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The Role of Nursing in Seasonal Crowd Management

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Abstract

Every year the Ministry of Health in Saudi Arabia announces the opening of applications to those who wish to work on Hajj. A certain number of applicants are nominated, yet many nurses continue to apply to participate during Hajj ever year. Although nurses are under great work pressure during Hajj, many nurses still apply for the approval to participate in Hajj. But as a life savior, communicator, therapist and first responder in case of mass gathering and disaster, the role of nurses is inevitable. The aim of this study is to identify the motivations of nurses to work during Hajj. Furthermore, to explore the motivations that lead nurses to participate in the Hajj season and to explore the challenges faced during the Hajj season. The study used a descriptive qualitative study design. The data were analyzed using SPSS Ver. 22.0.

Keywords: Nurses, Mass Gathering, Disasters, Role, Seasonal Crowd.

Introduction

It is challenging to work with so many patients from diverse linguistic, cultural, and ethnic backgrounds. It's a challenging work environment where nurses need to make quick and accurate nursing interventions to save patients' lives. In some locations, for instance, hospitals in Makkah and Madinah see thousands of patients during each Hajj season. Every Muslim who is of legal age must perform the Hajj, the fifth pillar of Islam, at least once in their lives. The Kingdom of Saudi Arabia's Ministry of Health is therefore eager to arrange for the nomination of personnel in the Hajj healthcare industries. That being said, a large number of registered nurses seek to take part in the Hajj each year. Examining the causes of nurses' yearly claims to work as staff nurses during the Hajj season is crucial. This study is the first to examine the reasons why nurses

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choose to participate in the Hajj season and the difficulties that work nurses have during the Hajj, as there is a dearth of literature on the subject. Thus, the aim of this research is to investigate the reasons behind the Saudi nurses' participation in the Hajj as well as the difficulties they faced while working as nurses during the pilgrimage. Therefore, health management may find this study useful for nursing at the Hajj in the future. Throughout the Hajj season, nurses might work in three different ways. The first group is nurses who are currently employed in Makkah and Madinah, two holy cities, and who frequently like to work during the Hajj. They are given preference when it comes to applying. Nurses from outside of those two cities can also apply to work as nurses during the Hajj; all requests are forwarded to the Ministry of Health, who then nominates the necessary number of applicants and notifies them of their nomination. The third option, and the most recent, is for nurses to apply for a locum nursing employment during the Hajj. A temporary contract with a defined salary is what this category uses, and nurses work in hospital emergency rooms or intensive care units as needed. Although front-line nurses play a crucial role in hospital emergency rooms when disasters strike, little is known about the skills and knowledge that these medical professionals need to perform this crucial clinical function. Studies that specifically assess emergency nurses' preparedness for disasters in the setting of large crowds are especially few. Additionally, there are no studies evaluating emergency nurses' perceived expertise and role awareness in disaster response in Saudi Arabia, which hosts one of the biggest public gatherings in the world every year. Disaster, according to the World Health Organization, is "an event that disturbs the normal conditions of existence and causes a level of suffering that exceeds the capacity of adjustment of the affected community." A disaster can also be described as "an event, whether natural or man-made, that causes an imbalance between the supply and demand for resources." With no universally accepted definition, mass gatherings are characterized in the literature in a variety of ways. According to the majority of academics, MGs are events that are attended by a big number of people (more than 1000) in a given location for a predetermined amount of time.

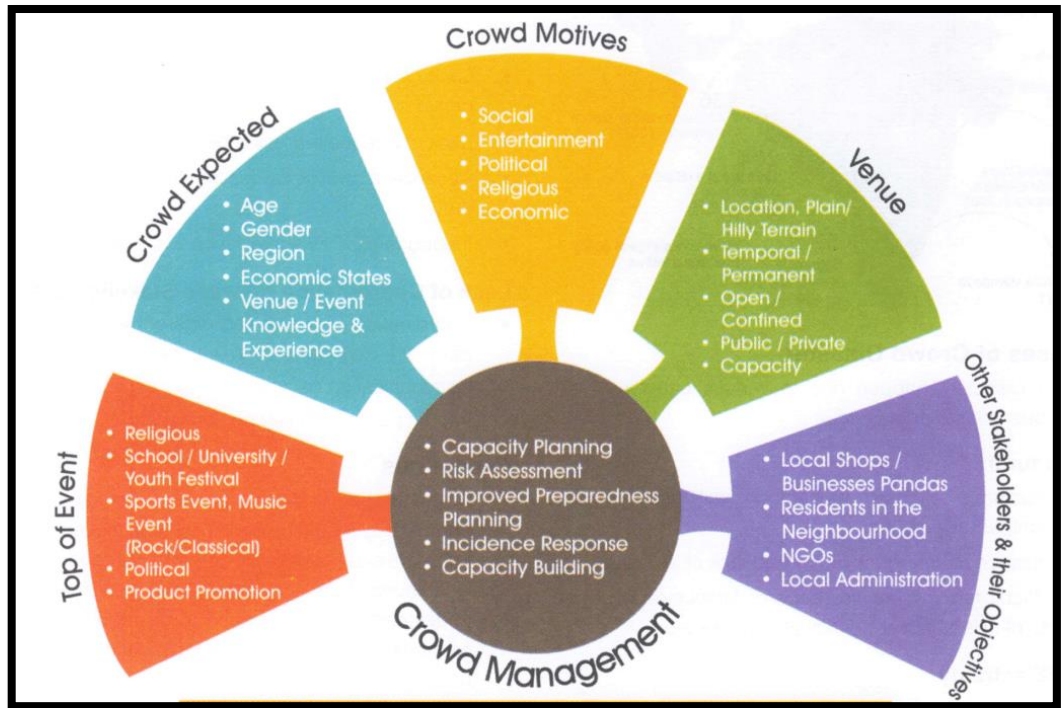


Figure 1: Integrated Approach Towards Crowd Management

Source: <https://lotusarise.com/ndma-guidelines-upsc/>

According to **Hammad et al. (2018)**, mass gatherings are "events attended by a sufficient number of people to the level that strains the host where it is being held's planning and response resources." Mass gatherings present unique hazards to participants in addition to taxing the host nation's planning and response capabilities. Among the frequent hazards are terrorism, infectious disease transmission, stampedes, accidents, and injuries. In addition, the possibility of a catastrophic catastrophe during large gatherings poses unique difficulties for healthcare facilities' emergency response, harm reduction, and prevention. Mass meetings are characterized by their broad geographic dispersion, high attendance, length, and security risks, all of which can have an impact on public health and safety services. The primary goal of healthcare services at large gatherings is to maximize participant safety and avoid or reduce the danger of illnesses or injuries. The local medical facilities will be under pressure in the event of an emergency brought on by any of the aforementioned threats. In order to offer an efficient reaction and aid in lowering the number of possible fatalities, hospital emergency department nurses should be suitably trained and equipped for such situations. Nurses in emergency rooms, in particular, need to possess the fundamental information, abilities, and expertise needed to effectively handle crises and deal with the frequently chaotic situations that surround a tragedy. Particularly in the setting of large gatherings, a small body of literature based on empirical research in emergency nursing disaster preparedness has begun to take shape. The knowledge and opinions of emergency nurses in South Australia regarding their involvement in disaster preparedness were documented by Hammad et al.¹ in a mixed-methods study. Three groups of Italian emergency worker trainees and students at Massachusetts University had common myths, which **Alexander et al. (2020)** investigated. According to the study, the participants had a number of false beliefs

about disaster management. **Magnaye et al. (2021)** aimed to ascertain the beliefs of emergency nurses in the Philippines concerning their function in disaster relief. The study also looked at their levels of readiness and disaster response expertise. According to studies in this field, a variety of factors affect hospital nurses' capacity to respond to a crisis, especially when large crowds are present. One important component is disaster education and training. Important components of education and training initiatives include military training, postgraduate taught courses in disaster response, and drills and exercises. However, there is less consensus in the literature about the subject matter and delivery method of these educational initiatives. Furthermore, the current program's applicability to emergency department nurses is questioned. Their degree of understanding and awareness of the proper course of action is a second significant aspect affecting the efficacy of ENs' response, especially when it comes to MGs. A third important component in emergency nurses' readiness for mass gathering crises is prior disaster management experience. According to Welzel et al. (2019), nurses from disaster-prone societies can gain experience by volunteering to work in disaster-prone societies; in this situation, "hands on" education and field training can help emergency nurses obtain important disaster preparedness experience. Lastly, the management team, support staff, doctors, nurses, and other professionals that provide care in emergency rooms are said to need to work together and communicate with one another.

Objective of Study:

The main objective of the study is to evaluate the role and acquired skills in relation to the preparedness for disaster acquaintance and management of the same. The respective evaluation will be in conjugation to the Mass gathering and the scenario explained by experienced nurses.

Research Process:

- A qualitative, descriptive study design was employed in this investigation. The study included nurses from Mina hospitals, including Mina Emergency Hospital, Mina Al-Jisir Hospital, Mina Al-Wadi Hospital, and Mina New Street Hospital.
- Twelve nurses agreed to take part in a semi-structured interview. Nurses' reasons for working during the Hajj season and the difficulties they encounter at work were investigated through in-depth semi-structured interviews.
- The interviews lasted between thirty and forty-five minutes each. Throughout the interview, participants favored speaking Arabic. Thus, every interview was conducted in Arabic and was recorded, transcribed, and subjected to theme analysis.
- Both researchers took into account the study's validity, confirmability, and transferability; for instance, they both looked over the data and concurred with the topics of analysis.
- The University of Saudi Arabia's Research Committee also approved the present study. Participants read an information sheet that provided further details about the study prior to each interview, and they then signed a consent form.
- The participant was informed that their participation was entirely optional and that they might withdraw from the study at any moment, according to the information sheet. The consent form also informed the participants that anonymized responses will be published as part of the study.

Data Analysis and Interpretation :**Summary results of ANOVA**

On the Basis of Knowledge	F	Sign
Nurses are knowledgeable for handling the mass gathering and disasters	.155	.926
General Assessment and caring are the main role of nurse during mass gathering	.688	.559
Timely response is the main role of nurses during mass gathering	.660	.577
Basic clinical response is being provided by the nurses during mass gathering	.365	.778
Effective communication and therapies are the roles of nurses during mass gathering	.889	.446
On the Basis of Experience		
Nurses are knowledgeable for handling the mass gathering and disasters	3.098	.016
General Assessment and caring are the main role of nurse during mass gathering	.534	.711
Timely response is the main role of nurses during mass gathering	.983	.417
Basic clinical response is being provided by the nurses during mass gathering	1.885	.112
Effective communication and therapies are the roles of nurses during mass gathering	1.117	.348
On the Basis of Income		
Nurses are knowledgeable for handling the mass gathering and disasters	.209	.890
General Assessment and caring are the main role of nurse during mass gathering	.579	.629
Timely response is the main role of nurses during mass gathering	.993	.396
Basic clinical response is being provided by the nurses during mass gathering	.593	.620
Effective communication and therapies are the roles of nurses during mass gathering	.456	.713
On the Basis of Experience		
Nurses are knowledgeable for handling the mass gathering and disasters	.082	.970
General Assessment and caring are the main role of nurse during mass gathering	.360	.782
Timely response is the main role of nurses during mass gathering	1.355	.256
Basic clinical response is being provided by the nurses during mass gathering	.660	.577

Effective communication and therapies are the roles of nurses during mass gathering	.313	.816
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Interpretation:

The thumb rule of ANOVA test (One Way) is that is the 'Sign.' values are higher than the 'F' values then the point in question is being accepted by the respondents and vice-versa. In the above given analysis, it can be seen that in most of the cases the sign values are higher than the F values this shows that the point in question is being accepted by more than 95% of the respondents @ 5% level of significance. An emergency plan created by hospital departments that outlines the crucial steps to be taken in the event of unforeseen catastrophes is called a major incident plan. For emergencies and mass gatherings, almost half of the nurses are familiar with the medical plans. The remaining 50% of nurses are only moderately to less than averagely knowledgeable about the aforementioned plan for large crowds and emergencies. Between 7 and 25 percent of people possess this kind of knowledge. The plan had not been fully reviewed by more than 60% of the nurses working at Mecca's public hospitals, and some of them were even unaware that it existed. This implies that fewer than half of the nurses working in Mecca's public hospitals would not be aware of or adhere to the proper standard procedures that are required in their departments during a disaster. In addition to endangering patient safety, this could have a significant effect on staff stress levels after a significant occurrence. The vast majority of those surveyed had prior experience responding to disasters. Frequency and range of prior disaster experiences among study participants: 42% of cases were related to stampedes and fires after two years, 20% of cases were related to transportation, 12% of cases were related to infrastructure, and less than 5% of cases were related to floods and epidemics after six years. A key element of Saudi nurses' readiness for MGs is their education and understanding of disasters, which the Saudi Arabian Ministry of Health has made a priority. During the Hajj, committees are entrusted with the duty of raising awareness and facilitating efficient communication in anticipation of a large gathering calamity, according to some studies. For instance, the Hajj Preventive Medicine Committee and the Supreme Hajj Committee perform preventative actions before, during, and after the Hajj. The WHO and the Saudi Arabian Ministry of Health gather and disseminate information about projected impending disasters or those that have a high probability of happening. Participants in this study, ENs, indicated a lack of awareness on appropriate disaster response to the Hajj pilgrimage mass gathering, despite the country's substantial investment in building a vast communication and knowledge dissemination infrastructure in this area. This research indicates that significant progress is required in this area, including training for nurse practitioners and efficient reach-out communication tactics, which currently seem to be below par.

One of the most significant changes to Saudi ENs' education and training is the rise of the specialty area known as "Hajj Medicine." This developing field of applied clinical practice involves the management and control of common and emergent health issues during the Hajj, according to some academics. With data on the medical treatment of disease outbreaks dating back to the 1800s, the Hajj is the most studied mass gathering in the modern world, which is what makes it so special for MG education and training. By more methodically considering this corpus of established information and the lessons gained from years of successful public health surveillance in the demanding environment of one of the biggest mass gatherings in the world, Saudi nurses can increase their "hands-on" practice experience. It has been observed that certain Saudi nurses have no prior direct experience in disaster relief. Nonetheless, it is evident that Saudi Arabia exposes ENs to far more difficult situations related to large crowds than the

majority of other nations. According to Hammad et al.1, South Australian nurses who have previously participated in mass gathering catastrophes have little direct experience in responding to emergencies. Saudi policymakers, public health officials, and healthcare professionals have extensive experience and knowledge in crisis management and preparedness. Other regular meetings in the area and the periodic Hajj event are the sources of the experience.

Conclusion

This study provides some insight into the role—albeit limited in capacity—that Meccan nurses are anticipated to perform in disaster preparedness during the Hajj mass gathering. Despite the significant experience obtained via clinical engagement in previous mass gatherings, the results of this study indicate that nurses working in Mecca's public hospitals have a concerning lack of expertise regarding Major Incident Plans. In addition, the results indicate that nurses appear hesitant to take the lead in disaster response and to offer psychological and preventive aid.

These abilities are crucial for all nurses, though, as they may be asked to make choices or provide psychological support to patients experiencing stress, fear, or trauma during a disaster. It is expected of the nurses to perform a variety of tasks intended to help the general people. In addition to covering material in the aforementioned, seemingly overlooked areas of clinical practice, training courses and workshops offered by hospitals, online providers, and universities must specifically include disaster response for the Hajj. The WHO may be involved, but local and national policymakers must be in charge of this endeavor. As one in five research participants said they had never participated in disaster exercises and four out of ten said they had only participated once, hospital administration and the Ministry of Health need to promote and further support nurses' participation in catastrophe exercises.

References

- Caidi N. Pilgrimage to Hajj: An information journey. *IJIDI* 2019;3:1. [doi: 10.33137/ijidi.v3i1.32267].
- Alaska YA, Aldawas AD, Algerian NA, Memish ZA, Suner S. The impact of crowd control measures on the occurrence of stampedes during mass gatherings: The Hajj experience. *Travel Med Infect Dis* 2017;15:67-70.
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77-101. [doi: 10.1191/1478088706qp063oa].
- General Authority for Statistics Kingdom Saudi Arabia. Hajji Statistics; 2019. Available from: https://www.stats.gov.sa/sites/default/files/haj_40_en.pdf.
- Bokhary H, Barasheed O, Abd El Ghany M, Khatami A, Hill-Cawthorne GA, Rashid H, et al. Pilot survey of knowledge, attitudes and perceptions of Hajj deployed health care Workers on antibiotics and antibiotic prescriptions for upper respiratory tract infections: Results from two Hajj seasons. *Trop Med Infect Dis* 2020;5:E18.
- Swift A, Banks L, Baleswaran A, Cooke N, Little C, McGrath, et al. COVID-19 and student nurses: A view from England. *J Clin Nurs* 2020;29:3111-4.
- Husna C, Yahya M, Kamil H, Tahlil T. Islamic-based disaster response competencies: Perceptions, roles and barriers perceived by nurses in Aceh, Indonesia. *Open Nurs J* 2021;15:1.
- Al-Hawary I, Banat A. Impact of motivation on job performance of nursing staff in private hospitals in Jordan. *Int J Acad Res Account Finance Manag Sci* 2017; 7:54-63. [doi: 10.6007/IJARAFMS/v7-i2/2824].
- Yılmaz G, Üstün B. Professional quality of life in nurses: Compassion satisfaction and compassion fatigue. *J Psychiatr Nurs* 2018;9:3.
- Nwinyokpugi N, Ebietuoma T. Work team management; a recipe for tertiary institutions "productivity in

- Delta state, Nigeria. *IJSSHR* 2020;3:27-38.
- Sanyal S, Hisam MW. The impact of teamwork on work performance of employees: A study of faculty members in Dhofar University. *JBM* 2018; 20:15-22.
- Yanchus NJ, Ohler L, Crowe E, Teclaw R, Osatuke K. 'You just can't do it all': A secondary analysis of nurses' perceptions of teamwork, staffing and workload. *J Res Nurs* 2017;22:313-25. [doi: 10.1177/1744987117710305].
- Kaiser JA, Westers JB. Nursing teamwork in a health system: A multisite study. *J Nurs Manag* 2018;26:555-62.
- Rayan A, Sisan M, Baker O. Stress, workplace violence, and burnout in nurses working in King Abdullah Medical city during Al-Hajj season. *J Nurs Res* 2019;27: e26.
- Shen X, Zou X, Zhong X, Yan J, Li L. Psychological stress of ICU nurses in the time of COVID-19. *Crit Care* 2020;24:200.
- Vagni M, Maiorano T, Giostra V, Pajardi D. Coping with COVID-19: Emergency stress, secondary trauma and self-efficacy in healthcare and emergency workers in Italy. *Front Psychol* 2020;11:566912.
- Aldossari M, Aljoudi A, Celentano D. Health issues in the Hajj pilgrimage: A literature review. *East Mediterr Health J* 2019;25:744-53.
- Chavoix C, Insausti R. Self-awareness and the medial temporal lobe in neurodegenerative diseases. *Neurosci Biobehav Rev* 2017; 78:1-12.
- Al Shamsi H, Almutairi AG, Al Mashrafi S, Al Kalbani T. Implications of language barriers for healthcare: A systematic review. *Oman med J* 2020;35:e122.
- Conlon L, Wiechula R. Preparing nurses for future disasters—the Sichuan experience. *Australas Emerg Nursing J* 2011;14: 246–50.
- Welzel TB, Koenig KL, Bey T, et al. Effect of hospital staff surge capacity on preparedness for a conventional mass casualty event. *West J Emerg Med* 2010;11:189–96.
- Rassin M, Avraham M, Nasi-Bashari A, et al. Emergency department staff preparedness for mass casualty events involving children. *Disaster Manag Response* 2007; 5:36–44.
- Ranse J, Shaban R, Considine J, et al. Disaster content in Australian tertiary postgraduate emergency nursing courses: a survey. *Australas Emerg Nurs J* 2013; 16:58–63.
- Martin J, Ummenhofer W, Manser T, et al. Interprofessional collaboration among nurses and physicians: making a difference in patient outcome. *Swiss Med Wkly* 2010; 140:13062.
- Ahmed Q, Arabi Y, Memish Z. Health risks at the Hajj. *Lancet* 2006; 367:1008–15.
- Shafi S, Booy R, Haworth E, et al. Hajj: health lessons for mass gatherings. *J Infect Public Health* 2008; 1:27–32.
- Twycross A. Research design: qualitative, quantitative and mixed methods approach. *Nurse Res* 2004; 12:82–3.