

## 分担研究報告書

研究題目 災害研修の内容・方法・評価に関する国内外先行知見の検討

研究分担者 植村 直子（東京家政大学健康科学部看護学科・講師）

### 研究要旨

現在、公衆衛生従事者を対象とした災害研修の重要性が認識されており、様々な研修プログラムが国内外で実施されている。こうした災害研修では、コンピテンシーを始めとした理論的枠組みが基盤として用いられているものの、どのような研修にどのような理論的枠組みが用いられているのか示したものはない。また、災害研修の具体的な研修方法や評価方法、および研修の成果について概観した論文は見当たらない。

そこで、本スコーピングレビューでは、公衆衛生従事者を対象とした災害研修に関する研究論文、レビュー論文、ガイドライン、および公的機関による報告書などの文献を分析対象とし、公衆衛生従事者を対象とした国内外の災害研修の理論的基盤や研修方法、評価方法、および研修の成果について概観することを目的とした。なお、文献検索のデータベースは、PubMed、CINAHL、医中誌 web、PsycINFO、Academic Search Premier、Web of Science、CiNii Articles を用いる。本スコーピングレビューのプロトコルの作成および調査の実施は、The Joanna Briggs Institute (JBI)の システマティックレビューの手順に基づき実施する。

### Abstract

The importance of establishing preparedness and response training for public health professionals to deal with emergencies and natural disasters is recognized around the world, and various training programs have been implemented by a variety of bodies. In recent decades, a competency-based framework and other theoretical frameworks have been applied in developing such programs. Hitherto, however, there has been no overview of the frameworks and methods applied in those programs, the type of evaluation methods used in their development, and an assessment of program outcomes.

Our scoping review will clarify and define disaster preparedness and emergency response training worldwide for public health professionals. We have conducted a preliminary search and found that there are currently no systematic reviews on this topic. We will include any types of studies (including primary research studies, systematic reviews, and guidelines) that deal with public health personnel. We will conduct our search among such databases as PubMed, CINAHL, Ichushi Web, PsycINFO, Academic Search Premier, Web of Science, and CiNii Articles. We will also include unpublished studies and gray literature, such as guideline reports by public organizations.

### A . Introduction

Emergencies and natural disasters often result in significant impacts on people's health, and countries are

encouraged to strengthen their capacities for emergency risk management, incorporating measures for prevention, mitigation, response

and recovery<sup>1,2</sup>. Establishing preparedness and emergency response training for public health professionals is a priority issue globally, and a variety of training programs have been conducted by academics, graduate schools and public health organizations across the world<sup>3</sup> in order to develop the competency of these professionals in the field of disaster research.

Competencies serve as the foundation for research, evidence-based practice and standards development<sup>4</sup>. Definitions of the term “competencies” are numerous and varied. Competencies are defined by Gebbie and Merrill as a complex combination of knowledge, skills, and abilities demonstrated by organization members that are critical to the effective and efficient functioning of the organization in the public health field<sup>5</sup>. In the nursing field, the ICN states “competencies are defined as a level of performance demonstrating the effective application of knowledge, skill and judgment<sup>6</sup>”. Miyazaki's definition is more complex: “Competencies can be expressed collectively as the knowledge, skills and actions involved in the essential judgement and decision-making required to promote attitudes, values and awareness of one's role as well as the planning, implementation and evaluation of actions, related to decisions by public health nurses about what to aim for and what to take care of in a disaster setting<sup>7</sup>”.

Competencies have been clarified to develop disaster preparedness and response training for public health workers in past decades. For instance, the Centers for Disease Control and Prevention and the Association of

Schools of Public Health in the U.S. produced a competency model which could function for the public health workforce to prevent, protect against, respond to, and recover from all hazards<sup>8</sup>. Also, several systematic reviews regarding competency of nurses in disasters have been undertaken<sup>9,10</sup>. Additionally, competency-based training has been developing as competencies are revealed. The amount of preparedness and emergency response training for public health nurses seems to be increasing today. Studies regarding implementation of disaster preparedness and response training by online seminar, face to face, web conference have been reported<sup>11,12,13</sup>. Several studies have introduced the developing process of competency based training<sup>14,15</sup>.

Moreover, other methods of training except competency-based for public health professionals have been reported. Barnett et al<sup>16</sup> suggest risk perception theory to create and deliver effective educational programs. Engelman et al<sup>17</sup> conducted a literature review and interviews with state level emergency management and public health agencies to create emergency responder training in one urban community, and tested the training. Ohzeki et al<sup>18</sup> report simulation training in disaster settings for public health nurses based on municipal health disaster preparedness and response manuals. Both of the training programs by Engelman and Ohzeki do not have a specific theoretical framework.

In past decades, disaster preparedness and response training for

public health professionals have been developing based on competency-based or other theoretical frameworks. However, there is no overview that clarifies which framework and methods have been used for which training program, what kind of evaluation methods have been applied to develop each training program, and what outcomes have been clarified. Therefore, this scoping review focuses on clarifying and mapping the range of disaster preparedness and emergency response training for public health professionals across the world.

A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews and the Joanna Briggs Institute Database of Systematic Reviews and Implementation Reports was conducted and no current or underway systematic reviews on the topic were identified. The methodology of this scoping review will be adapted from the JBI scoping reviews described in the JBI Reviewers' Manual, comprising the following methods: identify the research objectives and research questions; determine the inclusion and criteria; formulate the literature search strategy; extract, analyse, and discuss the implications for practice and further research.

## B. Review Question

- 1) What frameworks have been used to develop disaster preparedness and response training programs for public health professionals?
- 2) What methods have been used to train public health professionals?
- 3) What evaluation methods have been used to evaluate the outcome of

disaster preparedness and response training?

- 4) What outcome have been clarified?

## C. Inclusion Criteria

### 1) Participants

The review will consider studies that include public health personnel. A public health personnel is defined as a person who is employed in a public health organization or has responsibility for public health functioning in a non-public health organization. Public health professionals have a responsibility to prepare and respond to protect citizens in a disaster. Undergraduate students are excluded.

### 2) Concept

The proposed review is designed to map the four concepts: framework, methods, evaluation, and outcome in studies regarding preparedness and response training. Therefore, all studies with a focus on framework, methods, evaluation, and outcome will be considered. For this scoping review, preparedness and response training are defined as relevant any training or education programs including in-person, online, webinars, seminars, and symposia.

### 3) Context

The context for this review will be international settings. It will not be limited to the countries since the authors' interest is in determining the internationally recognized disaster preparedness and response training for public health personnel. Thus, the review will include public health personnel who has responsibility for public health functioning. Studies conducted in any healthcare setting,

such as public health organization, non-public health organization, will be included.

#### 4)Types of Sources

This scoping review will consider any type of studies including primary research studies, systematic reviews, and guidelines. Text and opinion papers will also be considered for inclusion in this scoping review. Studies published in English and Japanese will be included. Studies published since 2000.

### D. Methods

#### 1)Search strategy

The search strategy will aim to locate both published and unpublished studies. An initial limited search of PubMed and CINAHL was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for PsycINFO, Academic Search Premier, Web of Science, and CiNii Articles (see Appendix1). The search strategy, including all identified keywords and index terms will be adapted for each included information source. The reference list of all studies selected for critical appraisal will be screened for additional studies.

#### 2)Information sources

List all information sources (e.g. electronic databases, contact with study authors etc.) The databases to be searched include PubMed, CINAHL, Ichushi-web, PsycINFO, Academic Search Premier, Web of Science, and CiNii Articles. Sources of unpublished studies and gray literature to be searched include guideline report etc.

by public organizations. We will include literature in English in our review. These will be in addition to a comprehensive list of variations of these keywords. Please refer to the search strategy developed in PubMed and CINAHL used in Appendix .

#### 3)Study selection

Following the search, all identified citations will be collated and uploaded into EndNote and duplicates removed. Titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant studies will be retrieved in full and their citation details imported into the Joanna Briggs Institute's System for the Unified Management, Assessment and Review of Information (JBI SUMARI; The Joanna Briggs Institute, Adelaide, Australia). The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of full text studies that do not meet the inclusion criteria will be recorded and reported in the systematic review. Any disagreements that arise between the reviewers at each stage of the study selection process will be resolved through discussion, or with a third reviewer. The results of the search will be reported in full in the final report and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram.

### E. Data Extraction

Data will be extracted from papers included in the scoping review by two independent reviewers using a data extraction tool developed by the

reviewers. The data extracted will include the following: author(s), year of publication, origin/country of origin (where the study was published or conducted), aims/purpose, study population, framework/theory, methodology/methods, evaluation method(s), outcome(s) relevant to the review objective. A draft charting table is provided (see Appendix2). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included study. Modifications will be detailed in the full scoping review report. Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer. Authors of papers will be contacted to request missing or additional data, where required.

#### F. Data Presentation

The extracted data will be presented in diagrammatic or tabular form in a manner that aligns with the objective of this scoping review. A narrative summary will accompany the tabulated and/or charted results and will describe how the results relate to the reviews objective and question/s.

#### G. Funding

This study is supported by the Health and Labor Sciences Research Grant in Japan.

#### H. Conflicts of interest

The authors declare no conflict of interest.

#### Appendices

##### 1)Appendix I:

Search strategy for PubMed,

CINAHL, PsycINFO, Academic Search Premier, Web of Science, and CiNii Articles

#1: practice OR education OR training OR workshop

#2: disaster OR natural disaster OR emergency

#3: competency OR capability

#4 nursing OR public health personnel

#5: #1 AND #2 AND #3AND #4

##### 2)Appendix II:

###### Data extraction instrument

Author(s)	
Year of publication	
Origin/country of origin	
Aims/purpose	
Study population	
Framework/Theory	
Methodology/method(s)	
Evaluation method(s)	
Outcome(s)	

#### References

- 1.International Council of Nursing (2009).ICN Framework of Disaster Nursing Competencies. Geneva, Switzerland: International Council of Nurses and World Health Organization.
2. Sendai Framework for Disaster Risk Reduction2015 - 2030. United Nations.[http://www.preventionweb.net/files/43291\\_sendaiframeworkfordrren.pdf](http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf)
3. Gebbie, KM., Weist, E.M., McElligott, J.M., Biesiadecki, L. A., Gotsch, A. R., Keck, C.W., & Ablah, E.(2013). Implications of preparedness and response core competencies for public health. J public health management practice19(39,224-230.
- 4.International Council of Nursing

- (2009).ICN Framework of Disaster Nursing Competencies. Geneva, Switzerland: International Council of Nurses and World Health Organization.
- 5.Gebbie, K. & Merrill, J.(2002). Public Health Worker Competencies for Emergency Response. *Public Health Management Practice*,((3), 73-81.
6. International Council of Nursing (2009).ICN Framework of Disaster Nursing Competencies. Geneva, Switzerland: International Council of Nurses and World Health Organization.
7. Miyazaki, M.(2017). Survey of mid-level public health nurse's competency, role, authority, and training method at disaster.
8. Ablah E., Weist E.M., McElligott J.E., Biesiadecki L.A., Gotsch A.R., Keck C.W., Gebbie K.M., Public health preparedness and response competency model methodology. *American journal of disaster medicine*8(1),49-56,2013.
- 9.Abdullelah Al Thobaity, Virginia Plummer, Brett Williams(2017).What are the most common domains of the core competencies of disaster nursing? A scoping review. *International Emergency Nursing*31: 64-71.
10. Mayumi kako & Satoko Mitani (2010). A literature review of disaster nursing competencies in Japanese nursing journals. *Collegian*17,161-173.
11. Uden-Holman, T., Bedet, J., Walkner, L. & Abd-hamid, H..(2014). Adaptive Scenarios: A Training Model for Today's Public Health Workforce. *Journal of Public Health Management & Practice*20, 44-48.
12. Sabron, A., Stanley, B., Polivka, D. G., Kelly, T., Gloria, K. &Sheryl, M..M. (2008). The Explore Surge Trail Guide and Hiking Workshop: Discipline-Specific. *Public Health Nursing*25(2), 166-175.
13. Olson, D.K., Scheller, A., Larson, S., Lindeke, L.& Edwardson(2010) Using Gaming Simulation to Evaluate Bioterrorism and Emergency Readiness Education. *Public Health Reports* 125 (3), 468-477.
14. Wang, C., Xiang, H., Xu, Y., Hu, D., Zhang, W., Lu, J., Sun, L. & Nie,S.(2010) Improving emergency preparedness capability of rural public health personnel in China. *Public health* 124(6),339-344.
15. Parker,C. L., Barnett,D. J., Fews,A. L., Blodgett, D., Links,J. M.(2005). The Road Map to Preparedness : A Competency-Based Approach to All-Hazards Emergency Readiness Training for the Public Health Workforce. *Public Health Reports* 120,504-514.