Disaster Medicine and Public Health Preparedness

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Emergency Nurse Roles, Challenges, and Preparedness in Hospitals in the Context of Armed Conflict

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Original Research

Cite this article: Mani Z, Kuhn L, Plummer V. Emergency nurse roles, challenges, and preparedness in hospitals in the context of armed conflict. *Disaster Med Public Health Prep*. **18**(e21), 1–8. doi: https://doi.org/10.1017/dmp.2024.7.

Keywords:
disasters; emergency nursing; mass casualty incidence; military medicine; war

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Abstract

Introduction: An understanding of emergency nurses' roles, challenges, and preparedness in the context of armed conflict is necessary to capture in-depth insights into this specialty and their preparational needs when working in these unique environments. Unfortunately, the evidence about emergency nurses' work in the context of armed conflict is scant.

Method: Semi-structured interviews were conducted with 23 participants and analyzed using qualitative content analysis. The COREQ guideline for reporting qualitative research was followed.

Results: The emergency nurses' roles, challenges, and preparedness in hospitals in the context of armed conflict were explored in detail. The main challenges that these nurses faced included poor orientation, access block, and communication barriers. Various perspectives about preparation, including education, training, and strategies for preparing emergency nurses were identified. The most striking findings in these settings were the diversity of armed conflict injuries, clinical profiles of patients, triage of mass casualties, trauma care, surge capacity, orientation, communication, and strategies for preparing nurses.

Conclusions: This study provided an exploration of the scope of emergency nurses' roles, and how they were prepared and expected to function across multiple hospitals in armed conflict areas. The resultant snapshot of their experiences, challenges, and responsibilities provides an informative resource and outlines essential information for future emergency nursing workforce preparedness. There is a broad range of preparational courses being undertaken by emergency nurses to work effectively in settings of armed conflict; however, required education and training should be carefully planned according to their actual roles and responsibilities in these settings.

Armed conflict increases morbidity and mortality in affected populations across the world.[1,2] The nature and sophistication of armed conflict has threatened thousands of people with violence daily, influenced health-care systems, increased societal breakdown, spread contagious disease, and has led to a shortage of necessary resources.[1,2] However, despite the dire health-related consequences of the armed conflict, little attention has been received from health researchers.

Armed conflicts result in an influx of patients to the most immediately accessible health-care facilities, which are usually hospitals. Hospitals are resource-limited settings and can become rapidly overwhelmed by injuries including trauma from bombs, gunshots, burns, motor vehicle collisions, abscesses, and maternal fatalities.[2] The ability to adapt to the myriad of situations in resource-limited settings is a challenge, and requires highly specialized personnel.[2]

The use of explosives in armed conflict and terrorist attacks is common.[2] Blast injuries are prevalent and have caused civilian casualties in many parts of the world, including Baghdad, Damascus, Karachi, London, Madrid, Boston, New York City, Paris, and Atlanta.[3] Most victims did not die instantly, and those who survived tended to sustain severe musculoskeletal injuries.[3] Appropriate care of injuries in the immediate aftermath of armed conflict incidents is said to be key to reducing mortality rates and enhancing recovery.[3]

The high-energy transfer fragment, projectile, and blast injuries need effective damage control and operative competencies that are not usual in routine standards of care.[4] Therefore, proper training and preparedness are needed to manage these complex casualties.[4] Unfortunately, previous experience has shown that health-care providers were not always well prepared for mass casualties from armed conflicts and often worked in facilities with limited resources.[5] Multiple bombings have been perpetrated in recent decades, and unfortunately, anticipating the end of the armed conflict is difficult.[5] Bombings using various materials increases the need for complicated preparedness in hospital systems to manage the ongoing risk of exposure to hazardous materials.[5] In addition, it has been argued that inadequate planning for

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chemical, biological, radiological, nuclear, and high yield explosive (CBRNe) incidents might result in functional failures, for instance, secondary contamination of facilities, teams, and patients.[6]

The health services of many countries have come to recognize the necessity to better educate and prepare the nursing workforce for disaster management, to ensure they are competent and can confidently respond to major incidents. The literature reveals that nurses play a crucial role in disaster management; however, a national study found out that health-care providers perceived themselves to have low ratings on their knowledge about bombing situations and mass shootings.[7] Moreover, there remains a paucity of evidence for emergency nurses' roles, challenges, and preparedness in the context of armed conflict. Therefore, this study aimed to explore emergency nurses' roles, challenges, and preparedness in the context of armed conflict.

Methods

Design

A qualitative descriptive design was conducted using semi-structured interviews. The data were analyzed using inductive content analysis as described by Elo and Kyngäs (2008).[8]

Setting of the Study

The settings for this study were Ministry of Health (MoH) operated hospitals in the Kingdom of Saudi Arabia (KSA) in Jazan, which are near the Saudi border shared with Yemen. Seven hospitals that receive many casualties from armed conflict in this region were chosen.[9]

Participants

All emergency nurses working in this region, including those who were part of the Regional Backup Nurses for Disaster (RBND) group and key informants who oversaw management within these hospitals were eligible for inclusion in this study. The RBND group is a select group of emergency nurses who respond immediately when notified of any armed conflict incident and attend the receiving hospital. The key informant participants were leaders or managers of emergency nurses in these areas close to armed conflict, and they included nursing directors, emergency nursing supervisors, medical directors, and emergency physicians.

Participant Recruitment

The recruitment process was undertaken between June 20 and July 20, 2019, in KSA. Flyers were posted to advertise the study in the ED staff tearooms and nursing administration areas throughout the included hospitals.

Data Collection

Packs of interview questions, consent forms, and accompanying explanatory statements, sealed post boxes for anonymously "posting" the consent were provided in the staff tearooms. Interviews were conducted in quiet, private, and safe areas within the hospitals. Data saturation was believed to have been reached by the 22nd interview. A further interview was conducted, with no new data forthcoming.

Data Analysis

Data were analyzed using the qualitative inductive content analysis method that was outlined by Elo and Kyngäs (2008).[8] It consisted of 3 phases: preparation, organizing, and reporting.[8] NVIVO was used for code development and data organization.[10] Finally, codes were grouped into subcategories, and then categories, which were then refined into main categories.[8] The process of the abstraction is presented in Figures 1-3.

Trustworthiness

The transcription was conducted by a specialized expert in this context[11] and then reviewed several times by the research team. The process of developing codes, subcategories, categories, and main categories were evaluated by all members of the research team to consolidate the findings.

Ethical Considerations

Ethical approval to conduct this study was obtained from both the Directorate of Health Affairs of Jazan: Research Ethics Committee (Registry no. 119/2019 – approval no. 010/2019), and Monash University Human Research Ethics Committee (Project Number: 20330). A signed informed consent form for each participant was obtained.

Findings

Recognizing Roles, Challenges, and Preparedness and Planning

The interviews commenced by exploring how the participants viewed their roles in the hospitals in areas of armed conflict, and, what they liked about the role. The views regarding the main challenges they faced there, and finally, their views of the required preparedness and planning for nurses were explored.

Recognizing Roles

The responses regarding nurses' roles in the hospitals in areas of armed conflict resulted in 6 sub-categories and 2 categories included clinical nurse and head nurse (see Figure 1).

Within the hospitals where the participants worked, each of the emergency departments were divided into various areas including triage, which was usually situated at each facility's entrance to classify the patients into the following categories to indicate their level of priority: red, yellow, and green. During every shift, emergency nurses were assigned to an area in which they would work. As illustrated in the following quotes:

> *We divide the hospital area, and it should always include the triage area* (Amnah, RN)
>
> *We receive the patients in the triage area* (Natasha, RN)
>
> *We have a plan for every shift and who will be in triage and the red area, who will be in the green area and yellow area* (Sharifa, RN)
>
> *I worked as a triage nurse, or work in red, yellow, or green based on the leader[s] assignment* (Amnah, RN)

The emergency department in a 50-bed capacity hospital can receive multiple patients with different levels of triage priority concurrently. The emergency needs to decide if the incident is should be considered a "disaster" or not, which is defined as more than 6 cases. The nurse participants explained their role in

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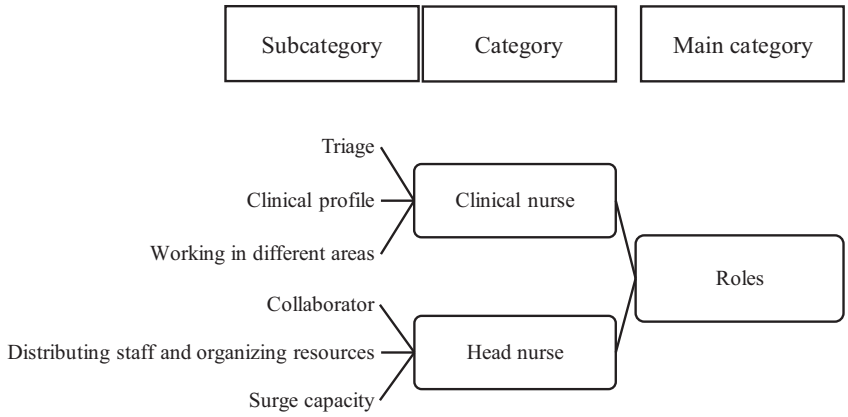

Figure 1. Abstraction of the findings adapted from Elo and Kyngäs (2008)[8].

determining when to declare a disaster and where to place these patients in the following:

> *ED can receive up to 11 red cases, up to 9 yellow cases, and the green cases in the outpatient area* (Thamer, RN)

> *My first role is to determine the incident; for example, if the cases [total] more than 6, we consider it as disaster* (Jill, RN)

Having an expert nurse for doing armed conflict triage is crucial because by using the tenets of mass casualty care effectively, they can reduce the load of patients in immediate need of emergency management considerably. It helps nurses to deal with higher volumes of patients with fewer resources. As indicated by 1 participant.

> *We need triage for disaster; we need someone to perform good or effective triage. If you have a good triage, it reduces a load of patients by 50%* (Rashad, RN)

Following triage, emergency nurses working near armed conflict zones begin managing critical cases who need immediate interventions to save their lives. The people with the most severe injuries, but who can likely be saved will be managed in the red area. Then, the yellow area is reserved for casualties who are assessed to be in stable conditions and whose injuries are not immediately life-threatening and can safely remain under observation. The green area is reserved for casualties with minor injuries who may be called "walking wounded" and can safely wait for treatment. The other area is black and is where casualties are placed if they are deceased or assessed to have injuries that are incompatible with life. Managing more patients with fewer resources is an important aspect of these nurses' care. Participants described their roles in the following quotes:

> *In general, just in disaster, some disaster goals just to deal with a higher number with less material* (Wajdy, RN)

> *We are distributing them to the red, yellow, green, or black area* (Natasha, RN)

> *After triage, we start with the red case or critical case* (Rashad, RN)

Participants explained that, during armed conflicts, all cases involved in the incidents had to be assessed and treated. Other noncritical cases, whose conditions were not related to armed conflict and were referred to as "cold patients" were asked to go another second-line hospital. Nurses were mainly responsible for these cold patients, who needed carefully applied nursing care before they could be referred away. They provided emergency treatment immediately as necessary and then referred these patients directly to other hospitals that were geographically further removed from the conflict zones. The role of the emergency nurses is described in the following quotes by an RN:

> *Well, as we are stopping the cold patients and we are triaging the armed conflict patients* (Natasha, RN)

> *So, as what we can do only emergency treatment, as early as possible we are receiving the [cold] patient, and we are referring directly to other hospitals* (Natasha, RN)

Participants revealed that armed conflict cases were different from routine cold patient cases. When responding to armed conflict incidents, there is a different scope of practice required of emergency nurses was often different to routine emergency presentations. They explained that applying care expected of regular nurses' roles and only following directions of doctors was not enough to manage the cases that presented from armed conflict incidents. The ratio of nurses is mostly large compared with physicians, and they are an important resource. Therefore, the scope of nursing practice should be advanced in areas close to armed conflict to maximize the nurses' critical care services, and this increased independence could reduce the morbidities and mortalities rates. As stated in the following quotes:

> *Before when I came here, we had not had these kinds of cases in our emergency department* (Natasha, RN)

> *I witnessed 2 periods of armed conflicts; the cases are varied compared to routine trauma cases* (Fahad, RN)

> *These armed conflict cases are a different kind, and it is different approach* (Jill, RN)

> *The normal role of the nursing, normal scope of the practice, it cannot be applicable for the* armed conflict incident*. Your nursing practice is not only following the order, but there is also a different scope of the practice for nursing in the armed conflict incident* (Rayan, RN).

Most of the armed conflict cases were soldiers and their injuries were severe traumatic injuries. Some cases had heavy bleeding and nurses got experience of dealing with those cases. Therefore, working in the situation of armed conflict incident enhanced nurses' competence to manage these scenarios as they arose, as described in the following:

> *It is mostly gunshot and mine bomb* (Fahad, RN)

> *We deal with gunshot and bomb blast cases* (Sara, RN and Natasha, RN)

> *Bomb blast and gunshot injuries, so actually, most of the soldiers that we receive here, most of them have lost a lot of blood* (Sara, RN)

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If there are heavy bleeding cases, we know how we are treating them (Natasha, RN)

Here, usually, we are receiving more emergency and trauma cases (Sara, RN)

Very good area to improve all the nurse's skills, especially we are doing everything there, we are learning new skills (Rayan, RN)

I think after coming to this field, in the sense of the armed conflict incident, we are able to manage (Noor, RN)

Due to the numerous armed conflict incidents, the MoH developed a specialized group of emergency responding nurses known as the Regional Backup Nurses for Disaster, or RBND, team. This included many nurses from other hospitals, who together, act as a mobile team. The primary purpose of this group is to support nurses in borderline hospitals during armed conflict incidents, as illustrated by participants in the following quotes.

They choose so many nurses from other hospitals, and they also make a group in WhatsApp for a mobile team. We go to armed conflict incident place as needed (Salah, RN)

We are giving support as nursing care in armed conflict field, we like just to help in emergency situations (Wajdy, RN).

The next role identified was that of a collaborator, who was working with various organizations to facilitate the management of care. During armed conflict incidents, collaborators can request further nurses by contacting RBND. They could also request further medical support and ambulance services as needed from the MoH's disaster and emergency administration, as described in the following:

I communicate disaster and emergency administration for medical supports and transportation supports and getting RBND supports (Thamer, RN)

Hospital, and also other government associations are involved in this kind of armed conflict (Wajdy, RN)

If I need more nurses, I request further nurses from other areas and request ambulances as well (Faisal, ND)

Another nursing role was identified as crucial to organizing care for cases who presented from armed conflict was head nurses. Participants explained that, every morning, the head nurse would identify how many nurses were working in the whole hospital and would assign staff to roles for each area. They would then ensure that nurses had checked and prepared the departments' supplies appropriately, as explained by the following quotes:

So, in the morning shift, we see how many staff in the hospital, everywhere they are mentioning who is the team leader, who is the supervisor (Natasha, RN)

So, our head nurse will inform us, will prepare our area. So, we need everything to be there, equipment, the machine should be checked like suction. Our cardiac monitor, ventilator, portable BP (Jill, RN)

The other role of the head nurse was to manage issues that arose during triage performed by either nurses or physicians as described in the following quote:

Sometimes there was an issue in the triage, either by nurse or doctor, and therefore for me as a leader, I always do re-triage for myself (Rashad, RN)

Challenges

Several views expressed by the participants provided insights into the various challenges that hospital nurses could face. Those challenges appeared in 7 sub-categories and 3 categories including poor orientation, access block, and communication barriers (see Figure 2).

The views of nurses who worked in armed conflict areas for the first time was fear of the unknown and examples were reported in the following quotes:

Actually, when I came to this place I was really scared because it is not like normal things (Noor, RN).

Well, the major challenges are like I'm risking my life. The war is almost 4 years [long] (Sara, RN).

Providing a proper orientation for the external nurses from RBND who came to support the teams was a challenge. During the armed conflict incidents, nurses proceeded to the areas to support, and they might not get enough orientation and preparation. Therefore, nurses need to know about the situation, hospital plan and locations of the resources, when they came from various hospitals systems to support the receiving emergency department that might also operate with different disaster policies and plans. Such inconsistencies could worsen the situation for nurses and patients and a solution is, therefore, urgently needed. As stated in the following.

The external nurses do not know about hospital internal plan and locations of the resources, and sometimes they are not aware of the armed conflict incidents management [procedures or plan] (Thamer, RN)

The armed conflict incident policy was lacking (Fahad, RN)

We do not have a real armed conflict incident plan (Jill, RN)

Several issues were identified about insufficient educational planning to manage armed conflict incidents. The frequency of armed conflict incidents might influence the availability of education and training in the affected areas because most of the nurses already had experience to manage such incidents, and the nurses always needed to be available clinically. However, disaster drills, training and updates were still wanted by participants, as illustrated in the following quotes.

Actually, I attended only one disaster drill as far as I remember, and I guess that we should also need some disaster training (Sara, RN)

I attend so many courses regarding the disaster, but all of it, it was around 6 years back (Rayan, RN)

Well, I think that for working in a disaster area we need some more of an update or disaster drills (Sara, RN)

Actually, we should attend trauma or disaster management classes disaster management because we are dealing armed conflict incidents (Noor, RN)

Due to armed conflict incidents, hospitals could encounter a real challenge of access block or emergency department overcrowding due to limited resources and the inability to move patients through to disposition so that others could be treated. As indicated in the following comments:

Main challenge here is a shortage of nurses (Fahad, RN, and Natasha, RN)

The challenge is a bed capacity (Sami, RN)

The challenge is overloading patients (Thamer, RN)

There was also another issue that could worsen the situation of the access block, which was the matter in the transportation systems that sometimes delay the transfer out. As mentioned in the following quotes:

Transportation is a challenge (Sami, RN and Thamer, RN)

Process of referring the cases takes longer times (Fahad, RN)

Possessing various effective communication systems (eg, pager, intercom, special phones, or radios) inside the hospital is critical.

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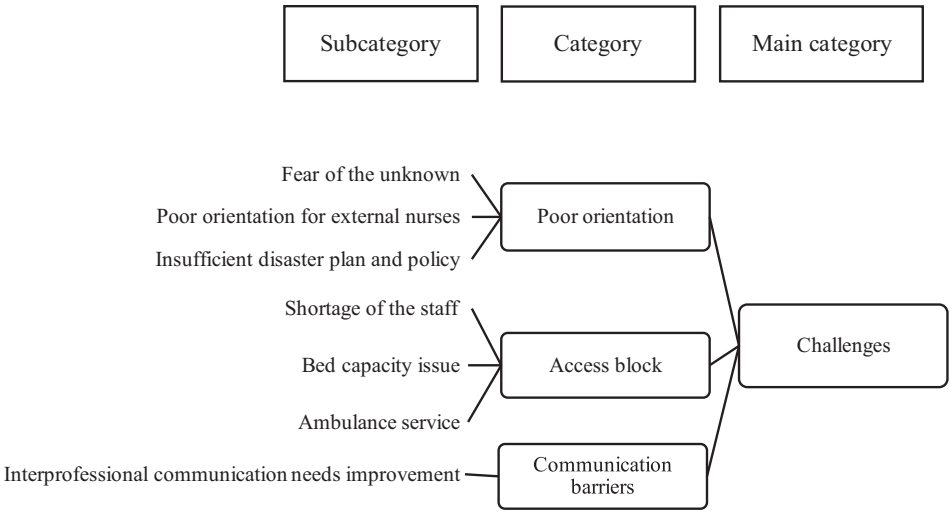

Figure 2. Abstraction of the findings adapted from Elo and Kyngäs (2008)[8].

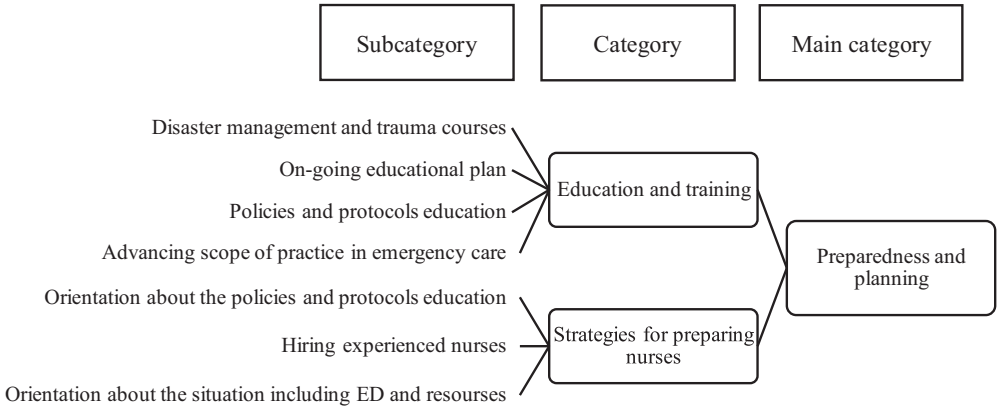

Figure 3. Abstraction of the findings adapted from Elo and Kyngäs (2008)[8].

It promotes communication among staff, during the armed conflict incidents. As stated in the following quotes:

> *Like, if we have a patient who is critically ill such as war trauma patients, there should be various communications systems in the hospital, so the required staff will come at the same time as anesthetists, nurses* (Adel, MD)

Some issues regarding communication between emergency nurses and physicians occurred. Unfortunately, some physicians ignored nurses' plans, and made participants feel as though the nurses lacked inclusion in decision-making. Furthermore, it was explained that nurses might not always understand physicians' communications adequately. The participants explained that nurses should not feel embarrassed about these issues, but communication was an area that did need to be improved in armed conflict areas, even more so than the physical nursing skills. These issues were elaborated upon in the following comments:

> *Sometimes, physicians do not listen to the nursing leader suggestion* (Rashad, RN)

> *In some cases, if the doctors are telling you something, maybe suddenly we do not hear those words, maybe it will be difficult to ask again, but we should not be feeling ashamed* (Noor, RN)

> *There could be an improvement in this communication like during the armed conflict incidents* (Sara, RN)

> *We need to improve our personal communication, rather than the technical skills* (Rayan, RN).

Preparation and Planning

A variety of perspectives were expressed about the preparation and planning. There were 7 sub-categories, and 2 categories were identified included education and training, strategies for preparing nurses (see Figure 3).

Trauma and disaster management courses were recommended by nurses, which it prepared them for working in the armed conflict areas and improved their response.

Those courses are listed in Table 1.

The importance of the triage and trauma management for armed conflict areas were mentioned by a participant in the following quote:

> *In conclusion, the best things I learnt for armed conflict incidents was triage and trauma management* (Rashad, RN)

Education and training for nurses about policies and protocols of how to deal with armed conflict incidents were described as essential, particularly for those nurses who want to work in this area. Participants said:

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Table 1. Participant-recommended courses for armed conflict incidents

Recommended courses	Participant(s)
Advanced Trauma Care for Nurses (ATCN)	Thamer, RN and Sami, RN
Advanced Cardiac Life Support (ACLS)	Wajdy, RN and Thamer, RN
Cardiopulmonary Resuscitation (CPR)	Wajdy, RN
Airway Management	Saleh, RN
Intubation	Noor, RN
Advanced Trauma Life Support (ATLS)	Wajdy, RN and Sami, RN
International Trauma Life Support (ITLS)	Wajdy, RN
Fundamentals of Critical Care and the Excellence of Emergency Care	Fahad, RN
Excellence in Emergency Care Course	Fahad, RN
Golden Course	Thamer, RN
Defibrillation	Noor, RN
Blood Transfusions	Noor, RN
Disaster Management	Saleh, RN; Thamer, RN; Jill, RN; Rashad, RN; Sami, RN and Natasha
Disaster Preparedness	Fahad, RN
Response in Emergency and Disaster incidents (REDi)	Fahad, RN
Disaster Triage	Saleh, RN
Communication During Disaster	Fahad, RN
Disaster Nursing	Wajdy, RN

Some education is needed regarding the policies or how we have to deal with armed conflict incidents (Noor, RN)

External nurses should know more about the protocols of military injuries (Sami, RN)

External nurses should follow the law and hospital instructions (Fahmy, RN)

Well, what I need, to know is which patient needs transfer first. I need some clear policy also. Because we are in armed conflict areas and the team from different places. When this casualty happens, we go there (Saleh, RN)

Ongoing educational plan for various sessions related to armed conflict incidents weekly, fortnightly, or monthly were wanted by participants, who stated the following:

If they are not able to do the weekly education, at least monthly education, one topic or monthly 1 topic or weekly 1 or every 2-week one (Noor, RN)

Increase the education, training, workshop, and conferences about armed conflict incidents (Fahmy, RN)

Important updates are needed like armed conflict management (Sara, RN)

Some staff who work in evening shift or night shift need education (Amnah, RN)

Participants believed that hospital administrators should visit nurses and provide them with moral support. Participants said:

Repeated visits from administrations and providing moral supports (Feras, MD)

Encourage them to avoid fear, face and try to learn regardless of the situation (Sharifa, RN)

Adequate previous experience was important to most of the participants. Furthermore, nurses needed to be knowledgeable enough on the variety of cases that were likely to present and prepare themselves for practice. As described in the following:

It is so important that nurses have experience before working here. Because if you are new or you are here for the first time, you will be shocked of what you will do in times of armed conflict incidents. Whereas if you already have experience from before, let's say like 4 years, you already know what to do and how to deal with assessment (Sara, RN)

Well, for the employer I can say that they should hire some nurses who are well experienced in ED because it is not so easy to work in armed conflict areas (Sara, RN)

I will choose the expert nurses in emergency for armed conflict incidents or disaster, just to make everything easy for me (Wajdy, RN)

Working in the Hajj with mass gathering is a great experience and helped me to work here (Thamer, RN)

Participants talked about the importance of finding ways for providing a practical orientation for nurses who consider working in the armed conflict area. As stated by several participants in the following:

Nurses need orientation of the ED design (Omar, RN and Sami, RN)

They need to know where the places are, and orientation for all hospitals (Rayan, RN)

Give some orientation for this emergency department, and equipment for new nurses (Saleh, RN)

Orientation for ED equipment, devices for new nurses (Fahmy, RN)

They should become familiar with the area first so that during the assessment, they will know where they will get all the equipment and the things needed if there is armed conflict incident (Jill, RN)

For dealing with armed conflict cases, nurses should be relaxed. Should deal with that one by one and should be knowledgeable enough, because this is armed conflict (Jill, RN)

We should be calm, first emergency cases we have to do, and then we have to go with the other patients (Noor, RN)

Working with those experienced in trauma like a surgical physician or experienced trauma nurses (Rashad, RN)

Discussion

The study findings of emergency nurses' roles, preparedness, and challenges in the specific settings of armed conflicts are presented. The findings provide an estimate of the scope of emergency nurses' roles, and how they were prepared across a range of hospitals in the

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armed conflict areas and, therefore, provide a window to their experiences. A significant snapshot captured an informative resource for these settings. The most striking findings in these settings were the diversity of armed conflict injuries, clinical profiles, the triage of mass casualties, severe trauma care, challenges of access block and surge capacity, orientation, communication, and strategies for preparing nurses for their role. However, these experiences were more relevant to the response phase and may be less applicable to the long-term of care. Those findings provided important implications for preparedness and planning. Given the large number of preparational courses being identified in these settings, the choice of the required education and training must be planned accordingly.

Recruiting emergency nurses who had experience in disaster nursing or leadership were recommended for the hospitals in the armed conflict areas. In addition, the basic competencies of emergency and trauma care nursing were assumed a fundamental for emergency nurses,[12] and if not demonstrated, it needs to be implemented to address this gap.[13]

Lack of orientation for external new nurses about the hospitals resources and preparation for armed conflict situations could impact their emotional state when they are called to respond to blast incidents and mass casualty scenarios.[3] (Balazs et al., 2015). Less experienced nurses in this study indicated their requirements for orientation and how it could better prepare them to deal with uncommon situations. Another Saudi national study described the importance of preparations to meet the needs of care.[7] Clear chains of command, proper orientations about resources, settings, and staff, and drills are significant supports for proper preparation.[3] In addition, surge capacity preparedness is critical for enhancing the outcome of care.[2]

Being aware of command-and-control and identifying the chain of command is essential.[6,14] The chain of command is crucial to operate each hospital efficiently.[15] Issues of teamwork communication were identified in this study. Therefore, identified issues should be settled and explained in upcoming training to improve the future implementations of the command-and-control system in the hospitals.

Versatility and the ability to adapt to different situations were invaluable for physicians wishing and planning to work in hospitals in armed conflict areas.[5] New staff became blurred in these settings because of a lack of knowledge and experiences.[5] The staff should consequently be familiar with the management of the influx of patients and be comfortable with performing common procedures in these settings. Therefore, emergency nurses wishing and planning to work in hospital in armed conflict setting should explore opportunities to improve their competencies to be comfortable and competent in an armed conflict situation. Nurses should advance their knowledge and experience by obtaining continuous education and training, particularly for caring for patients presenting in the context of armed conflict; unlike routine ED care, those patients might have been exposed to chemical, biological, radiological, or nuclear hazards.[16]

The changing nature of armed conflict settings and potential risks to researchers of exposure to harmful substances can affect future research in these settings.[17] The settings explored in the current study are frequently complex and can be overwhelmed at any time by a sudden wave of patients. Fortunately, a recent study provided new evidence regarding the essential core competencies for emergency nurses in the context of armed conflict.[18] This could be used to inform the education and training and is also expected to assist decision-makers and planners to mitigate risk and improve future responses in similar contexts.[18] Various strategies for improved disaster education have been suggested, including virtual disaster collaboration exercises,[19] collaborative exercises for health-care teamwork in a Saudi context,[20] and incorporating simulation exercises using collaborative tools in the disaster and emergency medicine curriculum.[21]

Conclusions

Emergency nurses should have sufficient education and training about the possible situations, hospital plan, surge capacity, triage, trauma, transportation, and their role in armed conflict. Participants highly recommended the availability of suitable courses in trauma, triage, and disaster management in armed conflict. The findings of nurses' roles, challenges, and preparedness are likely to inform future planning, education, and training, and might enhance emergency care in the context of armed conflicts. The planning of the drills should clearly define emergency nurses' roles and responsibilities and ensure that emergency nurses are competent.

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