An exploration of perceptions of disaster nursing and disaster preparedness among Australian nursing undergraduates

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Abstract

Aim: The primary aim of this pilot study was to explore perceptions of disaster nursing and disaster preparedness among Australian nursing undergraduates, including their definitions of disaster, disaster nursing and disaster preparedness. The study also aimed to gain an increased understanding of what Australian nursing undergraduates might see as their role in disaster situations. A naturalistic, qualitative approach was selected for this study. An exploratory, instrumental single case study design was determined to be the most effective research methodology for exploring this issue.

Methods: Data collection occurred via focus groups from a purposive, homogenous segmented sample. Participants were enrolled in the Bachelor of Nursing (pre-registration) at a School of Nursing and Midwifery at an Adelaide University. The data were thematically analysed.

Results: Four main themes were identified; ‘ideology of disaster’, ‘what is disaster nursing’, ‘what is disaster preparedness’ and ‘do nursing undergraduates have a role to play in disaster response?’

Conclusions: Three recommendations are made. The first is to increase nursing undergraduates’ knowledge of disaster nursing and disaster preparedness as part of their Bachelor of Nursing (BN) degree. The second is the establishment of agreements between schools of nursing and community organisations to facilitate nursing undergraduates’ engagement in the disaster response space. The third suggests ways to link nursing undergraduates with volunteer opportunities in order to increase their understanding of disaster preparedness and planning. This study found that the nursing undergraduates were not prepared to respond in a disaster setting, which may compromise their ability to respond should the need arise.

Key words: disaster nursing, nursing student, preparedness, undergraduate

INTRODUCTION

In 2009, the World Health Organization (WHO) and the International Council of Nurses (ICN) released the ICN Framework of Disaster Nursing Competencies, which clearly articulates the basic skills and knowledge required by generalist registered nurses to be considered competent in disaster nursing. The framework explicitly states that educational program must address any gap in skills and knowledge that nurses may have (World Health Organization & International Council of Nurses, 2009). The implication of this document is that the nursing profession has an obligation to develop basic competencies in emergency and disaster nursing in all registered nurses, and thus preparation should commence at nursing undergraduate level.

While there is no suggestion by the ICN that nursing undergraduates operate as competent disaster nurses, it may be argued that the ICN document creates a certain expectation that nursing neophytes would be able to provide basic nursing care within their scope of practice during a disaster event, should the need arise. This view is echoed by Gebbie (2010) who argues that nursing undergraduates should have novice level competencies and be able to identify what additional, specific competencies they need to acquire to support their
practice.

Nursing undergraduates are willing to be involved in some capacity during disasters (Sanders, 2007; Schmidt, Davis, Sanders, Chapman, Cisco, & Hady, 2011). This is important when considering evidence exists that suggests the nursing workforce may be either unable or unwilling to meet demand for patient care during a disaster for a number of reasons. These reasons are multi-factorial and underline the fact that nurses not reporting to work in times of crisis will impact the health-care system’s ability to function effectively (Arbon et al., 2011; Qureshi et al., 2005). With this history in mind, this study sought to gain an increased understanding of what Australian nursing undergraduates might see as their role, if any, in disaster situations.

Cusack, Arbon, and Ranse (2010) contend that Australian schools of nursing, and their students, may provide a viable and valuable resource to support local health-care services operating at capacity. Importantly, they note that it is extremely unlikely that nursing undergraduates would be used as first responders. Rather, they might be used to provide basic nursing care and ‘backfill’ acute care nurses, thus permitting more experienced practitioners to move into first responder/receiver roles (Cusack et al., 2010). However, a descriptive survey of Australian undergraduate nursing curricula that explored disaster nursing content and clinical exposure to disaster nursing found that the majority of respondents had little or no disaster nursing content within their curriculum (Usher & Mayner, 2011).

The evidence presented by Usher and Mayner (2011) suggests that within the Australian context, the majority of nursing undergraduates may not be provided with theoretical, practical or clinical opportunities to start understanding and developing the necessary competencies to satisfy the recommendations of the ICN. The absence of a formal introduction to concepts associated with disaster nursing and preparedness may make it difficult for Australian nursing undergraduates to achieve any level of disaster preparedness, potentially reducing their ability to effectively contribute when existing health-care and community resources are operating at capacity. The question arises as to whether Australian nursing undergraduates are familiar with the terms disaster nursing and disaster preparedness and, if so, what these terms mean to them. Nor is it clear whether Australian nursing undergraduates themselves believe they have a role to play in the disaster space.

The primary aim of this pilot study was to explore perceptions of disaster nursing and disaster preparedness among Australian nursing undergraduates, including their definitions of disaster, disaster nursing and disaster preparedness. The study also aimed to gain an increased understanding of what Australian nursing undergraduates might see as their role in disaster situations.

METHODS

A naturalistic, qualitative approach was selected as the most appropriate methodology for this study. The use of an exploratory, instrumental single-case study design was determined to be the most effective research methodology to achieve the aims of the research.

The case for this exploratory, instrumental, single-case study is the undergraduate nursing cohort at the School of Nursing at an Adelaide University in South Australia. The cohort of interest was the School’s undergraduate nursing students, comprising first-, second- and third-year students (Table 1). Purposive, homogenous, segmented recruiting was used to select participants. No direct recruiting occurred and all undergraduate nursing students were free to participate.

Data were collected via one focus group for each undergraduate year of study; a total of three in all. Focus groups have been chosen for this study as the group environment allows young people to feel that they belong to a group. This means that the young person’s individual behaviour is not put on notice – as the discussion focuses on group norms and not the young person as an individual (Jankie, Garegae, & Tsheko, 2011). Informed consent was obtained from each participant prior to the commencement of the session. A questioning route (Table 2) was used in order to ensure that all areas pertinent to the research question were introduced for discussion. The principal researcher acted as moderator for each focus group. Each group discussion was audio-recorded with participant consent. Member checking as part of the session wrap-up was conducted to ensure that all issues important to the participants were captured (Polit & Beck, 2012). Notes were made throughout and at the conclusion of each session by the principal researcher to record thoughts and observations arising from the group discussion. These notes aided the reflexivity of the

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Data are presented as n.
researcher and proved another valuable source of data for the study (Polit & Beck, 2012).

Data were analysed using thematic networks, based on the work of Attride-Stirling (2001). Key ideas and concepts were identified and grouped into sub-themes. The sub-themes were organized into four main themes, which were the ideology of disaster, what is disaster nursing, what is disaster preparedness and do nursing undergraduates have a role to play in disaster response? (Table 3).

Ethics approval for this study was obtained from the Social and Behavioural Research Ethics Committee of the Adelaide University where the research was conducted.

RESULTS

As previously noted, the following themes were derived from analysis of participant data.

**Ideology of disaster**

The theme ‘ideology of disaster’ was derived from participant discussions exploring definitions of disasters, providing recent examples of disasters and describing what they think disaster means in Australia. Participants offered broad definitions such as an event which imperilled the health and wellbeing of people or a time of great adversity. They used words that described the characteristics and effects of disasters. Different types of disasters were cited as a definition of disaster in themselves.

All year groups mentioned media reports of natural and man-made disasters. One participant commented that Australian disasters are natural, rather than man-made. Another thought that Australians tend to disassociate from disasters, which they only experience vicariously via media coverage.

Second- and third-year undergraduates saw disaster as synonymous with disruption to social structures and events resulting in chaos, displaced people and many deaths and injuries.

Participants had a superficial grasp of disaster nursing and predominantly conceptualized it as an acute-response role, nominating tasks that nurses might undertake in the immediate post-event disaster response and naming professional attributes commonly ascribed to nurses. The overall picture that participants presented of disaster nursing was grounded in idealistic notions of nurses who delivered holistic care under challenging circumstances, tireless and selfless, with a strong motivation to help others. Disaster nurses were seen to demonstrate the professional characteristics that nurses are known for (e.g., compassion, adaptability, critical thinking and organizational ability) and possess a comprehensive range of clinical skills and knowledge.

**What is disaster nursing?**

The theme ‘What is disaster nursing?’ was about what the term disaster nursing meant and what roles they thought registered nurses (RNs) might play in a disaster. Tasks figured prominently in their responses. Third-year participants were the only group to consider disaster nursing as a specialist role, stating that they found it hard
to conceptualize what disaster nursing is and what roles it might incorporate.

Disaster nursing and disaster nurses were seen to have a clinical dimension, with the role extending to management of health issues arising after a disaster. Participants raised the nurses’ role in public health, focussing on minimizing post-disaster disease outbreaks due to lack of clean water and sanitation, with RNs providing information and education to keep people safe in the post-disaster phase.

Counselling people and protecting their mental health was considered an integral part of the holistic nursing role in disaster response, irrespective of where and when care was being delivered. All groups felt that RNs have the skills, knowledge and resourcefulness that would permit delivery of effective treatment of victims with whatever resources were available to them, irrespective of the circumstances in which they might find themselves.

Participants suggested that nurses could fulfil leadership roles in a disaster response, as they are a respected profession. Nurses were ideally placed to act as coordinators during a disaster response, due to their skills, knowledge, and professional traits such as creativity and resourcefulness. Participants associated various non-traditional roles with disaster nursing and nurses working in a disaster situation, such as identification and allocation of available resources to ensure effective care of as many people as possible.

**What is disaster preparedness?**

All three groups of participants discussed physical and mental aspects of personal preparedness. There was recognition of personal responsibility to be prepared, and the importance of government and community organizations facilitating and aiding personal preparations for disaster situations, including the provision of early warning systems.

Clinical preparedness related to having skills and knowledge to care for people, irrespective of surroundings or circumstances in which care was to be delivered. Knowledge was not just conventional nursing clinical knowledge but cultural knowledge as well. Participants also felt it was very important to be adaptable in one’s clinical practice, so that effective care could be provided in the absence of familiar resources. Third-year participants stated that their undergraduate program should incorporate education on adapting and applying their clinical skills and knowledge in a disaster situation. They stated that this education should occur towards the end of their final year.

Institutional preparedness was spoken of by all groups. All groups of participants recognized the importance of institutions having disaster plans and protocols in place that clearly articulated roles and responsibilities of all personnel. Participants discussed the importance of institutions having human and material resources available for rapid deployment in a disaster response. Furthermore, they recognized the value of mock drills as an opportunity to become familiar with the protocols, lines of communication and equipment that they may be required to use during a response.

**Do nursing undergraduates have a role to play in disaster response?**

The majority of participants were willing to be involved in disaster responses in whatever capacity they could, even without a clear idea of what role they would undertake. While participants recognized that they had a very limited scope of practice, their lack of experience and skills was no barrier to their involvement; any assistance they could provide was more help than would otherwise be available if they were not involved. They believed that they had an ethical obligation to assist because they had chosen to be nurses and the possession of any degree of nursing skill or knowledge conferred a moral obligation to help.

There were dissenting voices among the participants, who believed that undergraduate involvement presents legal challenges and there is no place in disasters for unqualified people. There was a view that people who were unqualified and unprepared for the realities of a disaster scenario may panic, causing more problems than they solved, thus becoming victims themselves.

**DISCUSSION**

The International Council of Nurses (ICN) state that there is no universally accepted definition of disaster (World Health Organization & International Council of Nurses, 2009). The word disaster may be considered a broad term, in that it can be used to describe many different situations. Duong (2009) asserts as much, saying ‘the word ‘disaster’ encompasses a myriad of occurrences’ and is relative to the person having that experience, which provides the context for them to define disaster.

Each individual who participated in this study used their world view, media representations and personal experiences to interpret and construct their definition of disaster, and define circumstances that actually constitute a disaster. This is consistent with the literature, with several authors reporting similar findings (Duong, 2009; Fung, Lai, & Loke, 2009; Hammad, Arbon, & Gebbie, 2009).
The contextual definitions held by these undergraduates influenced the way that they then conceptualized disaster nursing, disaster preparedness and the roles that they might undertake in a disaster response.

The term disaster nursing is imprecisely defined within the literature (Jennings-Sanders et al., 2005). Just as there is no single, universally accepted definition of disaster, there is no single accepted definition of disaster nursing. The Japan Society of Disaster Nursing (JSDN) defined it as:

‘the systematic and flexible utilisation of knowledge and skills specific to disaster-related nursing and the promotion of a wide range of activities to minimise the health hazards and life-threatening damage caused by disasters in collaboration with other fields’ (Japan Society of Disaster Nurses, 2004, cited in Jennings-Sanders et al., 2005).

Whereas Powers (2010) defines disaster nursing in terms of a goal:

‘the goal of disaster nursing is ensuring that the highest achievable level of care is delivered through identifying, advocating and caring for all impacted populations throughout all phases of a disaster event, including active participation in all levels of disaster planning and preparedness’ (Powers, 2010).

Participants in this study appeared to have a superficial grasp of disaster nursing and predominantly conceptualized it as an acute-response role, nominating tasks that nurses might undertake in the immediate post-event disaster response and naming professional attributes commonly ascribed to nurses. This is unsurprising, as participants had little nursing and less disaster experience to assist them in dimensioning the role. Additionally, no explicit content relating to disaster nursing is included in the undergraduate Bachelor of Nursing curriculum of the School that the participants attended.

The overall picture that participants presented of disaster nursing was grounded in idealistic notions of nurses who delivered holistic care under challenging circumstances, tireless and selfless, with a strong motivation to help others. Disaster nurses were seen to demonstrate the professional characteristics that nurses are known for (e.g. compassion, adaptability, critical thinking and organizational ability), and possess a comprehensive range of clinical skills and knowledge across domains of acute care, public health, advocacy, community resources and mental health. There is evidence in the literature that registered nurses hold similar notions of the roles and responsibilities of disaster nurses to those held by participants in this research (Al Khaled, Bond, & Alasad, 2012; American Nurses Association, 2008; Arbon, Bobrowski, Zeit, Hooper, Williams, & Titchener, 2006; Fung, Loke, & Lai, 2008; Ireland, Ea, Kontzamanis, & Michel, 2006; Jennings-Sanders et al., 2005; Nasrabadi, Naji, Mirzabeigi, & Dadbakhs, 2007; Slepski, 2007; Tichy, Bond, Beckstrand, & Heise, 2009; Tillman, 2011; Usher, 2010; Yang, Xiao, Cheng, Zhu, & Arbon, 2010). Conversely, the literature reporting on nursing undergraduates found that few respondents identified clinical roles for disaster nurses, a finding at odds with those of this study (Jennings-Sanders et al., 2005).

One of the most significant findings of this research was that the majority of participants were willing to be involved in disaster responses in whatever capacity possible, even though they were unsure of the role that they might fulfil. This finding is supported within the literature, with several studies reporting similar findings (Chan et al., 2010; Pattillo & O’Day, 2009; Schmidt et al., 2011; Yonge, Rosychuk, Bailey, Lake, & Marrie, 2010). Participants in this study felt that they had a moral obligation to contribute, were aware that they may need to extend their scope of practice, and wanted the reassurance of strong leadership and supervision to guide their efforts during a response. These are all factors that have been recognized in previous studies (Cusack et al., 2010; Pattillo & O’Day, 2009; Schmidt et al., 2011; Yonge et al., 2010).

As part of their Bachelor of Nursing (BN) degree, all nursing undergraduates should be provided with an overview of the disaster continuum, including clear definitions of key terms such as disaster, disaster nursing and disaster preparedness. An introduction to personal preparedness and issues that require consideration before becoming involved in any response, organizational preparedness including incident command and communications, ethics and standards of care in extreme circumstances, and mental health first aid, should be included.

It is not unreasonable to suggest that nursing undergraduates could be used to extend capacity within the health system in times of need. Therefore, University schools of nursing should negotiate agreements with local health-care providers, government and/or community organizations that facilitate undergraduate involvement in disaster responses. These agreements require clear articulation of the circumstances and conditions under which nursing undergraduates would provide care, including scope of practice, lines of supervision and clarification of legal issues relating to unqualified persons providing care. These requirements are well described in
papers by Pattillo and O’Day (2009) and Cusack et al. (2010).

As part of their basic education in disaster nursing and disaster preparedness, nursing undergraduates should be advised of the existence of University–community agreements and asked to register their interest in volunteering. All necessary information regarding terms of involvement, scope of practice and other salient issues should be provided to the undergraduate volunteers at the time of registration.

Alternatively, nursing undergraduates interested in volunteering for disaster response or relief could also be advised of other community groups who are involved in that space; in this way, they could continue their involvement post graduation. Volunteers with organizations like their local Country Fire Service, St John’s Ambulance and Red Cross learn about various aspects of disaster preparedness (e.g., including incident command, and the importance of personal preparation) and may bring those skill sets back to their workplace.

There is great synergy in nurses volunteering with non-government and community organizations. Knowledge of organizational plans, being involved in planning exercises and mock drills are all professional development opportunities and may de-mystify the great nebulous cloud of ‘disaster nursing’ so that acquisition of basic competencies become just another aspect of professional practice (rather than an onerous burden), and is an integral part of workplace induction for future generations of nurses.

There are three main limitations to note in respect to this research. First, participants in this study were self-selected; that is, they voluntarily consented to take part in this research for their own reasons. Other nursing undergraduates who chose not to be involved with this study may have offered different perspectives and opinions that altered the conclusions reached.

The second is that it is a case study conducted at a single school of nursing and midwifery, thus potentially limiting perspectives obtained and transferability of the findings of this study (Minichiello, Fulton, & Sullivan, 1999). Nevertheless, there is sufficient congruence with existing published literature on several key points relating to definitions of disasters and an imprecise understanding of disaster nursing to suggest that there may be some commonality of perspectives both within and outside Australia, across nursing undergraduates and registered nurses. It is to be remembered that this study sought to examine a hitherto unexplored area, thus the findings may serve as a useful starting point for further conversations and research projects.

Finally, a risk with focus group discussions is ‘group think’, where the dominant discourse may discourage some participants from speaking freely and frankly (Polit & Beck, 2012). Although a questioning route and a reasonable degree of moderation were used in each discussion, and all participants were given the opportunity to contribute to the discussion, it is impossible to state categorically that all participants fully and freely expressed their opinions and perceptions.

Nursing undergraduates should be given the opportunity to be involved in disaster response should they so wish, but to send them in unprepared will jeopardize the health and safety of those they wish to assist. Furthermore, it is setting them up for failure and putting them at risk of becoming victims themselves. It is not ethical, reasonable nor realistic to permit any unprepared nursing undergraduate to participate in a disaster relief effort, no matter how well intentioned they are.

Preparedness equates to more than knowledge. It may be grounded in actual experience. It is only through experience that we can truly know something; only then can we know what we don’t know.

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AUTHOR CONTRIBUTIONS

KP was responsible for the study conception; KP, KG and AH were responsible for the study design; KP performed the data collection; KP performed the data analysis; KP was responsible for the drafting of the manuscript; KP, KG and AH made critical revisions to the paper for important intellectual content; KG and AH supervised the study.

DISCLOSURE

No conflicts of interest have been declared by the authors. None of the authors of this paper have any interest, financial or otherwise, that may have biased the planning, execution, analysis or write up of this research study.
REFERENCES


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