questionnaire and demographic data).

The instrument's reliability was confirmed by test and retest, and the instrument's validity was determined by a panel of specialists. Graphic information (frequency, percentages, arithmetic mean, and standard deviation), as well as illative information, were employed to interpret the data (Sufficiency in a Relative).

Findings

Most of the participants were male, 31-41 years old, and married (Table 1).

Table 1) Results of demographic data (N=200)

Sample Profile		Number	Percent
Gender	Male	145	72.5
	Female	55	27.5
Age Group (Year)	20-30	16	8.0
	31-41	170	85.0
	42-52	14	7.0
Marital status	Married	183	91.5
	Absolute	6	3.0
	Widowed	2	1.0
	separate	9	4.5
Academic Excellence	Faculty	14	7.0
	Institute	186	93.0
Experience of a real disaster	Yes	77	38.5
	No	123	61.5

Table 2) Result of the knowledge questionnaire

NO.	Items	Know		Uncertain		I don't know		Mean of Score	Relative Sufficiency	Rating
		N	%	N	%	N	%			
1	As a disaster management healthcare professional, I am well aware of my limitations.	120	60	75	37.5	5	2.5	2.57	85.6	High
2	I'm able to spot possible signs of mass exposure, such as a grouping of patients with identical symptoms.	165	82.5	14	7	11	10.5	2.67	89	High
3	I can handle the affective, behavioral, cognitive, and physical signs and behaviors that disaster survivors commonly experience.	123	61.5	90	35	7	3.5	2.78	92.6	High
4	For individuals who have experienced emotional or physical trauma, I am familiar with psychological therapies, behavioral therapy, cognitive methods, support groups, and incident debriefing.	30	15	105	52.5	65	32.5	1.82	60.6	Moderate
5	I may characterize my involvement in the catastrophe response phase in terms of my workplace, the broader public, the media, and personal relationships.	130	65	29	14.5	41	12.5	2.44	81.3	High
6	I'm confident in my ability to spot variations in health evaluations that could indicate biological or chemical exposure.	65	32.5	105	52.5	30	15	2.1	70	Moderate
7	As a health care practitioner, I would be confident in my capacity to give direct care and act as a first responder in emergencies.	190	95	7	3.5	3	1.5	2.93	97.6	High
8	As a member of a decontamination team as a health care practitioner, I would be reasonably confident in my abilities.	194	97	6	3	0	0	2.97	99	High
9	In the case of a bioterrorism/biological/chemical attack, I know how to do a focused health history and evaluation that is specific to the biological or chemical weapons used.	89	44.5	35	17.5	76	38	2.06	66	Moderate
10	As a health care practitioner, I am generally confident in my ability to care for patients on my own in the event of a crisis.	94	47	8	4	98	49	1.98	42.6	Low
11	I'd be comfortable establishing emergency plans, evacuation protocols, and other comparable procedures.	200	100	0	0	0	0	3.00	100	High
12	I'd feel comfortable educating patients about stress and atypical functioning as a result of trauma.	187	93.5	11	5.5	2	1	2.92	97.3	High
13	I'd feel comfortable teaching coping methods and providing training to patients who have been through terrible events so that they can manage their issues.	106	53	67	33.5	27	13.5	2.39	79.6	High
14	I take part in peer evaluations of catastrophe preparedness and response skills.	48	24	122	61	30	15	2.09	69.6	Moderate
15	I understand what my position as a healthcare professional in a post-disaster situation might entail.	47	23.5	67	33.5	86	43	1.8	60	Moderate

Table 3) Result of an overall assessment of the knowledge preparedness nurses' compliance with disaster management

Rating	Number	Percent	Mean of Score	Relative Sufficiency	Grade
High	120	60	2.53	84.5	High
Moderate	67	33.5			
Low	13	6.5			

Discussion

The first step in evaluating nurses' disaster preparedness was to find out what they truly knew and believed about disaster management. It is critical to establish and validate a scale that measures nurses' disaster preparedness knowledge to create and implement successful disaster preparedness education curricula and continuing education programs. The majority of nurses in Al-Primary Hilla's Health-Care Centers had a high level of Disaster Management knowledge, with an overall right rate of (84.5%) of knowledge questions among Knowledge Preparedness Nurses compliance regarding Disaster Management. This is in direct opposition to the findings. In terms of the literature relevant to the study's aims, Table 1 illustrates the findings of the current survey, which revealed that 72.5% of males and their ages are between the age

groupings (31-41 years), this finding is in line with Heidaranlu *et al.*, who discovered that 41 (82%) of the participants were men and 6 (12%) were women, with the percentages fluctuating (More than 85% of the time). This figure corresponds to the number of long-term respondents in the report [14]. According to Fischer, who conducted a descriptive study and discovered that (65%) of the sample is married, the majority of the study participants (91.5%) were married. Their educational attainment is a technical institute (93%) [15], These findings are backed up by Tavan *et al.*, The majority of the study participants are educated to a middling level and the majority of them have no prior experience in the field of accident control (61.5%) [16]. While it differs from Shittu *et al.* [17], who claimed that the biggest percentage (59.5%) of replies were due to a lack of funds. The second table demonstrates that research participants have an excellent understanding of all of the things tested, are fairly familiar with items 4, 6, 14, and 15, and have a limited understanding of item 10. Because coping with accidents increases medical care professionals' experience, this conclusion is compatible with Bahadori *et al.* [18],

Table 3, for example, has a high overall assessment of nurses' knowledge preparation for disaster management this result agrees with Hasan *et al.* [19], point of view nurses' expertise should be expanded. the value of recognizing and responding to disasters knowledge. the number of posts devoted to disaster research before the disasters, there was more relevant information from the media, social media, and specialists. Moreover, other comparable results were reported by other studies [20-25].

Our research also discovered that the knowledge management strategies utilized during the preparedness phase influenced the nurses' ability to recognize crises. However, additional work on knowledge transmission tactics is needed to increase participation and persuade health care practitioners to take precautions.

Training can help identify a nurse's present level of disaster readiness and plan extra educational programs to improve it. Nurses will be able to participate in disaster preparedness and mitigation coordination and collaboration in the healthcare sector.

To limit the size of losses, the study advises developing a trained cadre to deal with disasters of all kinds and according to the stages of their management. Having basic information on nurse preparation can help health policymakers establish nurse training programs and integrate them into an academic curriculum.

Conclusion

The majority of nurses had a strong awareness of disaster preparedness.

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