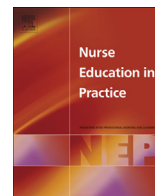


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Disaster nursing: Self-reported competence of nursing students and registered nurses, with focus on their readiness to manage violence, serious events and disasters



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ABSTRACT

The World Health Organization and the International Council of Nurses recognises the importance of nurses' involvement in disaster preparedness and response. The aim of this study was to describe and compare self-reported disaster nursing competence (DNC) among nursing students (NSs) and among registered nurses (RNs) with professional experience. Further to investigate possible associations between self-reported DNC and background factors. A cross-sectional study was conducted of 569 NSs and 227 RNs. All respondents completed the 88-item Nurse Professional Competence Scale, including three items assessing DNC. Significant differences were found among the NSs depending on which University/University College they had attended. RNs reported significantly higher overall DNC and better ability to handle situations involving violence, and to apply principles of disaster medicine during serious events. RNs working in emergency care reported significantly better DNC ability, compared with RNs working in other areas of healthcare. Multiple linear regression analysis showed that working night shift and working in emergency care were positively associated with high self-reported overall DNC. The results indicate that workplace experience of serious events increase the readiness of registered nurses to handle violence, to act in accordance with safety regulations, and to apply principles of disaster medicine during serious events.

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Background

Violence, serious events and disasters continue to kill and affect humans all over the world, with serious health-, social- and economic consequences (WHO, 2007; WHO, 2010); however, the type and severity of these events differs due to geographical locations as well as human and financial capacities (WHO and ICN, 2009). Violence can be defined as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or a community, that either results in injury, death, psychological harm, maldevelopment or deprivation” (WHO, 2002, p5). A disaster can be defined as “a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources” (UNISDR, 2009).

The World Health Organization (WHO) and the International Council of Nurses (ICN) recognise the importance of Registered Nurses' (RNs) involvement in disaster preparedness and management, and have developed a framework of disaster nursing competencies (WHO and ICN, 2009). This covers disaster prevention/mitigation, disaster preparedness, and disaster response and recovery/rehabilitation. As RNs represent the largest group of healthcare professionals who are strategically placed all over the world, in hospitals and in the communities (WHO and ICN, 2009), they play a significant role in planning for, responding to and mitigating serious events and disasters. However, a Red Cross and Red Crescent report shows that nurses' competence is not fully utilised in disaster preparedness and response. The report concludes the importance of further utilization of nurses' competence as a vehicle contributing to improved global health where saving lives and strengthening recovery from disasters and crises are some identified strategic goals (Gardulf et al., 2010).

Another perspective is opened when studying nursing students' and RNs' disaster preparedness and response. International research shows that RNs and nursing students worldwide are not optimally prepared in the area of disaster management. A study conducted by Jennings–Sanders et al. in the USA (2005) reported that nursing students (NSs) had limited knowledge regarding the definition of disaster nursing. In addition, they did not recognise the importance of knowing about community resources, they lacked experience of disaster exercises and in using models for disaster planning, and they did not recognise the significance of the role played by RNs in disasters. Findings from a recent study from the USA presents similar results, i.e. the NSs were lacking knowledge concerning disaster preparedness (Schmidt et al., 2011). Despite their lack of knowledge in disaster nursing, NSs have a positive attitude towards volunteering during disasters (Younge et al., 2010; Chan et al., 2010; Pang et al., 2009). Similarly, RNs also express a lack of preparedness for disasters (Fung et al., 2008; Wenji et al., 2015) and a lack of confidence in responding to major disaster events (Baack and Alfred, 2013); but despite feeling unprepared to respond to disaster situations, they also express a willingness to participate in disaster response (Smith and Hewison, 2012).

Recognising the lack of competence in disaster nursing among RNs, researchers have shown that training programs for RNs in hospitals were effective in improving RNs knowledge concerning disaster response (Pesiridis et al., 2015). Also NSs at universities who participated in a collaborative disaster simulation based on the ICN framework for disaster nursing competencies expressed it as valuable lessons (Hensarling et al., 2015).

During the past decade, the Nordic countries have also been exposed to several man-made and/or natural disasters and serious events. In Sweden, various risk situations have been identified, such as riots in connection with political meetings, terrorist attacks,

flooding and storms, which may have serious consequences (Swedish Civil Contingencies Agency, 2011). The Swedish Government recently tasked the National Board of Health and Welfare to prepare a planning document for trauma care in the healthcare system (Government Offices, 2013). The background to this initiative was the serious event in Norway during the summer of 2011, when one person bombed the Parliament building in Oslo, and shot and killed almost 100 young people who were participating in an organised political activity. Currently, individual nations within the European Union have initiated disaster preparedness measures in relation to the Ebola virus and other emerging infections-diseases. The precautions relate e.g. to the screening of passengers from high-risk areas, travel advice and repatriation plans (European Union, 2014).

To conclude, violence and disasters continue to affect humans all over the world. Both NSs and RNs are identified as important key players in responding to violence, serious events and disasters. Nevertheless, there is a lack of data describing their individual level of professional competence in this area, from now on summarised as disaster nursing competence (DNC). Such data are needed in order to suggest educational improvements in basic nursing programmes as well as in postgraduate nursing programmes.

The aim of this study was to describe and compare self-reported disaster nursing competence (DNC) among nursing students directly prior to graduation, and among registered nurses with professional experience. Another aim was to investigate possible associations between self-reported DNC and background factors.

Methods

Study design

The current study had a descriptive design using cross-sectional data from two samples represented by NSs and RNs. Data were derived from the Nurse Professional Competence (NPC) research project that is managed by senior researchers from six universities/university colleges in Sweden.

Data collection and sample

Nursing students

Data were collected during the last week of the 3-year university-level nursing programme at eleven universities/university colleges (from now on referred to as Higher Education Institutions, HEIs) in Sweden. At the time of data collection, the NSs had completed all the theoretical and clinical courses in the programme and were ready to take up positions as registered nurses. The purposive selection of HEIs resulted in national representation, in terms of geographic coverage of HEIs offering a nursing programme.

Registered nurses with professional experience as nurses

Using a convenience sample, data were collected from a group of RNs during their first week of entering a specialist nursing programme in the field of operating-, public health-, prehospital-, or elderly care at five HEIs. Before being accepted for any specialist nursing education in Sweden, RNs must have at least one year of professional work experience as a registered nurse.

In total, 569 NSs and 227 RNs participated in the study by answering a questionnaire, resulting in a response rate of 66% among the NSs and 70.9% among the RNs. The NSs were younger (mean age 27.6 years) than the RNs (mean age 36.8 years) ($p = .000$). There was a similar proportion of women and men in the groups, with women accounting for 86.4% and 88.9% respectively (n.s.). Further details regarding socio-demographic data are presented in Table 1.

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