

## NEEDS OF COMPETENCY IMPROVEMENT TOWARDS THE NURSES WORKING IN A DISASTER RESPONSE SITUATION IN INDONESIA

Arcellia Farosyah Putri, MSc<sup>1</sup>, Tuti Herawati, MN<sup>1</sup>

<sup>1</sup>Lecturer, Medical Surgical Department, Faculty of Nursing, University of Indonesia

\*Faculty of Nursing Campus, University of Indonesia, Depok, West Java 16424

E-mail: arcel\_farosy@yahoo.com

### Abstract

Data indicated a considerable increase in the number of disasters and their victims in Indonesia during 2000-2013. The trend of significant increase of disaster cases comes with the greater magnitude of the disaster's impacts. Disaster is a complex situation. It demands specific knowledge, skills and other essential things to be able to plan ahead and respond to the disaster situation in an effective manner within a short period of time. This study aimed to explore the needs of competency of the nurses working in a disaster response situation in Indonesia. The study was a qualitative study using semi-structured interview to explore 10 nurses with experiences of working in a disaster response. The participants were recruited using snowball-sampling method. Content analysis was used to identify categories of disaster nursing competency. Furthermore, focus group discussion was performed to validate and explore unclear identified nursing competencies, which were emerged, from the content analysis. Four main categories were identified in this study: (1) basic personal attitudes competency, (2) disaster nursing care competency, (3) leadership and managerial competency, and (4) professional development competency. All emerged categories and subcategories in this study described the nurse's competencies that are needed to respond a disaster event in Indonesia. This study might contribute to the content development of the education and training program of the disaster nurses, particularly those who are assigned to the disaster area during the respond phase.

**Keywords:** competency; disaster; Indonesia; nursing.

### BACKGROUND

Indonesia is one of the countries with the most frequent disaster occurrence. A survey of 120 countries all over the globe showed that Indonesia, China, The United States, Philippines and Afghanistan were five countries with the highest number of natural disasters (Guha-Sapir, Hoyois & Below, 2013). It was also reported that among Asian nations, Indonesia contributed to over 50% of the world's mortality account due to disaster (Guha-Sapir, Hoyois & Below, 2013).

Data indicated a considerable increase in the number of disasters and their victims in Indonesia during 2000-2013 (National Board of Disaster Management [BNPB], 2014). The data recorded 82 disasters happened in 2000. Meanwhile, in 2005 and 2013 the number rose to 693 and 1408 disasters, respectively.

The trend of significant increase of disaster cases comes with the greater magnitude of the disaster's impacts. Disaster is a complex situation. It demands

specific knowledge, skills and other essential things to be able to plan ahead and respond to the disaster situation in an effective manner within a short period of time (Legg, 2009). Thus, effective disaster response management is urgently required. Of the major elements of disaster management, competent human resource is the key.

Nurse is the backbone of the health care providers inside and outside the hospital during disaster situation. Considering the importance of the nurse's role in responding to disaster, International Council of Nurses (ICN) worked on the framework of the nurse's competency in disaster management (ICN, 2009). ICN identified that lack of training and education for the nurses that were sent to disaster area led to the ineffective disaster management, especially on the phase of response, transition as well as rehabilitation (ICN, 2009). Therefore, ICN further encouraged its member countries to adapt its global framework to meet the national context and needs of competent nursing resources to respond to disaster.

Bearing with the inevitable challenges of the disaster in Indonesia, we need to explore the existing condition of the nurses assigned in the disaster response situation. It is important to elaborate the knowledge, skills and ability in managing disaster

situation. This exploration may contribute to fill in gap of the demands of the disaster and the nurses' capacities to address the needs. In accordance to this background, this current study was aimed to explore the needs of the competency of the nurses working in a disaster response situation.

This study aimed to explore the needs of competency of the nurses working in a disaster response situation in Indonesia.

## METHODS

This was a qualitative study using face-to-face semi-structured interview. Data was analysed with content analysis method. Focus group discussion was conducted for the data validation and deeper exploration on some particular contents.

The participants were recruited using snowball-sampling method. Nurses eligible for this study were having minimum five years working experience, two times experiences of being assigned to the disaster response situations and having willingness to participate in the study. There were 10 nurses from two national referral hospitals in Indonesia participated in this current study. On the national integrated emergency system, these hospitals serve as the response hospital on national disaster occurrence, especially within the regional scope of Sumatra, Java

and international. Thus, the participants were among the national disaster response nurses.

The instrument of this study was the interview guideline that was synthesised from the literature review. The interview guideline assisted the researcher to address the research questions throughout the interview.

The first author used semi-structured interviews to collect the data. The interviews were conducted in Bahasa Indonesia at the hospital. All interviews were tape-recorded. The interviews lasted between 45 to 60 minutes until the data saturation was reached. During the interview, author used field notes to highlight important issues.

The latent content analysis of each interview in this study was conducted through the approach of Sandelowski (2006). The data were transcribed and identified referring to the research question. The data were then coded to form overall categories that described the needs of the competency towards nurses in a disaster response situation in Indonesia. The key categories were reviewed afterwards. Furthermore, the researcher analysed, performed final identification and interpreted the emerged categories. Additionally, focus group discussion of respondents was performed to validate and

explore unclear identified nursing competencies, which were emerged, from the content analysis. Discussion between researchers along the research process was conducted to add rigor of the study.

## RESULTS

### Nurses Characteristics

Table 1 showed that the most of the nurses assigned for a disaster response was male, aged 36-45 years old, with professional nurse qualification. Table 2 is a descriptive summary of the participants.

Table 1. Demographic characteristics of the participants N=10

Characteristics	(%)
Gender	
a. Male	80
b. Female	20
Age	
a. 35 – 45 years old	70
b. 46 – 55 years old	30
Level of education	
a. Diploma	30
b. Nurse	50
c. Master	10
d. Nurse Specialist	10
Working unit	
a. Emergency unit	40
b. Operating room	40
c. Intensive Care Unit	10
d. Surgical ward	10

The working experiences and the frequency of disaster response assignments, on the other hand, were distributed differently in each participant. The minimum year of working experience at the hospital was 14 years, while the maximum

year was 28 years. However, the longer the nurses work did not necessarily mean the more he or she was assigned to work in a disaster situation. Figure 2 depicts the

working experiences and the frequency of disaster response assignments of the participants in this study.

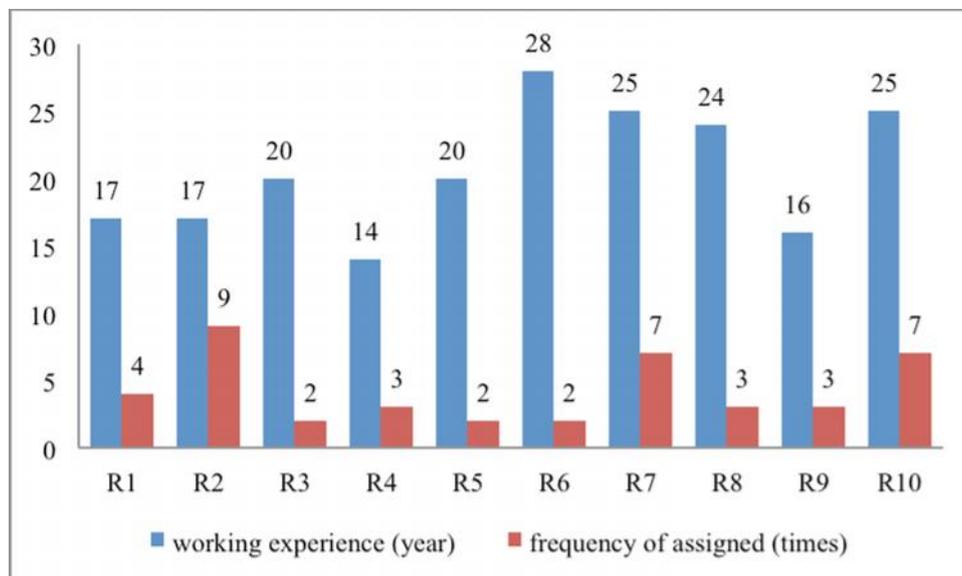


Figure 1. The working experiences and the frequency of disaster response assignments

Table 2. Nursing competency in disaster response situation

No	Unit of Meaning	Subcategory	Category
1	Critical thinking	Cognitive ability	Basic personal attitudes competency
	Field modification		
	Tools modification		
	Language	Mental ability	
	Courage		
	Ability to motivate his/herself and other people		
	Calm		
	Adaptable		
	Self-psychological management		
	<i>Burnout management</i>		
2	Patient safety in the disaster area	Disaster-related knowledge	Disaster nursing care competency
	Culture of the community in disaster area		
	Type and stage of the disaster		
	Field hospital		
	Disaster documentation	Basic emergency competencies	
	Integrated emergency and disaster management system		
	Airway management		
	Stabilisation		
	Transport and mass-evacuation		
	Basic life support		
	Wound care		
	Fracture management	<i>Rapid health assessment</i>	
	Psychological trauma management		
	Planning		
Location preparation, equipment, facilities and needs	Specific skills		
Data collection			
Data management			
Skills required at the ICU, Operating Room			

No	Unit of Meaning	Subcategory	Category
	Disaster triage Corpse handling Health education/training	The ability of patient education	
3	<i>Decision making</i> Coordination Cooperation: multi-sector and inter-professional cooperation.	<i>Leadership skills</i> Managerial skills	Leadership and managerial competency
4	<i>Transfer of knowledge ability</i>	The ability to share and synthesise new knowledge	Professional development competency

### Disaster Nurses' Competency

Four main categories were identified as the competency of nurses that are required in a disaster response: (1) basic personal attitudes competency, (2) disaster nursing care competency, (3) leadership and managerial competency, and (4) professional development competency.

Each of these categories contained a number of categories. The categories and subcategories are described below and summarized in Table 2.

#### **Basic personal attitudes competency**

On the basic personal attitudes, disaster nurses are expected to have cognitive and mental abilities. Cognitive abilities are included critical thinking, modifying tools/field and language competency. As reflected in the following statement of the respondent:

*"... critical thinking, to be able to modify tools which are needed to deliver health or nursing care. If we do not have the tools we need then we should be able to modify and find the tools substitution; different tools but with the same*

*function. If we can have this skill then I think we can handle the situation at any disaster site."* (R2)

Mental abilities include courage, ability to self motivate and others, calm, the ability to adapt quickly, the psychology of self-management and management of burnout. As reflected in the following statement of the respondent:

*"... Mentally we could handle things that will come, as we know working in disaster site is really full of uncertainty and unpredictable, we must be calm and not panic..."* (R6)

#### **Disaster nursing care competency**

This competency contain skills that should be mastered by nurses to provide necessary care in disaster site, which consists of (1) the acquisition of knowledge related to the disaster, (2) basic emergency skills, (3) specific skills, (4) health education to patients and (5) rapid health assessment

"... At least, when a disaster occurs, it means that we need to master basic life support, it is obligatory, the transportation-evacuation skills, and also triage skill ..." (R3)

### **Leadership and managerial competency**

Leadership skills include decision-making capabilities and coordination:

"When dealing with coordination that time I was confuse, I did not know any clue about that, to whom I report, I was just pure as an executor so I was just following orders from my leader or higher officer at that time." (R2)

Managerial capabilities related to the ability of performing multi-sector and inter-professional collaboration:

"... We are working 24 hours without break but we can optimise teamwork and collaboration with other profession to take turn, as needed. .." (R6)

### **Professional development competency**

Professional development refers to the ability of nurses to conduct the transfer of knowledge, discussion and sharing related to how effective service delivery.

"... When tsunami hit Aceh, we mostly support the nurses' skills. We try to provide what they need most during the disaster response phase and translate they need into a short training." (R5)

When the FGDs was performed to explore further related to the transfer of knowledge, this means that the nurse sent to the disaster area are expected to educate local resources, exchanging information and discuss how to deliver nursing services effectively and a possibility to adopt the best method of caring based on knowledge gained and evidence-based.

## **DISCUSSION**

The results of this study abstract behavioral competency of individuals equal basis with the Minami, et al. (2006) in the Core Competencies Required for Disaster Nursing. Furthermore, Minami, et al. (2006) highlighted that the capacity of individual behavior should include knowledge relevant to the role, functions and powers and the ability to implement those things in ethical and legal practice nurse in the affected areas. In Indonesia, the role, functions and powers (position statement) a nurse in disaster system, including the multi-disciplinary team or multi-sector still not visible in the implementation phase.

In the context of the basic abilities of nurses who served in the disaster area, the clarity of roles and responsibilities become a very important component. It is based on research that says that the clarity of the role and authority of an area nursing

interventions have positive influence on the behavior of the capacity and ability of the individual to provide services (Anderson, et al., 2006).

In ICN (2009), the phase of the response, disaster nursing care has five (5) targets clients are individuals, families, communities, vulnerable populations, and individuals with psychiatric problems. In this study, all respondents mentioned the competencies required to provide and improve services to the target clients (Table 2) unless specific competencies related to vulnerable populations.

As a nurse on duty responders in the disaster area during the response phase / acute, leadership and managerial capabilities, especially in the form of decision-making and coordination are essential. Qualitative research conducted by Ransie and Lenson (2012) found that nurses working in disaster areas primarily in the area of pre-hospital / community is not only required to have a clinical role but will have a more expansive role. This expansive role includes the competence to coordinate and make decisions.

ICN competency framework consists of three pillars, one pillar is the development of personal and professional qualities (Affara, 2009). Nursing as a profession has its main characteristic is to

maintain, develop and improve the quality of their knowledge in order to maintain high standards of professional practice so as to improve the quality of nursing care and patient outcomes (Indonesian National Nurses Association [PPNI], 2012). One-way to achieve this is by way of transfer (sharing) knowledge related to best practice (Affara, 2009). In the area of disaster nursing, knowledge related to best practice is very difficult to be identified due to the limited reporting or record field of nurse responders who fell into the affected areas, especially in the area of pre-hospital.

## CONCLUSION

Disaster event forms a complex situation, which has high potential to cause a health crisis. All emerged categories and subcategories in this study described the nurse's competencies that are needed to respond a disaster event in Indonesia. This study might contribute to the content development of the education and training program of the disaster nurses, particularly those who are assigned to the disaster area during the respond phase.

## REFERENCES

- Affara, F. (2009). ICN Framework of competencies for the nurse specialist. International Council of Nurses. Geneva, Switzerland. Available online

- <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.epda.eu.com%2FEasySiteWeb%2FGatewayLink.aspx%3FalId%3D7465&ei=ugpCVOaiJeK4mwWGi4KAAw&usg=AFQjCNFuzr-NPdwBTbnU5RLrpC-MIthOWg&bvm=bv.77648437,d.dGY>
- Andersson, A.-K., Omberg, M., & Svedlund, M. (2006). Triage in the emergency department – a qualitative study of the factors which nurses consider when making decisions. *Nursing in Critical Care*, 11(3), 136–145. doi:10.1111/j.1362-1017.2006.00162.x
- BNPB. (2009). *Data dan Informasi Bencana Indonesia*. Badan Nasional Penanggulangan Bencana. Retrieved February 24, 2014, from <http://dibi.bnpb.go.id/DesInventar/dashboard.jsp?countrycode=id&continue=y&lang=ID>
- Guha-Sapir, D., Hoyois, P., & Below, R. (2012). Annual disaster statistical review 2012: The numbers and trends. Retrieved February 25, 2014, from [http://www.cred.be/sites/default/files/A\\_DSR\\_2012.pdf](http://www.cred.be/sites/default/files/A_DSR_2012.pdf)
- ICN. (2009). *ICN Framework of Disaster Nursing Competencies*. International Council of Nurses. Retrieved February 15, 2014, from [http://www.icn.ch/images/stories/documents/networks/DisasterPreparednessNetwork/Disaster\\_Nursing\\_Competencies\\_lite.pdf](http://www.icn.ch/images/stories/documents/networks/DisasterPreparednessNetwork/Disaster_Nursing_Competencies_lite.pdf)
- Legg, T. (2009). Nursing in disaster situations: are you prepared to answer the call? *Pennsylvania Nurse*, 64(2), 4–9.
- Minami, H, et al. (2006). *Core competencies required for disaster nursing*. Information Base for Disaster Nursing Knowledge and Skills to Protect Live: [http://www.coe-cnas.jp/english/group\\_education/core\\_competencies.html](http://www.coe-cnas.jp/english/group_education/core_competencies.html)
- Persatuan Perawat Nasional Indonesia. (2012). *Standar Praktik*. Tersedia online pada laman <http://www.innappni.or.id/index.php/standar-praktek> diakses pada tanggal 15 Oktober 2014.
- Ranse, J., & Lenson, S. (2012). Beyond a clinical role: Nurses were psychosocial supporters, coordinators and problem solvers in the Black Saturday and Victorian bushfires in 2009. *Australasian Emergency Nursing Journal*, 15(3), 156–163. doi:10.1016/j.aenj.2012.05.001

Sandelowski, M. 2000. Whatever happened to qualitative description? *Research in Nursing and Health*, 19, 114-123.

This research was funded by the Directorate of Higher Education Ministry of Health, Republic of Indonesia  
There is no conflict of interest in the research, authorship or publication of the research