

President Address

Disaster Nursing: Past, Present and Future

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Disasters occur everyday somewhere in the world with dramatic impact on individuals, families and communities. World Disaster Report 2007 reported a 60% increase in disasters in the last decade over the previous decade.

According to the United Nation's Bureau of Crisis Prevention and Recovery, some 75% of the world's population live in areas that have been affected at least once by either an earthquake, a tropical cyclone, flooding or drought between 1980 and 2000 (IRIN, 2007, p.3). Asia was most affected by disasters in both the number of deaths and the number of disasters in 2007.

Nurses in the world have been always in the front line at the time of disaster, either natural disasters or man-made disasters including wars. Modern nursing was indeed originated by Florence Nightingale who showed the effects of nursing care on the injured soldiers at a military hospital in Scutari during the time of Crimean War at the mid of 19 century. He and her staff could reduce the mortality rate from 42% to 2%.

Although nurses were always working in the affected areas of disasters, we had not accumulated our knowledge from our own experiences until very recently. What nurses in past learned through experience was not shared with the rest of nurses in the world except of some institutions.

The year of 1995 became a mile stone of disaster nursing due to two major catastrophes occurred in Japan. One is a natural calamity which occurred on Jan. 17 in Kobe areas, named Hanshin-Awaji Earthquake. Another is a terrorist attack in the subway of Tokyo which occurred on March 24th in Tokyo by spreading the sarin poisoning gas. Nurses in the sites helped and supported for victims and survivors suffering from immediate and mid-term effects of the disasters as did so nurses in past. However, it was different this time from previous situations. Nurses in the sites recorded their experiences and shared with other nurses through writing document reports and presenting in the conferences. Nurses formulated networks to support each other and developed academic society to share know ledges and skills for preparing the future disasters. One of such new organization is the Japan Society of Disaster Nursing.

Since then, their activities were shared by nurses in different countries and helped these nurses to prepare themselves in their own countries. Nurses in other countries have similarly done. ICN has developed a network of nurses who are engaged with disaster nursing. WHO, particularly WPRO has developed own network in the region. Many international conference of nursing include topics related to the disaster nursing. Then, the World Society of Disaster Nursing was established on 2007 and it's First International Conference is going to be held in Kobe on Jan.9-10, 2010. I'll review the development process of disaster nursing as a domain of nursing in past and present as well as future prospect.

Symposium

Strengthen disaster preparedness and reponses in nursing through international collaborative efforts

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During the last decades, a growing number of health emergencies and disasters attacked human societies heavily, causing lots of death, injuries, infrastructure damage and destruction, which results in huge economic and health cost, sometimes even societal setback to the development process. In particular, Asia and the Pacific are among the most disaster-prone regions, which accounts for just one third of the landmass in the globe, but receives disproportionately higher disaster impacts.

It has been widely recognized that nurses play crucial roles in the stage of rescue and post-disaster recovery and rehabilitation. However, there is a significant lack of evidences to support effective preparedness for nurses towards improved immediate, mid-term and long-term responses in following of a disaster. The collaboration among nurses working in different disaster-affected areas definitely can strengthen the generation of evidences.

Over time, a few nursing professionals network were established to widen the collaboration in disaster nursing, e.g. World Association for Disaster and Emergency Medicine Nursing Section (WADEM-NS), World Society of Disaster Nursing (WSDN), Asia Pacific Emergency and Disaster Nursing Network (APEDNN). International Council of Nurses establishes a web-based Disaster Preparedness program to facilitate the information sharing through the Discussion Room technique. To support the achievement of APEDNN aims and objectives, Shandong University is developing a web-based platform which is instrumental for individual users and organizations to better the capacity-building using different strategies, including but not limited to, information sharing, resources coordination, documentation collaboration, courses development, provision and management, web-based research, and web-based translation and quality evaluation.

Taking the APEDNN web platform as an example, through interviewing APEDNN stakeholders, it is revealed that not only nurses, but also other health professionals, governmental officials, and the public be interested in getting access to knowledge of appropriate responses' experiences to different disasters. Valid and reliable guidelines, tools, and standards of practice are in great need, but there emerges a common concern regarding who generates or provides such valuable information. Once such information is ready for immediate use or further development, of most importance is to have them visible, accessible and available for all of relevance. Appropriate marketing strategies thereby are essential to a useful, sustainable and powerful web platform in addition to the continuous support from information technicians. All of the above can't be done by any individual. The collaborative team work is essential for any network.

In reality, not so many people know existed networks clearly. It is better to keep in mind always that once there is any possibility, nurses shall explore and activate the collaboration. This is not easy. Different organizations or persons behold a variety of beliefs, values, concerns and habitual behaviors in consistent with their particular contexts. Being sensitive to these issues is necessary for a successful collaboration and partnership development. The majority of professional nurses are well-prepared in this regard. Even there is a lack of such sensitivity or cultural competency, Showing respect and being open are always possible choices towards genuine support from others under any condition.

The last but not the least, establishing collaborative relationship needs practice and adventure-taking especially for those nurses with limited experiences, authority, or power relations. Having strong collaborative relationships is a sign towards a prosperity career. They are assets and resources in face of difficulties, challenges, problems and opportunities.

In conclusion, the competency of establishing and maintaining collaborative relationships with internationally recognized organizations and personnel with authority is essential for a better disaster preparedness and responses among nurses including nursing faculty in the world.

International collaboration at the scene of disaster

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In an era where disasters are an almost daily news event impacting on vulnerable populations in some of the most challenging environments collaboration and the pooling of resource has never been more important. A number of relatively new strategic level initiatives have evolved in recent times to address the need for preparedness and resilience but the fact remains when a disaster strikes the need to alleviate suffering and enable affected populations to address the specific needs of that affected population will require that all agencies involved at all levels are working in unison and not in isolation.

It must be recognized that when a disaster strikes it is the affected population and their sovereign state government that decides what (if any) international assistance is required. While this may frustrate many in the international humanitarian assistance community it remains a fact that without an invitation to assist there is no mandate to do so.

This paper will address the need for integrated planning and exercising of multi-agency groupings within the humanitarian assistance community in order to be better placed to function optimally when required in some of the most demanding and highly challenging environments across the globe. The superimposition of conflict requires further understanding of role and function when deployed on disaster response

No longer can the rationale of returning the disaster affected community to "normal" be seen as appropriate because to do so would simply be to reinstate the very conditions that perpetuated the disaster in the first place. In line with the World Disasters Report of 2009 this paper will argue that there must be greater emphasis on the "early warning, early action" agenda while acknowledging that some disasters are simply events that cannot be predicted.

World Reports of Disaster Nursing

World Reports of Disaster Nursing: Information of Iran

Hamid Reza Khankeh

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● Characteristics of the disasters and the its damage in Iran

Iran (the Islamic Republic) located in Central Eurasia, with a population over 70 million, is exposed to a wide range of natural and man-made hazards. According to EM-DAT 181 disasters are recorded in Iran for 1900-2007 periods, which caused 155,811 deaths, 168,217 injured and 44,037,516 affected. Earthquake, drought and floods are the most important hazards, in terms of mortality, economic damage or people affected. Furthermore, as of January 2007, Iran was among world's top 10 refugee-hosting countries with 968,000 refugees.

● Role of the Rescue/ relief activities at the time of disasters

Emergency Management Center (EMC), under Deputy of Health in MOH&ME is the center for planning, coordination and supervision of health emergencies.

At the time of disasters Iranian Red Crescendo is responsible for search and rescue with affected people and Local EOC is responsible to deliver emergency and relief services on field by triage, treatment and transfer injured people to the field hospital or nearest safe health facilities. Data should be gathered by Local EMS and the other related organization under supervision on Local EOC and should be sent to Provincial, Regional and National EOC. Usually nurses are involved in search& rescue, pre-hospital and hospital care.

● Disaster nursing and nursing education in Iran:

· Indeed, during any disaster affecting the health of the general population or the medical community, nurses often are unsung leaders, playing key roles during the response effort. Because of their education, nurses are well suited to the operational leadership positions during a disaster. Many of the problems imposed by disaster, which nurses are very adept at solving them. Further more Nurses are well suited to address the psychosocial and medical treatment aspects of both the patients and the medical team with which they work. When disasters occur, nurses can play a significant role in caring for people affected by the disasters. Based on above mentioned reasons preparedness of nursing staff and their managers is very essential to treat as many people as possible based on the resources at hand and provide the greatest good for the greatest number of people. To improve preparedness of nurses and the other health care providers disaster related training is the most important and feasible strategies around the world especially in Low and Middle income countries like Iran.

Although Iran is one of the most disaster prone country in the world there is not any academic and formal disaster education for nursing managers and nursing staff as well, even as a continue education program.

· In Iran there are three level of nursing education including; bachelor, Master and PhD. Until now there is not any academic and formal education as disaster nursing. But recently nursing administration in MOH designed and holds some basic Health disaster management and Hospital Incident Command System workshop for university Head and staff of nursing administration. Every province has one University of medical sciences and nursing is managed by University nursing administration, which responsible for:

- Controlling quality and quantity of nursing care in our hospitals
- Coordinating between nurses and with other health care provider
- Registration qualified nurses and distributing between our hospital
- Implementing continuous education base on evaluation

Beside nursing schools in every University of medical sciences is responsible for training and education nursing students based on rules and principles of MOH nursing board.

●The problems/ issues on rescues/relief activities from the point of view of disaster nursing:

The most important problems are:

1. The lack of formal education for disaster nursing,
2. Lack of international interaction and communication between Iranian nurses and experienced country like Japan
3. Lack of good and powerful structure for health disaster management in MOH
4. Nurses comprise the largest group of health care professionals in Iran and are essential personnel in efforts to prepare for disasters and to deal with the consequences of an event. Nurses provided the backbone of the initial Disaster medical assistance team (DMAT) disaster response. Limited research has been published regarding the roles and involvement of the nursing profession in disaster and evacuation.
5. While nurses have long been a part of disaster care, very little has been written about nurses' unique approaches to disaster. Despite their expanded role in serving vulnerable populations, nursing roles often are overlooked as a *health resource* and generally are not incorporated into disaster-relief plans.

●Future plan to improve disaster nursing:

Nursing disaster managers need to come up with a creative solution to these problems, such as the establishment of the constructive relationship among nursing staff and related authorities and using an information system from the beginning. The other appropriate strategies including:

1. Implementation Master and PhD program of Disaster nursing
2. Designing disaster nursing course for nursing managers and nursing staff at national and provincial level
3. Defining nursing position at local, Provincial, Regional and National EOC
4. Defining disaster related projects for Nursing faculties and Master and PhD students
5. Implementing Annual National Disaster Nursing Congress
6. Defining some international educational and research joint program with disaster experienced and knowledgeable countries.

Finally, there are still too much to concern in disasters nursing. In general the main concern of disaster involved organization is coordination. Little attention has been paid to the coordination in all over the world, especially in low and middle-income countries like Iran. In fact, health disaster systems are only beginning to focus on the lack of resources to deal with a sudden large increase in the health related needs at the time of disasters. By improving nursing system we can overcome this important problem special in field of health.

World Reports of Disaster Nursing

The health problems among the jogjakarta's survivor after Java earthquake

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Background:

Disaster is a circumstance in a region that causes ecology damage, human loss, and degradation of health and worthy health service. One of the disasters is earthquake in Yogyakarta in May 2006. Many information sources told about the condition of disaster area every day, but the information seemed inconsistent among them, especially about the condition of victims and survivor.

Objective:

to figure out the real health condition of the victims related to their conditions and what is the most important issue on 1 month to 1 year after the earthquake.

Method:

This study was conducted by interviewing Health cadres and Village Staffs from Camden Village (Jetis Sub-district), and Sub-District Staffs from Sewon Sub district. This study also involved documentation reviewed about Java Earthquake using government publication, national and local newspapers, and document from internet site. Content and Meta analysis was used to analyze this study.

Ethical Consideration:

All of participants who interviewed were asked to fulfill the informed consent.

Result:

From investigation from interview with local cadres and local government staffs, it showed that in one month after earthquake survivors still lived in a tent and felt anxiety to another earthquake. Survivors moved to bigger tents and began to rebuild their housing in three month after earthquake meanwhile for survivors whose house were not damage, they started to move to their own house. One year after earthquake, some houses were already built and 95% survivors already moved to their houses.

Meanwhile from documentation study, it showed that the condition of health care building in Yogyakarta area was in terrible condition. As many as 45 Public Health center were damage (36%), three health offices, and some district hospital were badly damaged.

Injured survivors were treatment in some hospitals plus field hospitals, health centers, and mobile clinics. The ratio between patients and health caregivers was too small. Most of patients suffered from extremity fracture, spine injury and head injury. During the first week many hospitals or Public health care were lack of medical devices, medicines and facilities. A lot of health problems undergone by earthquake survivors while living in camps from first week until 6 months post earthquake, such as diarrhea (850 cases per 100000 population), tetanus (80 cases with CFR 38.75%), acute respiratory infection (8656 cases per 100000), and food poisoning (in Klaten area). However, there was no outbreak of diseases. At that time, cases of suicide and mental disorder among earthquake survivors were also found. Six cases of suicide were reported, and as many as 74 people have been treated in psychiatric hospital since earthquake.

Discussion:

During crisis situation, in the first week of post disaster, it seems normal that everything was in chaotic situation. It might be because none of us were prepared with disaster, especially earthquake. It also happened among Yogyakarta's citizen. They never prepared about earthquake situation, but ready enough for Merapi's eruption.

The large of damage both housing and health care building were connected with the history of sediment soil formation in Jogjakarta area. It is believed that Jogjakarta area was formed by alluvial sediment from Merapi Mountain, so that the foundation is not form by the rock but by soil.

Most of patients were suffered from fracture because they were hitted by falling objects such as roof, or furniture.

A lot of health problems undergone by the survivor because they stayed in inappropriate houses, consumed limited food, and lived in damaged environment resulting in broken facilities of water and toilet. This condition of was very susceptible for the survivor to have health problems.

Poor sanitation, including lack of safe water and toilet facilities, and lack of suitable conditions of food led to outbreaks of food borne diseases such as diarrhea.

There were four factors contributing to the tetanus cases which happened in Java earthquake which are; 1) dirty wound that was late in the process of treatment, 2) the wound was sutured before previously being cleaned, 3) the patient had no immunity because there was no vaccination and, 4) when they entered the hospital, they did not receive Tetanus dotum. But, the Indonesian ministry of Health took some programs immediately to handling this problem by active finding cases, prophylaxis with Ig, and immunization campaign.

The acute respiratory infection cases become the most common problem among the survivor especially among under-five-years-old survivor. This might be due to the intense activity of reconstruction and evacuation of damaged materials in the community, overcrowding shelter, indoor air pollution from cooking, and outdoor air polluting resulting from the removal of debris.

Food poisoning cases happened because the food that was given for the survivors had contaminated by bacteria. It seemed to be understood because many food donations came from other area, which so far away and it could make the quality of food donation worsened.

For the suicide cases, it was suggested that the victims had suffered from severe depression because of multiple losses and could not strive to live. Many programs had been done by the community and government to prevent the other cases. The Java earthquake can bring survivors suffered from mentally problems such as stress and depression. But, because Javaness people are very stout hearted, the earthquake condition didn't bring them to severe depression. They share and help each other (Gotong Royong spirit) and get closed to God. It was documented that the people who have been treated in psychiatric ward were the person who has history of mental disorders before.

Conclusion:

Many health problems (physical and mental) happened in Java earthquake survivor, but with quick, responsive, optimal services from all health care givers and government it will prevent the worsened impact of disaster for the survivors.

World Reports of Disaster Nursing

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Al Hoceima province is located in the north of the Kingdom of Morocco. Its area is 3,550 km². The province has a population of 395,644, with annual demographic growth of 0.3%.

The population of Al-Hoceima is characterised by the wealth of its socio-cultural heritage (common customs and languages are Arab and Tarafit). The province's economic activity is dominated by the primary sector; the unemployment rate is estimated to be 13.6% of the active population .

In terms of health, the province has 56 ambulatory health care centers and three hospitals with a capacity of 364 beds, where 129 doctors and 329 nurses work. The province also has 24 ambulances.

The province of Al-Hoceima is considered a hazard area having suffered many natural disasters over the course of history (earthquake, floods, etc.). The province was recently struck by an earthquake of magnitude 6.4 on the Richter scale (24 February 2004). The toll of the earthquake was 628 dead, 926 injured, 2,935 houses collapsed, and 15,230 homeless. The toll remained limited because the epicenter was in a rural area inhabited by few people. Furthermore, the basic infrastructures (such as roads, bridges, electrical installations, hospitals) suffered little and the health services took action efficiently and fast.

For the Moroccan and international communities, the Al-Hoceima earthquake was an exceptional occurrence leading to the show of substantial support and solidarity with the victims in the form of human and material assistance.

The humanitarian aid granted to the province took concrete shape through the intervention of specialised disaster teams and the donation of material and equipment (tents, food and medication). It was implemented both within a governmental framework and through the NGOs of different countries. A serious problem the local authorities had to deal with was the management of donations, which required the mobilisation of all the ministries and of the local associative fabric to ensure their distribution to the victims.

To deal with the problem of homeless persons or disaster victims having fled their homes in panic, the local authorities set up 8 camps in urban areas. In the rural areas, people preferred to set up their tents close to their former homes, and sometimes in small family groups.

Disaster situations require the mobilisation of various actors for the implementation of appropriate relief action, particularly nurses who play an important role on the field. During the Al-Hoceima earthquake crisis, the nursing profession spontaneously joined forces and took action only hours after the disaster. They participated without prior or specific preparation in the different activities of disaster relief, emergency care and evacuation of the injured. Later, when the emergency services were organised and better coordinated, the nurses joined the mobile teams, whose mission was to facilitate access to care for the populations of stricken villages/towns. The services provided by these mobile teams in response to the earthquake included curative care, the vaccination of children and women against certain diseases, medical consultation, environmental health (aiming to monitor the sanitary conditions of living quarters), informing people and raising their awareness on rules of hygiene and the problems related to the disaster. Moreover, the nurses also participated in the psychological support of the victims by joining polyvalent teams that went to the camps and villages/towns hit during the critical phase. During the rehabilitation phase, the psychological support consultations took place at the provincial hospital level.

Epidemiological surveillance was a priority given the risks threatening the stricken populations. This surveillance was carried out in two ways: active surveillance through medical units set up at the camps, or passive at health centre level. The surveillance data indicate that the main transmissible diseases were meningitis, pneumonias, scabies, etc.

In psychological terms, the population showed various behaviour disorders immediately after the earthquake, such as: phobias, mood swings, insomnia, anorexia, and stress with a desire to flee the region. After approximately 5 months the situation began to return to normal (restoration of daily life: holiday celebrations, opening of construction sites), while certain people still suffered problems such as insomnia or phobias.

The nursing staff mobilised during the Al-Hoceima earthquake crisis carried out their mission with courage and devotion, while in certain situations feeling unwell or experiencing anxiety, due on the one hand to the stressful workload, and on the other to local nurses' concern for the health of family and loved ones. The travel of nursing staff from other provinces of the Kingdom was also a difficulty that had to be managed.

Feedback on the Al-Hoceima earthquake experience showed that the organisation of work during disasters is a linchpin for the interventions' success. Among the organisational aspects of disaster management, the work of multi-disciplinary and multi-sectoral teams must be prepared in advance through the creation of committees made up of actors from different sectors whose responsibilities must concern all the areas of crisis management, such as humanitarian aid, assistance, caring for victims, medication and information.

The preparation of disaster management mainly takes place through the good training of professionals to gain the skills enabling them to manage emergency situations in collaboration with multiple actors. This training can include the organisation of training workshops and simulation exercises integrating other actors such as local or foreign organisations with good experience in the field. This type of exercise allows an exchange of experience and know-how that can contribute to a better response to disasters in a world without borders.

Activities and future issues of the First Team dispatched to disaster site by request from the Japan Society of Disaster Nursing

Mariko Ohara

First team member dispatched to disaster site by request from the Japan Society of Disaster Nursing, Japan

<Purpose>

By request from the Japan Society of Disaster Nursing, the first team worked in flooded areas. Through these activities, the future issues of the first team are being considered.

<Method>

Reflecting on these activities, the roles of the first team of the Japan Society of Disaster Nursing are being considered based on the contract.

1)What is the first team?

When disaster more than fixed scale occurs,the first team member dispatched to disaster site by the Japan Society of Disaster Nursing is in charge of some parts of collecting information on nursing needs after soon disaster occurred, and standing support system, and making assessment on health problems of victim, making sure support needed,

After the draft of dispatch system had been made in 2008, that rule was established in 2009,

2) Assessment of damages

The west area of Hyogo Prefecture was ravaged by torrential rains caused by typhoon No. 9 from August 9 to the dawn of August 10. The amount of rainfall was 326 mm in 24 hours. 18 people died and 2 are missing. Many houses were destroyed and contamination by mud flow was severe.

3)Actual activities

The Japan Society of Disaster Nursing gathered information in the acute stage of the disaster. To protect the safety of the victims, make a support scheme, and establish the organization, the Japan Society of Disaster Nursing made a first team for the disaster in 2008. The first team members and dispatch contract was decided.

For the first time, the team was dispatched to Okazaki City, Aichi Prefecture, which had been ravaged by torrential rains. The second time, the team was dispatched on the following day of heavy rain in August 2009 to Sayo-cho, Hyogo Prefecture. In that area, the team worked with the chairman and president of the Hyogo Nursing Association to provide physical and material support to the citizens in emergency evacuation areas and disaster-affected houses.

<Consideration and conclusion>

Two organizations (first team members of the Japan Society of Disaster Nursing and Chairman of Hyogo Nursing Association) joined together, and provided support to the victims in the acute stage of the disaster. We think this is effective in starting the specific activities focusing on "life" and "living," not only in the initial period but also in the middle and long-term support stages. This was the second activity of the first team, following the heavy rains in August 2008. In the first activity, the importance of visiting the disaster site and protecting the safe living of the people in the area was recognized. The roles of the first team were established through the actual activities. The first team could play a role to transmit information obtained in the initial period to other groups and next nursing members in the association. It is expected that this will improve the analysis method of gathering disaster information, judging methods, and cooperating in the future.

Educational Lecture

Disaster Nursing Education - Building Disaster Nurses Globally

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The impact of disasters on communities and people continues to grow. In 2008, there was a dramatic increase in the number of people affected by disasters in 2008 even though the total number of disasters was less than in previous years. More than 214 million people were killed, injured or displaced by disasters in 2008. Building the preparedness and response capacities of countries and communities is foundational to saving lives and reducing suffering due to the effects of disasters. This translates into a need for more people to respond to disasters, especially health professionals. But the lack of trained personnel presents enormous challenges for response, transition and recovery. As the largest group of health professionals, it is imperative that nurses are prepared to respond effectively to disasters. However, recruiting nurses for disaster activities remains difficult and frustrating in part due to their lack of education in disaster.

The World Health Organization views nurses and midwives as essential in disaster response, but believes their lack of disaster training is a major gap in disaster and emergency response. Many nurses are unaware of the roles that nurses play in disaster preparedness and recovery as a result of the lack of disaster education. The transition from the daily nursing activities to a disaster is difficult even under the best of circumstances. Without an understanding of their role nurses can become frustrated and bewildered when the reality of the disaster situation exceeds their expectations. As a result, there have been situations where nurses became overwhelmed, failed to communicate important data, and failed to identify the impact of the disaster on individuals and populations.

Today, there are disaster nursing courses being taught in many nursing schools, although there is no universal standard for the programs. There are programs that range from one hour to a full 3 credit course and more. The courses vary in content with little assurance that students will be prepared to function in a disaster situation. Furthermore, most of these programs are elective rather than required of all students. Nevertheless, the global nature of disasters requires that nurses be prepared with similar competencies in disaster in order to work together and successfully to meet the health needs of disaster populations. Yet, these inconsistencies in disaster education further increase the difficulty of nurses to provide effective care in the time of disaster.

There are also a number of challenges in developing and teaching disaster courses. Available resources in disaster nursing designed for nurse educators have been limited and faculty without experience or education in disaster nursing are hesitant to teach disaster nursing. Perhaps the biggest challenge is the difficulty of adding additional content to already crowded nursing curriculums. Therefore the majority of the graduates of nursing programs still have had little or no disaster nursing content. But with the increasing impact of disasters on communities and populations, nursing can not afford to wait to include disaster nursing education as part of nursing curriculum. A positive development has been the growth in graduate programs in disaster nursing. These programs are producing nurses who can take on the needed education and leadership roles in disaster nursing.

With the majority of nurses having no education or experience in disaster nursing, there remains a major gap in developing the capacity to needed respond effectively to disasters. Therefore the development of continuing education programs is essential to prepare nurses worldwide. But attracting nurses to the programs is difficult. Nurses do not necessarily view disaster education as important, time and work are deterrents and courses are often not easy to locate. In order to meet the education needs of these nurses a variety modalities for delivering disaster education content must be available. There may also need for policy decisions such as those that require nurses to take a certain amount of disaster nursing education in order to assure that a country has the nursing capacity to meet the health needs of the community.

In a partnership between the International Council of Nurses and World Health Organization, the ICN Framework of Disaster Nursing Competencies was developed, an important step in building international disaster nursing response capacity. The competencies were developed using the disaster management continuum, as the organizing structure. The disaster management continuum was selected because it is a process that is recognized throughout the world. The competencies were organized under four areas: mitigation/prevention; preparedness; response; and recovery/rehabilitation. Ten domains were identified within the four areas under which the competencies were delineated. The Disaster Nursing Competencies do not stand alone but build on the generalist nurse competencies.

Given the global nature of disaster response, it is essential to have a common set of competencies to assure that all nurses possess a similar basic knowledge of disaster nursing. Learning and assessment is supported by competencies. The competencies facilitate deployment of nurses globally, promote consistency in care, allow for a unified approach and assist in building strong multidisciplinary teams. Additionally the competencies function as a guide for curriculum development, continuing education, training, research and job descriptions.

This presentation will focus on building disaster nursing capacity through integration of the Disaster Nursing Competencies in education, modalities for increasing the educational opportunities in disaster nursing and policy implications for nursing.

Disaster Nursing Network in the World

Disaster Relief Activities by JNA

Kumiko Ii
Japanese Nursing Association, Japan

Disaster Relief Network System

Disaster Relief Network System (DRNS) is a mutual support system between the Japanese Nursing Association (JNA) and prefectural nursing associations, including that in the affected area. The system aims to launch smooth disaster relief and effective nursing activities when a large-scale disaster occurs.

In case of a large-scale disaster, at the request of the association in the affected prefecture, JNA will dispatch nurses who have registered as "disaster relief nurses" to the area, in coordination with related prefectural associations. The nurse will provide flexible nursing activities depending on the needs in the disaster-affected area.

Disaster Relief Activities by JNA

1) What is a "Disaster Relief Nurse?"

They are nurses who are registered at a prefectural nursing association and are dispatched to disaster-affected areas as members of a nursing profession organization based on the DRNS.

2) Roles of the Disaster Relief Nurse

Disaster relief nurses provide appropriate healthcare and nursing services to disaster victims to help maintain their health. They also support affected nurses to reduce their physical and mental burdens.

3) Qualifications of Disaster Relief Nurses

<Essential Qualifications>

- (1) Membership of JNA, and registration at a prefectural association as a disaster relief nurse
- (2) Completion of a disaster nursing training program*¹

*¹: Disaster nursing training program provided by a prefectural association or JNA

<Favorable Qualifications>

- (1) Regular participation (once a year) in a disaster nursing training program or a joint disaster drill*²
- (2) Belonging to a healthcare institution, and the existence of an agreement between the institution to which he/she belongs and the prefectural nursing association (this, however, does not preclude participation of nurses who do not belong to an institution).

*²: Programs organized by JNA or the prefecture

4) Standards for Dispatch

Disaster relief nurses should be dispatched according to the following steps depending on the scale of the disaster.

- (1) When the nursing association of the affected prefecture can control the nursing activities on its own, disaster relief nurses who have registered at the concerned prefecture should provide nursing services.
- (2) For a large-scale disaster that requires the support of other prefectural associations, the associations of the surrounding prefectures should dispatch their disaster relief nurses first.
- (3) When the support from surrounding prefectures is found to be insufficient or is expected to be prolonged, associations of other prefectures should also provide support.
- (4) Such support should be coordinated by the nursing association of the affected prefecture in case of (1), and by JNA in case of (2) and (3).

(Note: In case of (1), JNA does not guarantee the occupational status of the nurses.)

5) Timing and Duration

In principle, the whole activity lasts for one month from the third day after the disaster's occurrence.

One nurse is on duty for four days and three nights, including travelling time.

6) Location of Service

In principle, priority is given to the affected medical facilities, social welfare facilities and welfare shelters. Only if no other support is available, general shelters could be included in the service.

7) Occupational Status

The occupational status of disaster relief nurses is guaranteed by JNA and the prefectural nursing associations collaboratively, except when they are dispatched by their own institution as part of their duties (i.e. worker's compensation is applicable). By guaranteeing the status of nurses, JNA plays the role of buying insurance for accident compensation that covers all the services including the round trip between the point of departure and the affected area (including own-injury cases during the activity period), and paying service-related travelling and accommodation expenses based on the actual amount (up to 20,000 yen).

Disaster Nursing Network

Aiko Yamamoto, RN, Ph.D
Professor & Executive Director of Research Institute of Nursing Care
for People and Community, University of Hyogo, Japan

Recently, we have witnessed disasters occurring frequently in various parts of the world. With the advent of the 21st century, we are seeing serious disasters occur even more frequently than before. Under disaster situations, many supports such as personnel, equipment, or finance are expected.

Within Japan, Nursing Support Network was developed for dispatching nurses at the site of disaster area. Japan Society of Disaster Nursing and World Society of Disaster Nursing were developed as academic societies. The societies are expected to accumulate and share knowledge about disaster nursing, facilitate an International collaborative research, and others. Under West Pacific Regional Office of WHO as International Organization, Asia Pacific Emergency and Disaster Nursing Network is also developed, and held annual meeting within region. International Council of Nurses as Professional Organization has the Network for disaster nursing consisted of practitioners, faculties, and researchers in the world.

The collaborating centre is now forty four in the world. Our Research Institute was designated as WHO collaborating centre in May 2008. Our terms of reference are:

- 1) to promote the nursing and health research on disaster reduction, preparedness, and others in the mid-to long-term,
- 2) to delineate the roles and competencies of nursing professionals,
- 3) to carry out a leading role in the development of an effective national, regional and global network system for nursing and other health professionals,
- 4) to implement training needs assessments, develop and implement training programs for the public and professionals,
- 5) to influence the governmental agencies and non-governmental organization to promote nursing leadership in the development of disasters nursing and health emergency management.

As WHO-CC, several training programs are conducted including the training programs of disaster nursing coordinator for nurses outside of Japan, disaster preparedness programs for Junior high school students in Japan, and others. International collaborative research is also conducted.

Details for these activities and future tasks will be presented at the symposium.

Panel Discussion

Stress Felt by Supporters: Outline of Critical Incident Stress

Tomoko Osawa

Senior Researcher, Hyogo Institute of Traumatic Stress, Japan

The Great Hanshin-Awaji Earthquake in 1995 attracted considerable attention to critical incident stress, which is often faced by professionals engaged in rescue operations in times of disaster. Until that event, their work-related stress had passed undetected due to societal expectation for such professionals, and their occupational culture, which encouraged them to meet such expectations. Since the earthquake, the Japan Coast Guard and local fire departments in Hyogo Prefecture have strived to prevent and manage critical incident stress. However, there are certain gaps among the types of professions, and the regions, in terms of their commitment to these efforts.

On this occasion, I will inform you regarding what we have learned about critical incident stress over the past 15 years, and about surveys that targeted fire department personnel and nursing professionals.

Abstract of Presentation for Panel Discussion at the 1st Research Conference of World Society of Disaster Nursing

Seiji Hoshino

Head of Welfare Section, Emergency Life-Saving Technician and Fire-Fighting Commander,
Kobe City Fire Bureau, Japan

[Activities of the Kobe City Fire Bureau]

In the immediate aftermath of the Great Hanshin Awaji Earthquake, which occurred on January 17, 1995, and during its post-disaster reconstruction phase, members of the Kobe City Fire Bureau continued to provide firefighting and emergency services despite themselves being affected by the earthquake. Following the Ikawadani fire incident on June 2, 2003, in which the precious lives of four young firefighters were lost, the Bureau, resolving to prevent similar tragedies, has worked to improve on-scene procedures based on lessons learned from the incident. At the scene of the JR Fukuchiyama Line derailment accident on April 25, 2005, Bureau members worked as part of the Hyogo Prefectural team to provide rescue and emergency services to the many injured. At the fire scene of the Mitsuwa Foods north factory in Higashinada Ward on June 1, 2009 we suffered the death of a colleague on duty, a loss that must never be repeated. Since we firefighters are required to provide services on a daily basis at disaster scenes from the time of initial response, there is need to give care to colleagues who encounter distressing scenes in the course of committing themselves to hazardous duties, in addition to caring for the injured and their families.

[Measures and Issues]

The Kobe City Fire Bureau addresses mental health issues of its employees through a program carried out in cooperation with the Hyogo Institute for Traumatic Stress. The program draws on the Bureau's experience with natural disasters, large-scale urban disasters and accidents involving on-duty deaths. This presentation introduces this program, and examines and considers the issues facing future care.

Care for Supporters

Seiji Taniya
Social Welfare Conference, Kobe City, Japan

After the Great Hanshin-Awaji Earthquake, I worked as a member of the Nada Ward Disaster Countermeasures Headquarters, laying out corpses. The death toll in Nada Ward exceeded 700. We transported the corpses, laid out in 12 temporary morgues, to funeral halls in other cities, with the cooperation of the Japan Self-Defense Force, because all funeral halls in Kobe were unavailable for use. Due to lack of staff, we were forced to work around the clock, without sleeping or resting.

After the temporary morgues were closed, I resumed my original duty—welfare public assistance service, while helping my colleagues deal with local residents' requests for loans and providing consultation on daily life and access to temporary housing for refugees staying at schools and in parks. The work immediately after the earthquake was very hard. However, driven by a sense of community and the exaltation unique to the mental state of people in disaster situations, we were able to survive the crisis without burning out, mainly due to material and manpower support from other cities, as well as complementary interactions with quake victims.

Health Activities in the Aftermath of the Great Hanshin-Awaji Earthquake and Care for Carers

Noriko Nakano
Hyogo Prefectural Hyogo Children's Center, Japan

The Great Hanshin-Awaji Earthquake was an epicentral earthquake of magnitude 7.3. A total of 6,402 people were killed by the earthquake, with more than 316,000 people forced to stay in evacuation centers.

Health activities by public health nurses and other staff, which focused on changes in the living environment of the disaster victims who lived in evacuation centers, ordinary homes, temporary housing and restored housing, included the determination of priority health needs, home visits, health consultations, health education, and the creation of health communities; and such continuous long-term activities (over 10 years) prevented the victims from succumbing to disaster-related health problems and supported healthy living so that the victims could restore, maintain and promote their good health.

Meanwhile, as the section responsible for health activities, we sent public health nurses to healthcare centers in the affected areas from inside and outside the prefecture soon after the earthquake occurred. In addition, we increased the number of public health nurses to respond to disasters and collaborated with Hyogo Nursing Association as well as provided opportunities to talk about the need for the psychological care for supporters and their individual experiences. Furthermore, staff members at healthcare centers in the affected areas shared information on their activities at the morning and evening meetings and were supervised by experts in psychological care. Through these activities, I become painfully aware that health risk management systems including care for carers should be enhanced on a regular basis.

E-Defense (NIED)

What will happen to your hospital during an earthquake?

In the event of a large earthquake, medical facilities are expected to provide critical services to rescue and save lives. However, the 1995 Kobe earthquake demonstrated widespread damage to medical facilities and equipments. The event taught us how difficult it is to continue operation after similar earthquake disasters. What happens to the hospital during and after similar events? What can we do to reduce damage and achieve continual operation? In order to answer these questions, a large experimental program was conducted at E-Defense - the largest shaking table in the world. In this project, a real scale building housing actual medical equipments was shaken according to a real earthquake. This booth will show video clips taken from the tests. Come see what an earthquake can do to your hospital.

Nursing Science Café

Against the odds: Nurses making the difference in disaster healthcare

Sunshine Chan

School of Nursing, Hong Kong Polytechnic University, Hong Kong

Disaster affects a good number of people and to those being affected it is often a time of great distress. Throughout history, nurses are committed to make a difference in the lives of people even in the most dangerous and difficult situations. Good nursing during disaster and beyond calls for more than the split-second life-and-death decisions and rescue. Using Sichuan earthquake as an illustration, the audience will be guided through the spectrum of work carried out by nurses against the odds in different settings and at different stages in times of disasters, the impact of such contribution, and the challenges nurses faced. Through their presence, nurses provided care for the needy, fostered healthy family, and built strong community. Motivated by the finest impulse of altruism and humanity, nurses treated people with love, restored human dignity, and created the most meaningful experience in ones' life. Combining compassion and creativity in the process of caring, nurses ensured comfort, fostered hope, and promoted health. Besides, by reaching the inaccessible, nurses reduced inequities in access to basic care. Apart from providing care for those in need, nurses also identified the most prevalent problems faced by the community, and the defects in the current health care system through record keeping and scientific enquires, in order to search for ways to shape policy making, strengthen health system, and improve nursing practice.

Development of nursing intervention on strengthening the resilience of the children after the Sichuan Wenchuan Earthquake in China

Xiaochun Zhang

Post Doctor of Graduate School of Nursing Art & Science, University of Hyogo, Japan

Purpose

The purpose of this research is to provide the nursing intervention for strengthening the resilience of the children who experienced Sichuan Wenchuan Earthquake in China.

Method

The research includes two studies by using interview and self-questionnaire, the one is to discuss on the practicalities of Japanese disaster nursing education tools in China during mid and long-term after disaster. The disaster nursing education tools include two tools, one is "Children who are living in a disaster area (Support for affected families)", and the other is "Children who are living in a disaster area (What nurses can do)". The study surveyed thirty one Chinese nurses (mean age 31.58, aged 23-42), who provided nursing care for the children after China Wenchuan Earthquake.

The others is to discuss the nursing intervention on strengthening the resilience of the children who experienced Sichuan Wenchuan Earthquake in China. By using interview and self-questionnaire, this study was conducted ninety- eight elementary school students (mean age 9.68, aged 9-11) and their guardians seven months after the earthquake in Sichuan Province in 2008 in China. All students and guardians were asked the questionnaires included the Children's Resilience Scale (CRS) and others. From the answers and the interview, the researcher provided nursing intervention to the guardians. The scores on the CRS before nursing intervention were compared between with two months after the intervention.

Ethical consideration

The rights of participants were considered and protected in accordance with the guidelines of the Research Ethics Committee of College of Nursing Art and Science, University of Hyogo.

Results

About the disaster nursing education, the design and the substance of Japanese disaster nursing education tools were discussed, the practicalities of the nursing education tools in china were supported by Chinese nurses. They also made comments on additional viewpoints and their difficulties in practical nursing in China.

About the study on strengthening the resilience of the children, the mean scores of the CRS before nursing intervention was 90.09(SD=9.15). Two month scores of the CRS after intervention increased to 90.58 (SD=8.92). The difference between the CRS scores before and after intervention were significantly different ($p < 0.01$). Also the most of the guardians answered that they are satisfied and need the nursing intervention after disaster as the Sichuan Wenchuan Earthquake.

Discussion and conclusion

The nursing education tools is strong possibility that the Chinese nurses can use them to provide nursing intervention for children and their guardians affected by earthquake during mid and long-term after disaster in the future. The nursing intervention to strengthen the resilience of children is effective after the Sichuan Wenchuan Earthquake. In the future, it is necessary to develop the nursing intervention system for affected children and their families by earthquake during mid-and long-term after the disaster.

Open Forum

Open Forum by the people of Kobe : Message of 15 years recovery from EQ in Kobe

It has now been almost 15 years since the Great Hanshin-Awaji Earthquake. Quake victims have never been able to erase the painful memory of that day when the beautiful port city of Kobe instantly fell into ruin. However, Kobe residents have worked together over the past 15 years to establish a "New Kobe." More than mere reconstruction, these efforts have focused on creating a disaster-resistant community, with collaboration between local residents and various supporters.

The purpose of this forum is to look back at the history of recovery from the earthquake and find how to establish a more disaster-resistant community. In attendance will be general participants and panelists who have contributed to community development by improving people's health and living conditions.

Speakers at the forum will be volunteers and experts who have devoted themselves to reconstructing Kobe as community members.

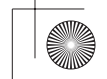
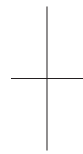
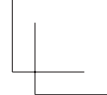
First, Ms. Makie Ohno will speak from the viewpoint of a public health nurse helping to improve the health and living conditions of local residents. She will talk about the roles of public health nurses, who supported quake-stricken local residents during the community's recovery process, as well as about their collaborative efforts with local residents and relevant organizations.

Mr. Yoshihisa Doro will speak from the viewpoint of a volunteer working to increase community disaster preparedness capacity. He will talk about his ongoing volunteer work of making the community more disaster-prepared from the perspective of disabled persons, and of passing on the stories of quake-stricken disabled persons to the wider community.

Mr. Hiroshi Koike will speak from the viewpoint of a coordinator supporting development of volunteers and establishment of volunteer organizations. He will talk about how he has supported volunteer activities since the 1995 earthquake till now as a bridge between people and people, and between people and society.

Ms. Sugako Ikeda will speak from the viewpoint of a volunteer involved in the university's health support efforts in the community. She will talk about health checks and health consultations for residents of temporary housing and public housing complexes for quake victims conducted over the past 15 years by volunteer groups of university students and teaching staff.

During the forum, general participants will be asked to express their opinions. We hope this forum will provide an opportunity for all of us to share new ideas of how citizens and supporters can work together to establish a more disaster-resistant community, and to communicate these ideas to the world. We look forward to your participation in this forum.



1 Education and Training for Disaster Nursing 1

1-1 Adaptability, creativity and ingenuity in disaster education: Curriculum challenges in healthcare provision

Kevin Davies

University of Glamorgan

By their very nature disasters are emotive, challenging and dynamic events. This paper is focused on the education, training and preparedness of healthcare professionals for deployment to some of the most demanding and potentially dangerous areas worldwide. Education action research forms the conceptual framework that underpins the articulation of this paper. This paper analyses and evaluates the evolution of a curriculum that has significantly enhanced the preparation of healthcare professionals within this domain. The assessment phase of this process involved the identification of a dichotomy between the preparation of healthcare professionals who had undergone predominantly field based training versus higher education based preparation; neither of which on their own adequately prepared the practitioner for deployment to the field. This subsequently informed the curriculum planning process which was underpinned by the development of an eclectic curriculum focused on constructivist and situated approaches. A cognitive apprenticeship framework was utilised to articulate the curriculum incorporating modeling of expertise in practice and the progressive crafting of knowledge and skills for the most demanding of situations that practitioners may face in the field. The three projects presented here centre on the preamble to and evolution of the curriculum, the evaluation of the education strategies employed within the curriculum and students construction of requisite knowledge and skills. The third project focuses on the evaluation of the mandatory field placement where students apply the knowledge constructed in the domains of leadership, strategic

Key words: [Disaster Education] [Cognitive Apprenticeship] [Expert Modeling]

1-2 Community participation for emergency health

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²International Federation of Red Cross and Red Crescent Societies

BACKGROUND: Cyclone SIDR happened in November 2007 in Bangladesh caused 3,295 deaths. IFRC (International Federation of Red Cross and Red Crescent Societies) /BDRCS (Bangladesh Red Crescent Society) Mobile Medical Team found the ratio of the communicable disease was high. In other survey, it was also found that less awareness of health issues in the community caused situation worse and the importance to disseminate basic health information was identified. To fulfil this requirement, PHiE program was introduced. The program aims to strengthening the capacity of communities on preparedness and response for future disasters. **CONTENTS OF THE NURSING PRACTICE:** Major activities done are development of a training manual, conduct Training of Trainers, Train community volunteers and follow up at the community level. **ETHICAL CONSIDERATION:** Verbal consent with program related people **RESULTS DISCUSSION:** The main focus of the training was on common diseases under the disaster in Bangladesh like diarrhoea, drowning and malnutrition. During the training, we emphasised the importance to disseminate these knowledge to the community, so community volunteers started sharing it by conducting health sessions and putting posters. In disaster prone countries, the action of the community people is the key. We found that they have a wish to learn but they hardly have chances. So conducting training among community volunteers of disaster affected areas is effective. By establishing the following up system and providing the knowledge, we believe that community volunteers can contribute for long time and it leads to reduce the impact of future disaster.

Key words: [Cyclone SIDR] [PHiE(Public Health in Emergency)] [Community volunteers]

1-3 The development of a basic disaster nursing education curriculum

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²Hirosaki University of Health and Welfare

Background

This report is the practice that we add knowledge of nursing activity after the Great Hanshin Earthquake of 1995 and the International Disaster Relief, and educated Disaster Nursing for the nursing student of the A Junior College. We opened a course in Disaster Nursing students raised Disaster Prevention awareness as for us, and to get basic knowledge as a nurse.

Nursing practice contents

We taught Disaster Nursing in the elective subject of the adult science of nursing of the A Junior College for 3years from 2003. The contents are Disaster basic knowledge, Triage, Shelter, the problems of the Public Health, PTSD, Disaster Prevention plans of the Prefectures. We added Outdoor Training of the Triage from the second year. We used Outdoor Triage Training on that day for three hours for one hour on the day before. We analyzed reports and a result of Inventory survey that students submitted.

Ethical consideration

We explained not influencing an investigation purpose and results, protection of privacy and we obtained its consent from students and collected it in a box.

Result consideration

The student who studied Disaster Nursing was 57 people, 48 people, and 33 people by order from the first year. When the student of 10% was lacking in feeling of strain only with students and teachers, the Outdoor Triage Training replied it, but about 40% students were tense and were not able to correct Triage as a result that 5 firemen participated in the next year.

As for the Triage Training, the participation of the expert of the Disaster is important to practice it with moderate feeling of strain. As for the students, interest was high in the prevention of a PTSD, but necessity to emphasize the management of the Shelter and clean environment for health of victims was suggested.

Key words: [Triage] [Shelter] [PTSD]

1-4 Disaster prevention seminar for foreigners(1) -Evaluation by participants-

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[Purpose] Analyzing the newspaper article about Hanshin-Awaji Earthquake, foreign victims' feature the factors that influenced their health and life were clarified. By the clarification, obtaining the suggestion of "Foreigners' feature and support to them at a disaster", a disaster prevention program to the residents including the foreigners was developed, and the disaster prevention seminar was implemented using the program. This study aimed to verify the effect of the disaster prevention seminar that is also for foreigners who became vulnerable people using the questionnaire. [Method] The disaster prevention seminar was held twice for the Japanese and the foreigners who resident in A prefecture. The seminar installed seven aims such as "Understanding disaster", "Understanding vulnerable people", composed of sixteen items (eleven lectures and five exercises), and went in Japanese. The questionnaire investigation was done by using participant's mother tongue before and after the seminar. [Ethical Consideration] This research obtained approval in Ethical Review Board concerning the epidemiologic study of Faculty of Medicine at Gunma University. [Results] Forty-one Japanese participated in the first seminar. Sixteen Japanese and eleven foreigners participated in the second seminar. It was the first time for all foreigners to participate in such a seminar. Thirteen/thirty-two (40.6%) of Japanese and Six/seven (85.7%) of foreigners evaluated "Excellent" for the items of the program. For the item of "The foreigner's feature and support", about the participants who attended this lecture; four/sixteen (25.0%) of Japanese of the first seminar, three/six (50.0%) of Japanese of the second seminar, six/six (100.0%) of foreigners evaluated "Excellent". [Discussion] It is guessed that a fresh experience and program planned for foreigners brought higher evaluate to the seminar by the foreigners than the Japanese. [Conclusion] Since the foreigners don't have the experience to receive the disaster prevention education, it is necessary for the foreigners who resides in Japan where a lot of disasters exist.

Key words: [Disaster] [Foreigners] [Education]

2 Information Management System

2-1 Construction of an inhabitant support information system in a disaster and an emergency

Keiko Takemoto, Atsuko Hayakawa, Jie Chen, Hiroshi Inada

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When Great Hanshin-Awaji Earthquake broke out in 1995, there were a few medical facilities which were destroyed so that medical services were not available. Consequently, the shelter facilities played an important role as a place for the emergency medical treatment of many sufferers. Then, we intended to construct an inhabitant support information system in a disaster and an emergency by which the suffered inhabitants and/or medical personnel can acquire and utilize individual health information of the sufferers for diagnosis and treatment in case of the particular disaster and the emergency. In the present study, a system is devised by which not only the sufferers and their family but also medical personnel and administrative parties can access individual medical information of sufferers. For the purpose, we make an original idea of our own about an electronic post-office box, which was proposed by Japanese government in the policy of IT Strategy 2007 but remains still at the plan stage. The system is tried to be used in case of the disaster and the emergency. In the system design, two or more storage systems are constructed to be able to acquire the medical information of individual sufferer such as essential information, physical information etc. from anywhere in case of the emergency such as the disasters. Therefore, maintenance of security is the key problem of the system. It is considered that the important problems of constructing the system are as follows ; Methods for registration of the object persons and access considering security, Investigation and construction of an individual medical information database for urgent medical treatments and Evaluation of the developed system from the standpoint of social needs. In this presentation, we would like to report the necessity for the system construction, for example, the idea and the plan of the system etc.

Key words: [An inhabitant support information system in a disaster and an emergency] [Electronic post-office box] [Individual medical information database]

2-2 The rescue / relief issues and challenges at the time of disasters in Iran from the point of views of survivors, nurses and the other health care providers

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²Health in Emergencies & Disasters Department, School of Public Health & Institute of Public Health Research, Tehran University of Medical Sciences, Iran

Introduction

Iran has achieved considerable academic and administrative success in terms of emergency management and risk reduction in health sector, but many rooms for improvement are left. The purpose of the study is to explore the experiences and perceptions of individuals, who were affected by, or who responded to, the recent earthquake disasters in Iran related to health disaster management and rescue/relief services issues.

Method

The study was conducted using grounded theory. Study participants included members of a multidisciplinary disaster response team as well as residents of the community affected by the earthquake (n=29). Data collection included semi-structured interviews, field notes and reviews of narratives and films, while constant comparative analyses were simultaneously conducted.

Result

This study indicates that the lack of; coordination in the; provision of health services at the time of disasters, lack of the information management system, organized community involvement and lack of incorporating nurses into disaster-relief plans, were the most significant barriers and issues to the provision of adequate disaster health care services specially rescue/relief services during Iranian recent earthquake.

Conclusion

The other related study in Low and Middle income countries have identified lack of resources in terms of expert in field of health care services and lack of equipping health care facilities for times of natural disasters as the major issues to an effective disaster response. This study revealed that proper resource coordination, strengthening the information management system, community-based initiatives and developing a national health disaster plan are critical which will result in a successful response

Key words: [Coordination] [Health services] [Qualitative research]

2-3 A study of terms in earthquake disaster nursing

Lin Chen

School of Nursing, Shandong University

Objective This study was to excavate and analyze the nursing terms on earthquake disaster to enrich nursing knowledge and promote the development of nursing discipline.

Method Qualitative research was adopted. Authoritative official websites, earthquake disaster special pages and related webpages were chosen according to indrawn standards. (1)Government's official websites, with the authority to publish news of 5-12 earthquake were chosen; (2)earthquake special pages were established in these websites and information were correct and plenty; (3)webpages were closely related to 5-12 earthquake, such as earthquake basic information, hottest news, earthquake influence, rescue work and post-disaster rehabilitation. Publishing time was between May 12th 2008 to July 31st 2008.

Results A total of 12 websites, 10429 webpages were viewed, 560 nursing terms were found out and classified into four sorts: earthquake exclusive words(N=63), trauma receptor(N=28), earthquake influence(N=221) and responses after earthquake(N=248).

Consideration Nightingale's theory and International Classification for Nursing Practice (ICNP) were referred to for the identification of relevant terms. And data validity are ensured by another checker. But as the information on the internet are huge and it is hard to duplicate this study, local practice should be considered to ensure the reliability.

Conclusions Wenchuan earthquake supplies plentiful nursing terms, this study sets the foundation for the development of disaster nursing discipline and international nursing terms system.

Key words: [Disaster nursing] [Standardization] [Nursing theory]

3 Competency and Skill Development

3-1 Nursing in humanitarian aid: Improvement of competencies and requirements in education

Stefan Goerres, Niels Harenberg, Ewa J Sander, Doerte Magens

Department for Public Health and Nursing Science, University of Bremen

Background

The number of man-made or natural disasters is increasing worldwide. Nurses have been involved in disaster management for a long time, not only in their home countries, but also in humanitarian assistance abroad. International literature gives evidence that nurses are inadequately prepared. At the same time a high level of stress and frustration is reported. Up to now professionalization of aiders in humanitarian projects takes place unstructured in repeated deployment.

Purpose

The Purpose of this investigation is to determine what tasks nurses undertake in the context of humanitarian aid and what competencies are needed to fulfill these tasks. Furthermore it shall be evaluated if there is any structured preparation of nurses for humanitarian aid deployment in Germany.

Method

A systematic review of literature was conducted at the University of Bremen, Germany. The databases Medline (via Pubmed), Cinahl and Cochrane Library were used, involving publications between 1998 and 2008 in English and German. A total of 98 Publications could be included.

Results

Results show nurses in humanitarian aid undertaking the tasks of emergency aid, management, organization, education and prophylaxis. The competencies required can be divided in sociocultural, professional and leadership competence. There is no adequate preparation in Germany.

Discussion

It is obvious that these competencies cannot be met adequately in basic level education for nurses. Worldwide there are only a few programs for nurses that focus on preparation of nurses for humanitarian aid, and none in Germany. Up to now only brief courses are held by the aid organizations immediately prior to a deployment. An expert meeting, supported by the Robert Bosch Foundation, Stuttgart, will be held in Berlin in October 2009, in order to discuss these results and define a possible need to act for Germany with officials from German Nongovernmental organizations and the German Professional Organization for Nursing.

Key words: [Nursing in humanitarian aid] [Competencies] [Requirements in Education]

3-2 The vocational training guidelines for the landmines people : Pongnamron Chanthaburi Thailand

Gumpanat Boriboon

Faculty of Education, Srinakharinwirot University

Abstract This research aims to study the expectation of the communities and localities toward vocational training, appropriate vocational training guidelines that according with the capability of the mentally retarded persons as well as guidelines and management patterns of the center for vocational promotion for the people. Procedure: The sample of the qualitative research was divided into 3 groups using focus group discussion method. The main information givers consists of the local administration in-charge, community leaders, landmines people. The In-dept interview was processed from 10 selected main information givers above to add up information and a set of questionnaires was processed with 30 landmines people in village. The data was analyzed to calculate percentage, mean (X) and standard deviation (S.D.) Findings: The expectation toward the skill training for landmines people are as follows: self help skills, and the character traits that needed for work, occupation skills: vocational training for the land mines people should base on the basic occupation employed in their families, communities which will be convenient to support. Guidelines and management patterns of the center for vocational promotion for the landmines people are the followings: the participation of the local organization that are able to allocate budget to support the management with should be in the form of juristic persons, having fulltime manager. Their tasks are to promote vocations for landmines people not to care for them. The organization may be an assistance place for landmines persons but their main tasks are vocational training, demonstrating management, and researching which will be in a form of sustainable support for the landmines retarded persons.

Key words: [Vocational] [Landmines] [Training]

3-3 Practice of nurses' rescue skills in Wenchuan earthquake disaster sites: Survey and analysis

Jingci Zhu, Huahua Yin, Haiyan He, Yan Zhang, Min Zhou, LiMei Zhang

School of Nursing, Third Military Medical University

Objective: To probe into the practice of nurses' rescue skills in Wenchuan disaster sites so as to provide references for carrying out training on corresponding rescue skills. **Methods:** A total of 95 medical workers who participated in the emergency rescue after Wenchuan earthquake were surveyed using semi-closed self-made questionnaires. 90 valid questionnaires returned (with a feedback rate of 95%). The application frequency, proficiency, importance, and training needs of 19 rescue skills were analyzed descriptively using SPSS13.0 software. **Results** The survey showed that observation and monitoring (89.4%), debridement and dressing (86.0%), intravenous insertion(83.7%) were the most frequently applied skills during the disaster. The best performed nursing skill was the intravenous insertion(79.3%) followed by indwelling catheterization(73.6%), and traumatic haemostasis, bandaging, fixation, transport(65.5%), while the ability of controlling specific infection(43.5%), emotional crisis interference(46.5%), flexibility during stress (47.1%) were poor. Timely transport was considered of the most importance (85.6%), followed by triage (83.1%) and flexibility during stress (82.2%). As for the training priorities, timely transport (72.4%) was high on the list, along with observation and monitoring (70.6%) and flexibility during stress (68.6%). **Conclusions** The frequently applied skills during rescue are surely the most vital and essential, which need to be reinforced with great attention. In addition, further training should include special infection control, emotional crisis intervention as well as random handling.

Key words: [Disaster] [Nurse] [Rescue skills]

3-4 A nursing teacher's experiences in the medical team in Wenchuan Earthquake

Xiwen Liu

Nursing Department of The Fourth Military Medical University in China

Background: At 2:28 p.m. on May 12th, 2008, an 8.0 magnitude earthquake happened in Wenchuan county, Sichuan province. as a nursing teacher ,On May 14th, I and others went to earthquake-stricken area as the first medical team to do some relief work and front-line rescue. Content: I am a nursing teacher and participated in some of the emergency care and assisted the surgery work, itinerant medical treatments, health and epidemic prevention work, logistics work, psychological counseling and health education. Teamwork, multi-role, creativity all can be found in our 43 days of the medical care work to cope with various difficulties and pressure. Strong adaptability, resilience and management capabilities are showed during the whole process. Results: Our efforts achieved the desired effect, but there are still some problems, such as the lack of knowledge and experiences on how to react when facing appalling conditions in quake-hit areas. Besides, Nurses are prone to fear, tension, emotional numbness and incompetent work conditions in front of the shortage of materials, rescue guide, capacities and so on, which greatly affected the quality of the relief work. Therefore, we need to improve the response capacity of nursing staff. Consideration: Nurses of care relief work demands both good psychological and physical quality, adequate communication abilities, particularly non-verbal communication skills and harmonious interpersonal relations. It also requires systematic training in disaster medicine, regular training of disaster rescue simulation, a solid grasp of basic rescue care and multiple disease spectrums of nursing knowledge; a high degree of responsibility, keen observation and team collaboration in division of labor. Integrate disaster nursing into the nursing education system and carry out basic education, postgraduate education and further education about disaster nursing. Unite disaster care power with international collaborative network.

Key words: [Disaster] [Disaster Nursing] [Nurse]

4 Preparedness

4-1 Emergency preparedness planning for medical devices dependent patients

Kaoru Konishi, Chie Ishida, Yuko Sato

School of Nursing and Rehabilitation Sciences, Showa University

Purpose: Purpose of this study was to develop a conceptual framework and a checklist for assessing emergency preparedness planning for medical devices dependent patients.

Methods: Our two year project had four phases that are as follows: conducting a literature review and key informant interviews with public health and emergency management professionals of community organizations in 10 regions in the metropolitan area in Japan. Using the literature review and themes from interviews, a conceptual framework and a checklist for assessing emergency preparedness planning for medical devices dependent patients were developed. Community organizations were included public health centers, medical associations, hospitals, home visit nursing agencies, and community support centers.

Ethical Consideration: All participants of this study were given the consent form that included the nature and purpose of this study, and assured all collected data would be coded to protect their identity and privacy.

Results: A conceptual framework was developed for use by public health leaders. Actual state of individual home care services would be affected by the multidimensional community systems in which patients live. Multidimensional community systems are composed of demographics, medical and welfare systems, enforcement of national policy, and education for healthcare providers. A checklist for assessing emergency preparedness planning for medical devices dependent patients is composed of information of patient, information of their family members, health status and ADL of patients, communication plans, essential medical devices, home healthcare providers, preparation supplies, and earthquake-resistant construction.

Conclusions: Minimizing the disruption of patient care and services during and after a natural disaster would be affected by actual condition of home care and good preparedness planning. As the result, it was pointed out that the most important activities were to continue correspondence for consultation, education, and support for individuals in preparing for a variety of hazards and events that could impact the patients.

Key words: [Emergency] [Preparedness planning] [Medical devices dependent patients]

4-2 Preparedness of personnel and emergency medical services toward disaster

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Boromarajonani College of Nursing, Surat-Thani

Purposes: This study aimed to describe the preparedness of healthcare workers, related personnel, and emergency medical services for disaster and 2) to examine factors affecting their preparedness.

Methods: Eight hundred (80%) of participants attending a three-day national conference on emergency medical service and disaster management were conveniently selected to complete the questionnaire.

Ethical consideration: This study was approved by the college's research ethics committee. The informed consent form and information fact sheet were enclosed with the questionnaire envelopes.

Results: Approximately 62 percent (n= 495) completed and returned the questionnaire. The majority of the respondents were nurses (56%). Two thirds had no experience in disaster care.

Most respondents perceived that they and their hospitals or organizations (emergency medical services) (71, 73%) were moderately prepared for the disasters. On average, respondents had good levels of knowledge and skills in disaster care. Most respondents agreed that they had enough knowledge and were ready (perceived preparedness) to work for disaster in terms of disease outbreak (59%), protesting (46%), bomb (37%), and tsunami or earthquake (46%).

Age, education, career, marital status, training in disaster, and experience in disaster care affected the knowledge, skills, and perceived preparedness of health care workers for disaster. Knowledge was correlated with skills ($r=0.76$, $p<0.001$) and with perceived preparedness ($r=0.157$, $p<0.001$); skill was correlated with perceived preparedness ($r=0.215$, $p<0.001$). Education and training on role competencies and improving coordination for disaster care were mainly suggested from participants experiencing disaster care.

Discussion: Thai health care personnel and organizations seem to be moderately prepared for disaster. Training and experience in disaster care play important roles in disaster preparedness.

Conclusion: The involved organizations should provide more education and training to personnel in order to enhance their knowledge and skills regarding disaster care.

Key words: [Disaster preparedness] [Personnel] [Emergency medical services]

4-3 Factors of the nursing preparedness for the flood in Morocco

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Purpose: To clarify the factors of nursing preparedness at the disaster in Morocco. Method: This was a qualitative study. The subjects consisted of 12 Moroccan medical people who had first experienced the flood occurred in 2008, and worked at medical facilities in two provinces. The data was gathered from semi-structured interview. The data were analyzed by the contents concerning preparedness. This study was approved by the research committee of University of Hyogo. Results and discussion: There was factor concerning to accelerate to the reaction for the disaster such as the role and command (the provincial risk manual), vehicle of sharing information (Epidemiology check list), medical facility (structure, unit of revival, etc), coordination of the medical person, and measure for communication, stock (medical, revival kit, and tent). Secondly, the relation among colleagues and multi-sector were included. Thirdly, knowledge and experience about disaster was also founded. Fourthly, the ability of nurse such like first aid was mentioned. For monitoring survivor's health, though nurses had noticed psychological response of survivors, they had no idea for caring it at that time. In one province, the damage after flood was serious and there is no telling when refugee will be got back their usual daily life. The nurses were placed always in the front-line even if 3 months passed after flood, but they did not have the chance to know about caring on the survivor's health in the medium-long period after the disaster. Conclusion: The ability to respond the people's health after the disaster is seemed the essential factor. The importance of evaluating survivor's health in the medium-long term period and of having the occasion to learn it are needed by the medical persons as preparedness for future disaster in Morocco. This study was subsidized by Grand-in-Aid for Scientific research (Scientific research B).

Key words: [Preparedness] [Flood] [Nursing]

4-4 Post traumatic stress syndrome of nurse survivor after earthquake and tsunami in Aceh

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The purpose of this research was to explore the experience of nurse survivors with post traumatic stress syndrome four years after disaster (earthquake and Tsunami) in Aceh. The qualitative research method with phenomenological study was used to explore the experience of nurse survivors with post traumatic stress syndrome. Eight nurse survivors who were the nursing students of University of Indonesia were selected. The qualitative data was collected using in depth interview and focus group discussions. Participants were asked to describe their current experience and flash back on previous experience after earthquake and Tsunami Disaster and how they have been coping as a nurse and nursing student.

The qualitative data analysis revealed the themes: 1) A strong belief in GOD (end of life in the world, believed that this is a GOD's wish, focus on survival and life safety, extra power from GOD to survive, miracle, strengthened spirituality); 2) Psychological burden (nightmare, phobia of water and the sound of wave, guilt feelings, due to killing and hitting others to save own life, do not help others during panic); 3) Psychological compensation (self-sacrificing to help others, focused on finding families, relatives and friends, provided resources, and referred to professionals); 3) Ethical and moral obligation (role conflicts: in conflict who should be the priority to be rescued, recalled what had been done against code of ethics, and undoing); 4) Coping strategies to relieve PTSS (away from the affected areas and avoiding places, professional counseling, self-help group, and learning new things at new places).

The nursing implication is for nurses to be sensitive to the survivors' psychological impact which might still remain with the survivors. This required professional help to overcome the PTSS experienced by the survivors.

Key words: [Disaster] [Trauma] [Psychological impact]

5 Psychosocial Issue

5-1 Family presence during the pediatric reanimation : An additional stress factor ?

Emmanuel Rohrbacher

World Association of Disaster and Emergency Medicine, Programm Committee Officer

Family presence during care is an Anglo-Saxons topic that begins to interest the French Emergency Departments. After a personal situation with family presence during pediatric cardio-pulmonary resuscitation and I make a strictly lecture from the international literature with the keywords family presence and caregivers stress factor. My lecture had a little success because just 3 studies make interest on the stress factor by the nurses and doctors in the situation of pediatric resuscitation and family presence. These studies give me first answers about the problematic to insert family during pediatric reanimation and working axis for the future. I provide a special interest on the caregivers' reaction during the family presence and I want to locate the borderline from stress by nurses and doctors in this situation. This concept of care needs a special interest and a psychological approach who demand to make mourning about he's anterior conception of care. I develop the five fundamental needs of family to take an optimal charge of the family during this hard situation for the familial nucleon.

Key words: [Family presence] [Pediatric reanimation] [Stress factor]

5-2 Building blocks to a multidisciplinary behavioral health disaster plan

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Background A subgroup of a USA County Emergency Planning Team was charged with developing a multidisciplinary plan to deal with mental health needs of people before, during, and after disaster. The group considered the following service delivery concepts in their plan: 1. Disaster victims are normal people experiencing normal reactions to an extraordinary event, but there will be vulnerable, identifiable groups needing special consideration. 2. Behavioral health services during disaster must be multi-level, comprehensive and community supported. 3. Behavioral health programs must be creative and adaptable to changing needs. Also, the subcommittee used the framework of the phases of disaster to begin the planning and develop appropriate interventions.

Content of the Nursing Practice Nurses are involved in all phases of a disaster in any community. During disaster, the US National Institute of Mental Health (2002) asserts the role of nursing may increase, thus necessitating an even greater understanding of behavioral health needs of people. Nurses were included in developing this plan and all phases of intervention.

Ethical considerations In developing the plan, the group paid special attention to ethical considerations including confidentiality, rationing of resources and provider harm.

Results Discussion The presentation will discuss how the plan was conceived and highlight planned actions including: Community assessment and how to get multi-level involvement; Development of the plan from triage methods through meeting of long-term needs; Psychological First Aid educational content for professionals and community members; Web site development with informational resources specific to life span, special needs groups and disaster workers; E-Counseling guidelines and Helpful clinical tools to use during disaster

Key words: [Psychological First Aid] [Disaster nursing] [Mental health nursing]

5-3 Adapting to sudden loss: Experiences of the aftermath of the tsunami disaster in Thailand

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Purpose: This study aimed to examine experiences of adaptation to sudden loss in the aftermath of a disaster. **Method:** After the study was approved by the University Review Board, the qualitative descriptive study was used, 12 in-depth interviews and 6 focus groups were conducted to gather information from tsunami survivors who had successfully and unsuccessfully adapted to sudden loss. Colaizzi's method (1978) was used for data analysis. **Results:** Seven themes emerged: 1) Immediate priority was to search for missing loved ones. 2) Interacting with other survivors on a daily basis improved mental condition. 3) Disruption to daily function. 4) Recovery depended on reestablish career. 5) Survivors who were able to start a new life had positive psychological reactions. 6) Not being successful in their new career lead survivors to a state of depression. 7) Survivors who lost their spouse tended to marry each other.

Discussion: The success, ability, and duration of time to restart ones life depended on the severity of a survivor's loss and the psychological support they received. As for mal-adapted survivors, they continued to fail again and again when they attempted to restart their lives. **Conclusions:** Understanding the adaptive process of disaster survivors and the conditions that helped them fully recovery are beneficial to health care providers in promoting mental health of future disaster survivors. Furthermore, for mal-adapted survivors, these results can be used to design a psychological intervention mechanism to promote their mental health.

Key words: [Adaptation to sudden losses] [Qualitative descriptive research] [Tsunami disaster]

5-4 Analysis of mental worsening factors in three-year continuous survey of victims of the 2004 Niigata Chuetsu earthquake

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The purpose of this study is to clarify the factors in worsening of the mental condition in victims of 2004 Niigata Chuetsu earthquake. A registered self-completing survey was performed on the residents aged ≥ 18 years living in the mountainous area where the disaster was most extensive. The subjects targeted in the study were the victims that provided responses each year in 2005, 2006, and 2007 examinations. The items examined were subjective physical states, lifestyle condition, GHQ(General Health Questionnaire)-12 SQD(the Screening Questionnaire for Disaster Mental Health), and housing condition after the disaster. The respondents were those consented to the written informed consent. The local government consented to the disclosure of this information. As a result, the number of subjects was 333 that were 23.7% of 2005 responders, that males were 44.4% and the mean age in 2005 was 60.5 ± 15.1 years. Mean GHQ value was 4.2 ± 3.8 points in 2005, and that was 2.4 ± 3.1 points in 2007. Mean SQD value was 2.6 ± 2.4 points in 2005, and that was 1.9 ± 2.2 points in 2007. GHQ value improved in 2006 ($P < .000$) and SQD value improved significantly in 2007 ($P < .000$). The GHQ worsened group from 2005 to 2007 was 47(20.1%) subjects. The SQD worsened group was 49(20.4%) subjects. Between the GHQ worsened group and the other group, there were significant differences in the status of disease, subjective symptoms, change of alcohol intake, sleep satisfaction, and future outlook. The SQD worsened were significantly related to the sleep satisfaction. Consequently, physical condition and change of lifestyle of the victims in the first year affected the worsening of the mental condition in three years after the disaster. From the early stage of the disaster, continued support are necessary for prevention of mental disorders.

Key words: [Earthquake] [Mental condition] [Support]

6 Nursing Intervention

6-1 Development of nursing intervention on the resilience of the children who experienced the Sichuan Wenchuan Earthquake

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Purpose The purpose of this study is to enhance the resilience of children who experienced Sichuan Wenchuan Earthquake in China. **Method** This study is an intervention study. By using interview and self-questionnaire, this research was conducted ninety-eight elementary school students and their guardians seven months after Sichuan Wenchuan Earthquake in Sichuan Province in China in 2008. All students and guardians were asked the questionnaires included the Children's Resilience Scale(CRS), General Self-efficacy Scale(GSES) and others. From the answers and the interview, the researcher provided nursing intervention to the guardians during two weeks. The scores before nursing intervention were compared with two weeks and two months after the intervention. **Ethical consideration** The rights of participants were considered and protected in accordance with the guidelines of the Research Ethics Committee of College of Nursing Art and Science, University of Hyogo. **Results** The mean age of the CRS was 9.68 years old ($SD=0.68$) and aged from 9 to 11 years old. The mean scores before nursing intervention was $90.09(SD=9.15)$. Two week scores of the CRS after nursing intervention decreased briefly($M=89.03,SD=9.89$), but two month scores after intervention increased to $90.58(SD=8.92)$. The difference between the CRS scores before and after intervention were significantly different($p < 0.01$). Also the most of the guardians answered that they are satisfied and need the nursing intervention after Sichuan Wenchuan Earthquake. **Discussion and conclusion** The nursing intervention to enhance the resilience of children is effective after the Sichuan Wenchuan Earthquake in China. In the future, it is necessary to develop the nursing intervention system for affected children and their families by earthquake during mid-and long-term after the disaster.

Key words: [Children] [Resilience] [Nursing intervention]

6-2 Evaluation of the long-term healthcare services provided by Hyogo Nursing Association for the survivors of the Great Hanshin Awaji Earthquakes in 1995, which led to the Town Healthcare Room(THR)

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Purpose Hyogo Nursing Association launched healthcare services for the residents in the public temporary housing built for disaster reconstruction after the Great Hanshin-Awaji Earthquakes in 1995. The major service was home-visit nursing care by volunteer nurses to help the elderly living alone and prevent solitary deaths. Additionally, the association has been actively engaged in community-dwelling people's support activities, such as "Town Healthcare Room (THR)" since 2001. As successful contribution of those activities to health promotion of local residents is highly evaluated, "THR" activities win budgets from Hyogo Prefecture.

We report the results of the questionnaire survey conducted at all of 203 THR venues with intent to evaluate long-term healthcare services provided for disaster survivors and clarify issues to be resolved when managing THR activities.

Method With supports of nurses who play key roles at respective venues, the survey was conducted at 203 THR venues (20 in reconstruction areas and 183 in other areas) regarding activities, numbers of users, proportions of repeaters, desire for activity continuation, and issues.

Ethical consideration Nurses anonymously filled questionnaires after having full explanation about the survey and giving their consent. Contact information for survey-related inquires was clearly stated so that they would have neither mental and/or physical burdens nor disadvantages when filling questionnaires.

Results All questionnaires were answered. At 53 venues (38.7%), more than half of participants were repeaters, and the ratio of the venues where the replied participants desired activity continuation reached 85.3%.

Discussion and conclusion Many issues became clear and need to be resolved for the future, such as poor collaboration with the administration and community associations at some venues, volunteer shortages, and unsuccessful visits to the homebody elderly. Nevertheless, at many venues, activity continuation was desired.

Key words: [A long term care to survivors] [Town Healthcare Room] [The Great Hanshin Awaji earthquakes]

6-3 The development of a psychological and social support model for natural disaster victims

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Boromarajonani College of Nursing, Surat-Thani, Thailand

Purpose : Study to develop a psychological and social support model for victims of natural disasters to be utilized by nursing and public health students.

Methods : The development contained three phases.

Phase I: Analyzing context and objectives, designing a real experience program for students, and developing instruments for evaluating activities regarding psychological and social support for the victims.

Phase II: 520 nursing and public health students volunteered to participate in this program providing support to 1,321 victims at a tsunami hit area, Ranong Province, Thailand. The application emphasized community participation in the activities provided in the model. A questionnaire assessing the tsunami victims' satisfaction about the provided support by volunteers, a questionnaire assessing the satisfaction of volunteers having real experience in supporting victims. Data were analyzed for frequency, percentage, standard deviation, and by content analysis.

Phase III: Analyzing and synthesizing the results as knowledgemanagement. The model, a teaching guideline for nursing instructors, and a handbook for nursing students in providing psychological and social support to natural disaster victims was developed.

Ethical considerations: The study was approved by the college's research ethics committee.

Results: The results revealed that 90% of nursing students indicated to be very satisfied with the supporting activities. Ninety four percent of the victims were very satisfied with the supporting activities they received. In addition, the teaching guideline and handbook were developed as a byproduct to be further used with nursing students and health personnel.

Discussion and conclusion: The model can appropriately applied to nursing students providing psychological and social support to the natural disaster victims.

Key words: [Psychological and Social Support Model] [Disasters] [Victims]

6-4 This presentation will discuss the variables of the nursing duties during a natural disaster (hurricanes) and the effects of the disaster on providing patient care.

Kristy Simmons

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Objectives:

1. Provide information from a perioperative nurse's perspective that was on staff at a hospital during two natural disasters.
2. Discuss the experience of a hospital that received patient evacuees from the New Orleans area before and during the aftermath of hurricane Katrina versus being a facility that was hit by a hurricane (Gustav) and functioning without power on backup generator and the challenges the situation presented to the nursing staff and the lessons learned from both situations.
3. Discuss the skill set needed for healthcare professionals to respond effectively in disasters, the flexibility, the ability to trouble shoot and work well under pressure.
4. Discuss the preparedness of each situation, the challenges in communication, and the outcomes and lessons learned through both emergency disaster situations. A discussion of how each disaster helps you learn something new to be better prepared for the next disaster.
5. A list of emergency supplies needed from home for personal use while staffing the hospital during an emergency situation will also be presented.

Key words: [Response] [Communication] [Variables]

7 Pandemic

7-1 Possible support and contribution that volunteer nurses of Town Healthcare Room and Hyogo Nursing Association as a professional organization could offer at the time of the H1N1 outbreak in Kobe

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[Introduction] After the first domestic H1N1 (initially called swine flu) infection confirmed in Kobe in May, 2009, the nationwide outbreak occurred. Both Hyogo Prefecture and Kobe City governments provided telephone counseling services for flu. By request from the local and municipal governments, Hyogo Nursing Association asked volunteer nurses of 'Town Healthcare Room' for help and about 270 volunteer nurses were involved in the counseling services to provide H1N1-related health consultations and advise to seek medical attention when necessary.

[Method] With intent to review the role as a professional organization and prepare for the next threat, a survey was conducted by questionnaires sent to 134 volunteer nurses involved in the activities. Statistics of responses from 61 individuals were compiled, while using the KJ method for qualitative data.

[Ethical consideration] Explanation was provided in writing about the purpose of the survey, data compilation without specifying each individual, the use of data exclusive to the purpose of the research, and the discard of the data after the research.

[Results] The results demonstrate the telephone counseling services effectively relieved anxiety of local residents and clarify 1) importance of improving nurse quality, 2) needs for orientations prior to activity and activity manuals, 3) necessity of quick information exchange, and 4) needs for close collaboration among the administration, medical facilities, and concerned organizations, as well as the roles of our nursing association as a professional organization in 1) building up closer connections with the administration and concerned organizations, 2) sharing roles with concerned organizations and professionals, 3) adopting the 'Town Health Room' volunteers as human resources, and 4) adopting retired nurses.

[Discussion] These results give evidence on the activity of volunteer nurses, indicating necessary preparations to future influenza outbreaks and how our nursing association can contribute to the community and society.

Key words: [Swine flu] [Volunteer Nurses of Town Healthcare Room] [Japan Nursing Association]

7-2 Knowledge, attitude, and practice towards prevention and control against pandemic influenza type A H1N1 2009 of people in Surat-Thani province, Thailand

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Boromarajonani Nursing College, Surat Thani

This study aimed a) to study a level of knowledge, attitude and practice towards prevention and control against pandemic influenza type A H1N1 2009 and b) to assess the associations between knowledge, attitude and practice.

Seven hundred and ninety-six people in Surat-Thani Province, Thailand were accidentally selected to complete the researcher-developed questionnaire assessing their knowledge, attitude, and practice. Data were collected from July, 1 to August 4, 2009. Statistical analysis included frequency, percentage, mean, standard deviation, and Pearson's correlation. This study was approved by the research ethics committee at the researchers' nursing college.

The results showed that respondents had good knowledge ($\bar{X}=9.68$, $SD=2.09$). The majority of respondents (92%) reported knowing modes of virus transmission, such as cough and sneeze. The majority had stayed informed with the pandemic influenza (75.8%). The attitude of respondents was moderate ($\bar{X}=3.39$, $SD=0.37$). They had highly positive attitude towards the use of mask, serving spoon, and washing hands to prevent the pandemic influenza. Nevertheless, some respondents had moderately negative attitude towards using mask, such as being shy and feeling discriminated. In addition, of those who had signs and symptoms of cold (32.2%), 18.1% did not meet doctors, 22.4% did not use masks, and 21.7% did not wash hands.

The results of the Pearson's correlation showed that knowledge was not correlated with practice ($p<0.05$). Overall, attitude was positively correlated with practice ($r=0.07$, $p<0.05$). However, four practices were negatively correlated with the attitude. These practices included having hot meal ($r=-0.14$, $p<0.01$), washing hand ($r=-0.16$, $p<0.01$), preparing soap ($r=-0.1$, $p<0.01$), and using mask ($r=-0.0$, $p<0.01$).

The results are useful for management, prevention, and control pandemic, as well as promoting self-care of people against the influenza 2009.

Key words: [Knowledge Attitude and Practice] [Influenza type A H1N1 2009] [Pandemic Influenza]

7-3 Knowledge, attitude, and practice towards prevention and control against pandemic influenza type A H1N1 2009 of students grade 7-12 in Surat-Thani Province, Thailand

Wiriya Phokhwang-Just, Atiya Sarakestrin

Boromarajonani College of Nursing, Surat-Thani

Purpose: This study aimed to describe knowledge, attitude, and practice towards prevention and control against pandemic influenza type A H1N1 2009 of students grade 7-12. Method: Schools were clustered into 4 physical regions. Five hundred students were conveniently selected from 9 schools. The researcher-developed questionnaire asking students' attitude, knowledge, and practice was distributed. Ethical consideration: The study was approved by the college ethic committee. An informed consent form emphasizing the participants' rights was enclosed with the questionnaire. Results: Four hundred students completed the questionnaire (80%). Approximately 70% of the respondents were female and were 15.43 years old. Most students were in Grade 10 (31%) and Grade 9 (23%). More than 94% of students knew the route of infection. However, 35% answered that seasonal flu vaccine could prevent H1N1 2009 Flu and 32% answered that H1N1 2009 can be prevent by the H1N1 2009 Flu vaccine. About 80% did not receive seasonal flu vaccine. Nevertheless, 78% wanted to receive the vaccine against H1N1 2009 Flu 2009. From a total knowledge score of 9, their mean score was 3.4 ($SD=1.6$). From a total attitude score of 62 with the high score meant positive attitude, the mean score of attitude towards prevention and control was 44.4 ($SD=5.4$). From a total good practice score of 37, their mean score was 10.2 ($SD=1.8$). Female students had higher score of positive attitude regarding healthy prevention behaviors than did female ($p<0.05$). Knowledge was correlated with attitude ($r=0.209$, $p<0.001$). No correlation was found between knowledge and practice and between attitude with practice. Discussion: Secondary and high school students in Surat-Thani seemed to have rather low knowledge, positive attitude, but rather poor practice towards prevention and control against pandemic influenza type A H1N1. Conclusion: Nursing education towards these students should focus on knowledge and practice.

Key words: [H1N1 2009 Flu] [Students] [Knowledge, Attitude, and Practice]

8 Management System

8-1 Disaster management system in Tribhuvan University Teaching Hospital (TUTH).

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Background: TUTH is a token of love from people of Japan to Nepal. It has 484 beds and occupancy rate ranges from 90% to 100% with average hospital stay 7days. Disaster is situation of mass casualty influx into an emergency room. The vast majority of natural and fabricated disasters occur suddenly and unexpectedly, disrupting normal health care systems. There is a Hospital Preparedness for Emergencies (HOPE) Protocol, which guides the management of disaster situation. The objectives are to triage the patients, to establish treatment and care provisions, to minimize disability and death and to communicate with mass media.

Content of the nursing Practice: Matron act as logistic director to organize nursing staffing, triage tags distribution, supply of equipments including resuscitation, suture sets, and emergency drugs/infusions. Emergency supervisor triage patients and assigns nurses in different areas to care, OT supervisor prepare for emergency operations, hospital director as operation commander coordinates media, public and other services.

Ethical considerations: The Government of Nepal, ministry of health approved HOPE policy. Discussion/conclusion: The hospital record shows several events of disaster managed with HOPE protocol they were bus accident, landslide, flood, public riot and political demonstrations victims etc. All casualties were managed in efficient manner with HOPE protocol.

Key words: [Triage] [HOPE] [Operation commander]

8-2 Project report of JICA's reconstruction support program for the Central Java area in Indonesia affected by earthquake

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[Purpose] Under Japan International Cooperation Agency's reconstruction program providing assistance to the central Java area affected by earthquake, focusing on the convalescence phase of disaster restoration, five people qualified as either nurses or physical therapists (hereinafter PTs) were sent to work for one month. This program placed emphasis on the rehabilitation and nursing of decubitus ulcers in the post-disaster period, an aid activity on which most other support groups do not focus.

[Contents of activities] At the Sardjito hospital, where 2,000-3,000 patients were accommodated at the time of the earthquake and also healthcare centers and the area of Bantul prefecture which were greatly damaged by the earthquake. We visited healthcare centers in Bantul prefecture with hospital staff members to investigate the damage at the time of the earthquake and summarize activities and current problems. We subsequently visited the homes of spinal injury victims with healthcare workers and observed actual rehabilitation and conducted interviews regarding the current situation of home-visit nursing care and the problems that patients are facing. Furthermore the dispatched PTs made a DVD regarding physiotherapy and nurses gave a lecture on decubitus and rehabilitation nursing as well as a demonstration of decubital treatment.

[Ethical consideration] The permission of Sardjito hospital was obtained for the conduct of this investigation.

[Conclusion] It is important to understand the situation of disaster areas after most support groups leave following the acute stage and to implement rehabilitation projects. It is essential to monitor and consider the balance and the adequacy of support after its provision. We will continue to support the convalescence stage of disaster restoration and by using central Java as a model case, establish a methodological program for supporting the transitional period between the acute and convalescence stages in order to make support for other disaster areas available ahead of time.

Key words: [Medical Support Activities] [The Recovery period] [Earthquake of the Central Java]

8-3 Stakeholders analyses of the APEDNN web platform

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Purpose

This study was to identify strategies to strengthen the impact of Asia Pacific Emergency and Disaster Nursing Network (APEDNN) Web Platform towards satisfying emergency and disaster preparedness and responses.

Method

A purposive sampling strategy was used to identify stakeholders who were approached after the informed oral consent was obtained and the anonymity was ensured. The semi-structured interview was conducted with an interview guide. All interviews were digitally recorded and then transcribed verbatim, while transcripts were analyzed using content analysis. The strategies of member-checking and long-engagement were used to establish the trustworthiness.

Findings

Six themes were generated from 11 transcripts, i.e. needs responsiveness, resources coordination, authority & quality, visibility & marketing, partnership & collaboration. All stakeholders emphasized the necessity to have the web platform meet healthcare workers' needs and beyond. It was considered crucial to channel and coordinate resources especially human resources for efficient and sensitive rescue in crisis. Knowledge development and sharing across borders was of significance for a better emergency and disaster responsiveness. The role of World Health Organization and the Asia Pacific Emergency and Disaster Nursing Network as well as governmental involvement was highlighted to play in sustaining the web platform.

Conclusions

The APEDNN web platform has the potentiality to attract the public, health professionals and policy-makers. It deserves efforts to improve the quality of services exert educational, research and knowledge managerial effect.

Key words: [Asia Pacific Emergency and Disaster Nursing Network] [Stakeholders Analysis] [Web Platform]

8-4 Analysis of the urban community disaster medical assistance in China - Taking Changchun as an example

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The frequently happened global disasters have become one of the important factors which influenced the safety of human life and the social economical development in the developing countries. By using our specially designed questionnaire survey among randomly chosen 296 policemen and 506 community residents in Changchun city, with the help of the computer software (SPSS15.0), we have done the descriptive statistical analysis, chi-square test and rank-sum test on the data. We found that the city's UCDMA (urban community disaster medical assistance) system mainly relies on local medical ER centers to provide emergency treatment currently. Often the far distance from the ER center to the disaster site considerably prolongs the emergency response time. Due to the lack of the ER treatment knowledge and the training, the policemen and the community residents can not provide the proper emergency medical assistance (in our survey only 7.8% policemen passed CPR test. 8.5%community residence know the correct compress frequency on CPR). We concluded that Changchun needs a better UCDMA system to reduce the emergency response time and to give the disaster victims the proper, immediate on site medical assistance prior to the emergency rescuers get to the site. Our results can be used for further exploring the development strategies of UCDMA in China.

Key words: [Disaster] [Urban community] [Medical assistance]

9 Response and Recovery

9-1 The current situations and issues for spinal cord injury syndrome on the recovery period after earthquake of the Central Java

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[Purpose] The focus is applied to the victim who became a spinal cord syndrome due to the earthquake of Central Java, and it reports on the current situations and issues.

[Method] The subjects were 7 patients of spinal cord syndrome at Prefecture B, Central Java state, Indonesia on 15th March to 14th April. Investigation contents were Demographics and oral investigation by semi-constructive interview method. Contents analyzed by entering data as verbatim records.

[Ethical consideration] Agreement was obtained from the interview subjects after explaining personal information protection issues.

[Result] The Demographics Men/Women Age was 20-50 and Years. They got the Decubitus ulcer after became a victim because of transportation is put to sleep to on a hard door and the passage. After this year, about one year is a portion of medical expense to be paid individually according to the content of treatment though was exempted from all the therapy cost. Frighteningly to the aftershock that has some traumas by all members, and continues still.

[Conclusion] The object people who hold the trouble through life are anxious about the future including the physical aspect and the economic aspect. It is necessary to think about a concrete action method to the grasp of the problem of the stricken area in the disaster convalescence since the emergency aid to the acute stage and it from these with the administration in a region concerned. Especially, it is thought that the home medical care including the psychological care, the home nursing visit, and the enhancement of rehabilitation are important including the personnel training, securing the number of men, and the budget acquisition.

Key words: [Spinal Cord Injury Syndrome] [The Recovery period after Earthquake] [Central Java]

9-2 Analyzing isolated death of human on the Great Hanshin-Awaji Earthquake in Japan

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Purpose: Most natural disasters are unexpected, and threat or loss of life, lose one's community. That is strongly impact and changed human and social environments. This study was to describing and analyzing characteristics for isolated death of the victims on the Great Hanshin-Awaji Earthquake. Methods: Secondly data analysis was used to analyze the characteristics of isolated death of the victim of the disaster. Data were collecting from an obituary column of a local major newspaper from the January 17, 1995 to January 16, 1998 which focused on the disaster related isolation death. The contents were age, sex, family status, living status, job status, health situation and the disaster victim. As a ethical consideration, victims' individual information were confidentiality and anonymity were preserved. Results: The result showed that total numbers of the obituary about disaster isolated death found 94 cases. Males were 72 and females were 22 cases. The numbers of the significant ages were 33 cases were 60s and 15 cases were 50s. Forty out of sixty-five cases were less than 1year living in new shelter. Ninety three out of 94 were living alone. Eighty out of 81 had health problem, and 89 out of 9 were no job. Conclusion: This study revealed regarding characteristics of the victims through isolated death on the disaster that many cases were living shelter within 1 year, males were more higher rate than the female, age of the 60s were highest cases compare with other ages and almost all cases had health issues and no job. Thus, there were multi-complex problems on victims as a socially vulnerable. Disaster nursing sport and intervention for these victims are strongly needed.

Key words: [Isolated Death] [Great Hansin-Awaji Earthquake] [Japan]

9-3 The longitudinal study of survivors' daily lives and health conditions after earthquake disaster in Sichuan of China - The result of the first year-research

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[Objective] To longitudinally investigate the Survivors' daily lives and healthy condition after earthquake disaster in China.

[Method] Questionnaire was utilized for data collection people who experienced the earthquake live in the temporary housing at present, including the disaster victims. By using the cluster sampling method, the survey was conducted for the victims aged 18 years and over without cognitive impairment. Consents were obtained from the victims investigated. Information on the victims' socio-demographics, impact of disaster and the victims' healthy and psychological status after disaster were collected systematically. The data analysis included general description and factor analysis of Survivors.

[Results] After the earthquake, it was shown that the activities of daily life (ADL) of the Survivors were changed, in order as follows: sleep, diet, movement activity, entertainment and others. The most common healthy disorders after a half year of the earthquake were functional disturbances of body's joints and muscles, decrease of self-immunity, disturbances of endocrine organs, increase of asthma and allergy and others. The following symptoms were answered: headache, sleep disorder, hand or foot or joint's ache, waist ache, cough, sneeze, nasal mucus and others. With regard to the self-rated health condition, more than 50% of victims thought "themselves in poor health". With regard to the psychological condition, the mean value of IES-R score was 30.7 ± 16.7 in the victims investigated. It was shown that about 50.2% of victims were suspected to suffer from post trauma syndrome of depression (PTSD) tendency.

[Conclusions] 1st year of the earthquake disaster, most of the Survivors in China had some health problems in both physical and psychological functions. It is definitely needed for the local nursing authorities to pay more attention to understanding and promoting the disaster Survivors' health in the future.

Key words: [Earthquake disaster] [The survivors' life] [The survivors' health conditions]

9-4 Quality of life survivors in Bantul district Yogyakarta 3 years after earthquake

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Purpose This research purpose was to find out the quality of life among survivor in postdisaster situation, in three Bantul sub district after Yogyakarta Earthquake that occurred on May 27, 2006.

Methods Two hundred and twenty eight survivors in three subdistrict of Bantul (Pleret, Jetis and Sewon) participated in this study. Data were collected through two kinds of questionnaires which were Short Form 36 (SF 36) Quality of Life (QOL) and personal data questionnaire. The personal data questionnaire also consisted the impact of earthquake that felt by survivor such as injury, damage of house, death or injury from the member of family. Data was analyzed with Kruskal Wallis, Mann Whitney and Chi Square tests.

Ethical Consideration Ethical clearance and research inform consent was performed for the respondents

Results Three years post earthquake, majority of survivors in Bantul showed good QOL in general (83, 3%), in physical dimension (79, 4%), and in mental dimension (84, 2%). The data also showed that there are some different in QOL score among the survivor in many variables such as age, level of education, income, physical injury and history of family being injured by earthquake. Whereas, in other variables such as sex, location, funding for rebuild housing, history of living in tent & death in family caused by earthquake there are no differences. Furthermore, it also showed that type of injury and rehabilitation services affected the QOL score among survivor.

Discussion Many variables could influence the QOL of the survivors. To improve their QOL during post disaster phase, they need help such as health rehabilitation, funding for housing, and caring for them.

Conclusion Disaster may cause physical & mental trauma and it can impact quality of life of survivor. The QOL among Bantul survivor are influenced by their age, level education, length of stay in tent, physical injury and history of family injure during earthquake.

Key words: [Quality of life] [SF 36] [Post earthquake]

10 Education and Training for Disaster Nursing 2

10-1 Disaster nursing education of Japan Disaster Relief Team

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Background: Japan Disaster Relief Team is sending 46 description medical teams to the stricken area by present, after it is established in 1982. The conventional nursing activity report contents relate to a role and the duties contents of the nurse in the team mainly, and it is the present conditions that the data about the health problems and nursing practice of the victim are not left.

Content of the nursing practice: Then, the development of the curriculum that applies the focus to the nursing practice has been tried in the nursing group since 2006 fiscal year, because the nursing act that had been done without having been considered up to now. The attempt to clarify and materialize the role as the nurse of JDR was begun by the accumulation of the victim's reaction, the nursing intervention related to victim's health matter, the result and the evaluation of nursing practice in shape of nurse's record as date.

Moreover, the nursing record must be the one from the aspect of the continuance nursing with a local medical institution from which everything understood together. The nursing record that introduces the nursing diagnosis is examined for that.

Conclusion: From the above, it is necessary to execute of the curriculum of 'Nursing practice', and to develop the nursing record that local nurses and we understand together.

Key words: [Disaster nursing education] [Nursing practice] [Nursing record]

10-2 Continuous care from disaster nursing (acute stage) to rehabilitation nursing (reconstruction stage) - Starting training program

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1. Aim To start Disaster Nursing and Rehabilitation Course for hospital managers and administrators of Asian Region who are from disaster occurrence countries to provide. continuous care from disaster acute stage to reconstruction stage.

2. Methods Program was developed in 2007 and organized by The Japan International Cooperation Agency (JICA) in 2008 and the International Nursing Foundation of Japan (INFJ) conducts the course. The duration is one month. Program consists of lectures, drills and observation. Qualification of participants are doctors, nurses, PT, OT and administrators of hospitals.

3. Ethical Consideration Ethical consideration is taken to protect privacy and individual information.

4. Outcomes

1) Increase of participating countries The 1st Course (2008): 4 countries, 6 ps. (Iran, Saudi Arabia, China, Maldives) The 2nd Course (2009): 6 countries, 10 ps. (Iran, Saudi Arabia, China, Maldives, Myanmar, Viet Nam)

2) Recognition of rehabilitation nursing 3) Necessity of team medical services

4) Necessity of drill to accept many patients in disaster 5) Recognition of necessity of cooperation among nurses, PT and OT.

5. Discussion Participating countries experience many type of natural and manmade disasters, however, disaster prevention training programs and rehabilitation nursing services learned from experiences have not been provided in the hospitals. Rehabilitation nursing is not included in job description of nurses. It is new area. Nurses have no cooperation with rehabilitation therapists. Patient centered team approach is not provided yet.

6. Conclusion Through one-month training program, participants realized necessity of physical and mental care from acute stage and reconstruction stage continuously. Participants' satisfaction for the course program achieved 90%.

Key words: [Disaster] [Rehabilitation] [Continuous care]

10-3 Disaster management training for emergency response in China

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Recently man made and natural disasters have increased awareness that responders to disasters require preparation specific for disasters. The purpose of the program was to develop trainers to increase the capacity of responders to disasters and to evaluate the methodology for disaster management training for emergency response in China at all levels for proper response to specific types of emergencies based on the type of emergency and injury. Approval for the study was granted by the institutional review board (ethics committee) of Wuhan University. The training course is a 2-3 day intensive program for interdisciplinary members of disaster response teams including nurses. The educational program consisted of two parts. The didactic content (theory) included: incident command system, medical response to disaster, public health response, decontamination, response to terrorism, care of specific injuries in disasters, environmental considerations and psychological response including care of the dead and their families. The second part focused on the mastery of skills needed for first responders in disasters. All participants learn all the roles of an emergency response team. The participants were nurses, doctors, Communicable Disease Center personnel, public health officers, police, emergency medical technicians, psychologists, morticians, fireman, and social workers. A pretest and post test was given to evaluate the cognitive knowledge and the skill stations evaluated by demonstrated skill competence. The entry level scores median is 50% while the post test scores reflect significant learning with the median at 95%. Training programs are restricted to 30 participants to allow for mastery in the six skill stations. The content of the workshops is based on research from the field by the team from response to international disasters both natural and man made as well as years of practice and research related to patient response in various types of disasters.

Key words: [Disaster management] [Disaster response] [Preparedness]

Poster A Community Transition

A-1 Nursing activities to predict the situation in middle - long term from acute period

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Background: The 1995 South Hyogo Prefecture Earthquake disclosed a problem of an aging society. We report that we considered future plans in acute period and reconstructed the nursing care for taking people's own end of life with respect. Content of the nursing practice: Our activity purposes were that 1.Prevention of solitary death, 2.Prevention of bedridden person, 3.Making a livable living space. We investigated victims' needs by a nursing viewpoint on human being and life. We established a space for side job because many victims had economical uneasiness. In the temporary housings, we established a group house because there are living alone person and independent living difficult person. In addition, we provided 24-hour support and a counseling service for health problems. We cooperated with administration and other jobs to evolve these activities. In permanent housings, we provided 24- hour support and made community involved the neighboring community. We provided medical and welfare consultation, visiting nursing and support to residents' health and life. Results discussion: In temporary housings, a space for side job became to a meeting place and place of making community, health and life. Through these activities, it explains important that nurses coordinate with multi jobs, suggest policy, and practice nursing-care in advance of the social situation. There is reality in the field. The disaster prevention and mitigation society was built by accumulation of reality. Ethical considerations: We explained subjects that we would present these activities and we got permission to presentation. We gave attention that subjects did not emerge as particular person.

Key words: [Viewpoints on life] [Making community] [Network with multi occupations]

A-2 Factors affecting local residents' determination to carry through their visitation to individual disaster victims

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Purpose: Since disaster victims living in temporary housing have developed a sense of loss, it is necessary to take their psychological state into consideration when providing support for them. Following torrential rains in Niigata and Fukushima Prefectures in 2004, community residents, i.e., non-specialists in post-disaster support, have visited individual disaster victims living in temporary housing to monitor their safety. We examined that they could carry through their regular visitation. Methods: We conducted a group interview involving eighteen local residents, and analyzed their responses and comments. Ethical considerations: The subjects consented to the interview and its recording. Results: 'Mutual support among local residents' and 'a broad perspective developed through interactions with many people' were the main reasons that they carried through with their visitation. Local residents also continued their calls on disaster victims when they: 'learned from the activities of community health nurses'; 'received emotional support from family members'; and 'obtained related knowledge and learned about the meaning of their activities from university instructors'. On the other hand, they were distressed when: they directly faced the anger and anxiety of victims; they were torn between the local government and victims; they felt deep social responsibility; and they felt helpless regarding their activities. Discussion: Visitation and listening to disaster victims helped local residents broaden their perspectives, and so they became determined to carry through their activities. To provide effective support for victims, consultation with community health nurses and specialists was important. Conclusion: Factors affecting local residents' regular calls to individual disaster victims included a broad perspective developed through interactions, and support from specialists and family members.

Key words: [Flood disaster] [Temporary housing] [Calls (visitation) to individual victims]

A-3 The survey for the function of Community Health Nurse <CHN> Coordinators <Co> in the disaster through the experience in South Sulawesi.

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Background In South Sulawesi's areas are prone to disaster. In 2007, some disasters occurred in the province, such as big flood and landslide. The number of CHN is majority in Health Center <HC> and their function is important in disaster. In addition to, CHN of the every district health office and HC in the province were already trained as coordinator in the past.

Objective To reveal the functions and activities of CHNCos at district and HC in disaster.

Method Study Period: June to August 2008. Subjects: Each CHNCos at district and HC in 10 districts where were affected by disaster in 2007 to May 2008. Means: A half structural questionnaire-based interview.

Result and Discussion 7 CHNCos at district and 8 CHNCos at HC carried out functions and activities. The functions and activities of CHNCos at district: During disaster, their functions were coordination of disaster teams, delivery of necessary goods and being First-aid staff. Their activities were distribution of foods and medication, home-visit and assessment. After disaster, they monitored the disaster area and enlighten the health include prevention for infection. Their activities were providing health services and assessment health services and victims. The function and activities of CHNCos at HC: During disaster, their functions were coordination of health service, care for victims and being First-aid staff. Their activities were providing health services included treating victims and distribution of foods, clothes and medication. After disaster, they monitored the disaster area, victims and health problems. Their activities were treatment for victims and maintain the environment with sanitation.

Conclusion Most CHNCos corresponded to disaster during and after disaster. But only 3 CHNCos took part in a training of disaster management that didn't focus on disaster nursing. We expect CHNCos will be the leader of disaster nursing and need making the training of disaster nursing.

Key words: [Survey for actual activity] [Function of community health nurse coordinator] [Disaster affected area in Indonesia]

Poster B Competencies, Education and Training

B-1 Thoughts of the nursing students on disaster nursing who recently-enrolled in the university

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Purpose: The purpose of this research was to investigate basic data for the education of disaster nursing.

Method: The subjects were the first year students, and the questionnaire research was conducted in June, 2009 when they were still new to the nursing university. The questionnaire was distributed to 69 of the students and submitted by 63 of them.

Ethical considerations: The aim of the research was explained, and the submission was their free choice.

Results: Approximately 80 % of the students responded that they were interested in disaster nursing. Those students responded with their interest for it had a significantly stronger willingness to participate in relief activities at disaster, compared with those who responded otherwise ($p < 0.001$). Among those students with such an interests, 19 % of them knew the meaning of "triage", and 46 % of them knew the meaning of posttraumatic stress disorder (PTSD), which implied that there is no significant difference in this aspect. However, those students who had the experience of being a victim of disaster tended to strongly recognize the need for education on disaster nursing.

Discussion: Students had a high interest in disaster nursing. However, no matter how much they were interested in disaster nursing or whether or not they had the experience, few students were understood the meaning of "triage" or "PTSD".

Conclusions: As students have a high interest in disaster nursing at the time of university entrance, it is suggested necessary to take the basic principle of disaster nursing in their education.

Key words: [Disaster nursing] [Nursing students] [Nursing education]

B-2 Development of a competency model related to nursing activities immediately after an earthquake: Identification of the patterns of promoting teamwork

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Purpose: The objective of this study is to identify the patterns of the behavior of nurses who lead teamwork activities under constrained circumstances after an earthquake.

Method: This study was conducted between June and September in 2008 and the participants were 27 nurses from 10 hospitals damaged by an earthquake, who led nursing activities. Data were collected in semi-structured interviews and questions in the interview guide were i) what were constraints after the earthquake, ii) what judgments were made to overcome the constraints, and iii) how did you behave toward team members. Ethically, each participant agreed to participate in this study of his/her own free will and that we ensure that his/her personal data cannot be identified.

Results: After the analysis, principal concepts were Constraints, Judgments and Teamwork Activities. Teamwork Activities was comprised of seven categories: Information Gathering, Information Transmission and Sharing, Consultation for Task Identification, Activities to Overcome Constraints, Task Execution, Activities Evaluation, Physical Care and Psychological Support. To protect the safety of patients, nursing leaders were always responsible for Information Gathering and Information Transmission and Sharing, identified tasks and decided on their priorities through Consultation for Task Identification, and were actively engaged in Activities to Overcome Constraints, Task Execution, and Activities Evaluation with the cooperation of team members. During the course of those activities, the leaders were providing Physical Care and Psychological Support for team members to continuously arrange and maintain teamwork.

Discussion and Conclusions: In conclusion, a series of patterns of leadership behavior were identified: nurses actively tried to share information as well as understanding about actions to be taken with team members and to arrange and maintain team activities.

Key words: [Competency model] [Promoting teamwork] [Disaster nursing]

B-3 Nurses' role behavior during cataract surgery in disaster through an emergency drill

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Aim; To make clear nurses' role behavior during cataract surgery in disaster through an emergency drill. **Method;** 1. Nurses' codes of behavior were built on the occasion of a fire and a power outage during a cataract surgery. 2. Assuming a fire, an emergency drill was held. Theater nurses were in charge of scrub nurses, (a)(b) circulating nurses, and medical doctors. 3. An emergency drill was videotaped. 4. After checking nurses' role behavior on the video, the second emergency drill was carried out. **Ethical Consideration;** Approval was obtained from all the participants after they were explained.

Result; The first drill took four minutes and twenty seconds. Each of roles were not clearly understood by scrub nurses and (a)(b) circulating nurses. Some role behaviors were not done as a guideline. The second one took two minutes and thirty seconds after a fire was reported. Scrub nurses were to move microscopes, place eye drops to the patients, and have a bandage over their eyes. (a) Circulating nurses reported fire breaking; (b) circulating nurses guided the patients to evacuate after removing instruments on them. This survey showed that the cataract patients are safe for evacuating in a wheelchair because they have problems with walking and hearing other than visual loss as they are elderly. **Consideration;** By holding a drill twice, many nurses came to act well during a fire. Some problems in disaster were clarified through videotaped drills. Nurses' roles of behavior were made clear. As a future issue, nurses' role behavior should be clarified according to various operations.

Key words: [Emergency Drill] [Role Behavior] [Cataract Surgery]

B-4 Qualitative analysis of nurse-directors' effective behaviors in natural disasters

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(Purpose) In order to respond appropriately to disasters and mitigate resulting damage, effective training and educational programs are required. The purpose of this study was to clarify the framework of effective behavior in mass natural disasters that is essential for developing training and educational programs.

(Method) A qualitative descriptive design with the behavioral event interview was employed. The 12 Japanese nurse-directors who were interviewed each experienced one of the following disasters: The Great Hanshin-Awaji Earthquake in 1995, the Niigataken-Chuetsu Earthquake in 2004, flood disaster by the typhoon 23rd in 2004. Interviews were recorded, transcribed, and qualitatively analyzed.

(Ethical Considerations) This study was approved by the ethical committee of Kobe University. Ethical considerations were addressed by explaining the study and participants' rights both orally and in writing. The purpose of the study was explained, as well as the time commitment required, and participant confidentiality. Written consents to participate were obtained.

(Results) Eight themes were identified: 1) Redesign and re-arrange the hospital system in response to the primary disastrous situation, 2) Mitigate the secondary disaster with safety and relief for patients, 3) Support staff nurses' mental health and improve the workplace environment, 4) Provide opportunities to receive continuing and proper medical care services to patients, 5) Support patients' mental health, 6) Provide nursing care at home and disaster shelters collaborating with other medical professions, 7) Protect the dignity of the dead and provide care to bereaved families, 8) Prepare for a disaster in carrying out daily nursing.

(Discussion) Although disasters affected their hospitals seriously, nurse-directors responded with various effective behaviors. Eight themes suggest that responding emerging problems appropriately in extraordinary circumstances, nurse-directors use their abilities of flexible thinking, creativity, planning, implementation, and ethical consideration.

(Conclusion) We found nurse-directors' specific behaviors that performed desirable outcomes for the patients in the natural disaster settings.

Key words: [Disaster nursing] [Behavioral event interview] [Nurse-directors]

B-5 Relation between thoughts about disaster nursing and self-acceptance of students who recently-enrolled in the university

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Purpose: This study aims for collecting basic data on the education of disaster nursing. It carried out a questionnaire survey to research thoughts about disaster nursing and self-acceptance (SA) of students who recently-enrolled in the university.

Methods: The subjects were the first year students at the nursing university, and the questionnaire was conducted in June, 2009. The questionnaire was distributed to 69 of the nursing students.

Ethical considerations: The aim of the research was explained, and the submission was their free choice.

Results: There were 60 effective answers, 48 (80.0%) of the nursing students responded that they were interested in disaster nursing. There were significant differences in mean SA (19.27 ± 4.14) of the students who had responded interested in disaster nursing, and mean SA (16.25 ± 5.26) of the students who was not interested in it ($p < 0.05$). The students who answered that want to participate in the disaster rescue and nursing positively when becoming registered nurse in the future were 46 (76.7%). There were no significant differences in mean SA ($p = 0.09$), students who had answered that want to participate in the disaster rescue and nursing (DRN) was 19.22 ± 4.06 , students who had not answered it was 16.86 ± 5.49 .

Discussion & Conclusion: It was suggested that the students with high level of SA were the high interest in disaster nursing. It was considered to contribute to helping students to improve level of SA to increase student's awareness of the disaster nursing.

Key words: [Disaster nursing] [Nursing students] [Self-acceptance]

B-6 The relationship between emotional empathy and interest in disaster nursing of the nursing students who recently-enrolled in the university

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Purpose:The aim of this research was to acquire basic data for the education of disaster nursing. We implemented a questionnaire research about relationship between emotional empathy and interest in disaster nursing of the nursing students.

Method:The subjects were 69 students who the first year students in a nursing university, and the questionnaire was conducted in June, 2009. The questionnaire research was conducted question about interest in disaster nursing and Emotional Empathy Scale (EES). The ESS was consisted of three subscales; emotional-warmth, emotional-coolness, and emotional-susceptibility.

Ethical considerations: The subjects were informed of the purpose and voluntary participation in the research.

Results: We had 60 effective answers. There were significant differences in the mean of emotional-coolness of 48 students (22.63±8.33) who had responded interested in disaster nursing, and the mean of emotional-coolness of 12 students (29.00±10.13) who was not interested in it (p<0.05). For the 46 (76.7%) students who answered that want to participate in the disaster nursing positively when becoming registered nurse in the future. There were significant differences in the mean of emotional-warmth (p<0.05), 46 students (59.98±5.98) had answered that want to participate in the disaster nursing, 14 students (55.57±6.60) had not answered it.

Discussion & Conclusions :It is said that the level of emotional empathy was affected by caring and assistance behavior. Therefore, we suggested that level of emotional empathy influenced the interest in disaster nursing.

Key words: [Disaster nursing] [Nursing students] [Emotional Empathy Scale]

B-7 The study of disaster nursing at authorized disaster base hospitals in Japan

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purpose: The purpose of this study is clarification of the preparation about disaster at authorized Disaster Base Hospitals in Japan. **Method:** This study was carried out 577 director of nursing during authorized Disaster Base Hospitals in Japan. The questionnaire was constructed by researchers. It constituted situations of disaster nursing education at hospital and nurse's participation of disaster nursing seminar held by others. Discriptive statistics was used data analysis. The questionnaire was distributed through the mail. **Result and Discussion:** 363(62.9%) of hospitals returned completed questionnaire. Within this respondents, 291(80.2%) conducted training program of disaster nursing at hospital. Of this number,253(86.9%) implemented triage program. Other Programs implemented were assistance of treatment (187,64.3%), mental health care (112,38.5%), attitude for activity of disaster relief (169,58.1%) and collaboration with team members and others (162,55.7%). These were given by lecture, simulation on the table, simulation, group discussion. Of 363respondents,210(66.9%) sent nurses who belong to hospital for disaster nursing seminar held by Japnese Nursing Association. And 82(26.1%) sent nurses for seminar held by Japan Society of Disaster Nursing. Of 62 that didn't conduct training program, 44(70.9%) sent nurses for there. It is important to equip for disaster. Nurses need to obtain at training for disaster. Consequently, It needs to clarify knowledge about disaster nursing and to cooperate with others about disaster education to prepare for disaster. **Ethical consideration:** The following was explained to the participants regarding ethics about voluntary participation in this study, the protection of privacy, the data obtained would not be used for purposes other than study, and the questionnaire was anonymous by letter.

Key words: [Study] [Disaster Nuesing] [Training Program]

B-8 Effect of the disaster response training on disaster preparedness in junior high school students

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Purpose: The younger generation's disaster response training is an important component of maintaining both individual and community safety. The aim of this study was to examine the effects of varying levels of disaster knowledge before and after training for a disaster from a nursing point of view. Methods: Participants were 122 third graders Junior high school students in Japan. Study was use of a survey questionnaire. The surveys were life and health related in disaster and self administrated. Study surveys were conducted at three different times: before, immediately after and three months following the disaster on educational training. The surveys were conducted in 2008. As an ethical consideration, this study was conducted with the approval of the University of Kindaihomeji. Results: Valid average participants were 121. Results of the survey showed at the time of the disaster that knowing how to help people living in disaster area, knowing when to visit the hospital when injured by the disaster and how to explain one's health situation were more likely increased in the training immediately after and in the training three months after. Knowing how to prevent contagious disease, knowing how to measure blood pressure, how to stop bleeding of the vein, and knowing how to carry a person who cannot move themselves at the disaster site were noted to have the highest rate immediately after the training and the 3 months after training had higher learning rate than the before the training. Conclusion: The evidence in this study displays the effectiveness of related disaster knowledge and response by disaster training from nursing point of view. It was also noted that progression of the younger generation's knowledge and their perception of disasters will be important for their preparation in responding to unpredicted disasters in their communities where they live.

Key words: [Disaster response training] [Nursing point of view] [Junior high school student]

B-9 Taking the role of logistical support hospital for the control of the novel influenza A(H1N1)

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Background; In 2009 March, the novel influenza A(H1N1) appeared for the first time in the world as a new type of swine flu in Mexico. Kobe city set a committee to combat this new type of influenza and our hospital took the role of logistical support for the control of the disease. The first case of new swine influenza of a patient who had no history of recent foreign travel was reported and the spread of this influenza became imminent.

Result; On the 16th of May, after receiving the news of a probable spread of the influenza, our hospital held a conference to deal with the situation. Kobe city ordered the installation of outpatient clinics especially for patients who had high fever, so our hospital opened up this new type of clinic and also instructed measurements for the infection control. In order to avoid contact between the patients who go to this new clinic and the patients inside the main hospital building, we placed this outpatient clinic outside the main building, in the parking space. Also we posted the number of patients who visited this clinic on intranet to enable our medical personnel to grasp the trend of the influenza spread and make them aware of the importance of infection control measurements. During the time this outpatient clinic was held we discussed about the management of this clinic and the equipment for a better adjustment in an urgent meeting. On the 15th of June, the Ministry of Health and Kobe city announced a new policy for swine flu so the clinic was closed.

Consideration At the time, our hospital had no concrete measurements for the influenza and the medical personnel were neither trained for the outbreak of this disease. Now a seasonal outbreak is likely to occur so the training of the medical staff and the creation of a concrete manual have become a top priority.

Key words: [Swine flu] [The novel influenza A(H1N1)] [New type of clinic for high fever]

B-10 Study of disaster consciousness among nursing student in Japan

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[Purpose] To examine disaster consciousness among nursing students to obtain suggestions for improving disaster nursing education.

[Method] Subjects were 156 students in the school of nursing of a 4-year college. The survey studied disaster consciousness, earthquakes-related disaster perceptions; and response behaviors, and anti-disaster measures among family members.etc. Analytical tabulation was performed for each item. For ethical considerations, students were verbally informed about study purposes, freedom of participation, and were assured against non-participatory repercussions. Submissions served as the agreement to study terms.

[Results] Earthquakes frightened 92.2% subjects. Main reasons were "I might die", "Houses will be destroyed", "I might lose a beloved one" and "Earthquakes are unpredictable", while 93.7% were aware of major past earthquakes including. These at Hanshin-Awaji disaster, Chuetsu, Geiyo, and Sichuan. Others responses included "Follow the teacher's instructions", and "Don't know what to do before it happens", An escape route from the classroom was known to 34.7% ,while 20.8% knew a place en route to or from college that was dangerous during earthquakes. Previous experience of earthquake or disaster-related and discussions with family about disaster-management were present in 13.8% subjects.

[Discussion] Disaster consciousness has an enormous impact during disaster preparation and disaster-management execution. Despite >-90% of the nursing students being aware of earthquake-related damage. Clearly, there is a need to improve disaster consciousness and preparedness of nursing students. Valuable suggestions on the teaching methods for basic nursing disaster education were also obtained.

Key words: [Disaster consciousness] [Nursing students] [Nursing disaster education]

B-11 Current circumstances of disaster nursing education - Survey of basic nursing education institutions under the Japanese Red Cross Society -

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A questionnaire survey was conducted to clarify current circumstances of disaster nursing education in the basic nursing education institutions established by the Japanese Red Cross Society.

Subjects: 23 teachers in charge of disaster nursing in Japanese Red Cross nursing institutions

Survey period: December 2008 to January 2009

Analysis: From responses to open questions, meaning was extracted and categorized.

Ethical consideration: A letter explaining survey purpose, statistical data processing, anonymity protection, respect for free will for participation, and no disadvantage from refusing was sent with the questionnaire. Returning the completed questionnaire was regarded as the consent to participation.

Results: 17 out of 23 subjects responded (college 1, junior college 1, training school 15), valid response rate 73.9%.

The major points the teachers wanted students to learn in disaster nursing were nursing knowledge, techniques and attitude according to stages in disaster cycle and mental care for victims and aid workers. The teachers intended to instill interest in disaster nursing and awareness of nurse's role. Besides lectures, sessions incorporated speeches by those having aid activity experience or victim experience, exercise, rescue drills, and simulations. The teachers hope disaster nursing will be established as an independent subject as it integrates different fields of nursing, and allows students to gain basic knowledge, skills and multifaceted perspectives of nursing, and be prepared for disaster.

Discussion: Essential in disaster nursing education is to learn basic knowledge including the concept of disaster and basic nursing and mental care (victims and aid workers) according to stages in disaster cycle. It is also vital that students recognize disaster as an issue for themselves. Disaster is, although an extraordinary situation, not unrelated to daily life. Efforts in teaching styles and methods so as to help students gain a deeper understanding of disaster nursing and continue the study with dedication were suggested.

Key words: [Disaster Nursing Education] [Basic Nursing Education] [The Japanese Red Cross]

B-12 Disaster nursing education at undergraduate nursing courses

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Hyogo University of Health Science established at Kobe city in Hyogo Prefecture in 2007. In Hyogo Prefecture, two large-scale disasters occurred in recent years. One was the Great Hanshin earthquake which measured 7.3 on the JMA magnitude scale on January 17, 1995, and the other was the Train Derailment Accident on JR West's Fukuchiyama Line on April 25, 2005.

In our university, Disaster Nursing was offered as an elective class for second year undergraduate nursing students in 2008. The educational goal was for students to understand the role of the nurse in disaster preparedness and response. The class had a facility tour and five lectures by faculty in the nursing department, a director of nursing, and a nurse manager in the intensive care unit (ICU) at the disaster medical center. The director of nursing gave lectures on disaster management in the hospital and nursing system in rescue and relief activities. The nurse manager on the ICU, a critical care nursing specialist, lectured on hospital nursing responses in disasters and mental health care for not only victims but also persons engaged in relief activities, by giving examples from the Great Hanshin earthquake and the Train Derailment Accident on JR West's Fukuchiyama Line. The students and faculty visited a museum "Disaster Reduction and Human Renovation Institution", to share experiences and lessons from the Great Hanshin-Awaji Earthquake and consider what they can do as nursing students.

In the class, 106 of 112 second year nursing students participated. We considered future strategies for the class by their change of knowledge about disaster preparedness.

Key words: [Undergraduate nursing courses] [Disaster nursing education] [Disaster preparedness]

B-13 Identifying disaster nursing research priorities using the Delphi method

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Purpose: To specify disaster nursing research themes to be undertaken in the future, we attempt to clarify the research fields of disaster nursing using Delphi method.

Methods: The research participants were: 1) 20 officers and counselors from the Japan Society of Disaster Nursing since 2000; 2) 79 authors of theses published in the Journal of Japan Society of Disaster Nursing; 3) 22 staff of the COE Program at University of Hyogo Akashi campus; and so on. We sent out free-form surveys (Questionnaire I) containing questions on, "Disaster nursing research fields / topics already being investigated" and so on. Questionnaire II was sent out to research participants and asked them to assess the "necessity", "urgency" and "existing research" of listed subjects on a scale of one to five on the subject. Questionnaire III and IV were asked them to numerically rate their consensus per item. This study was approved by the University of Hyogo Ethical Committee

Results: The 132 subjects on Questionnaire III has high consensus rate (reference point: 60%). The most of the 40 respondents were in their 40s with a majority practicing under their nursing licenses (n=26). The results were compiled based on consensus on "future research significance" from the item answered as "very urgent", "urgent", "not urgent but necessary" all subjects with the exception of "Measures to prevent intruders into pediatric wards" (67.2%) attained a consensus rate of more than 70%. A consensus of more than 90% was obtained for further 56 subjects that were categorized into "preparation", "system of coordination", "supporting vulnerable people providing relief efforts", "construction of disaster nursing study (basic education)", "international", "mental health", "specific and multiple disasters and other".

Conclusion: We believe the results provide an extremely significant source experts working in diverse disaster-related fields.

Key words: [Disaster nursing] [Delphi method] [Japan]

**B-14 The Development of the disaster nursing education program
- Focus on to be improved nursing ability required on emergency phase -**

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The Japanese Redcross College of Nursing

1. Purpose The study was done study effective verification Disaster Nursing Education Program focused on Emergency Phase was developed to educate ability of the organizational collaboration and each role which are required to set up and manage a first aid station.
2. Methodology 1) Subjects: 2nd Year Students 75 ps, (2008-2009) Elective Subject: Red Cross Aid Methodology I "Nursing in Disaster Emergencies" 2) Study Methods: Have done study to maintain the one data of strategy of the development method from the comparison of self appraisal conducted before and after the comprehensive practical simulation. and the verification of the questionnaire conducted after the practical simulation. Self evaluation: It was constructed by 4 major territories (judgment, technique, attitude, activity) with 20 appraisal items. Standard of the evaluation: Have evaluated the practice with these four category(A~B) such as slide, comparing before and after the training with 5 criteria(1~5). 5: possible with self-confidence, 4: possible, 3: generally possible, 2: a little possible, 1: impossible
3. Ethical consideration : Have explained survey purpose, statistical data processing, anonymity protection, respect for free will for participation, and no disadvantage from refusing was sent with the questionnaire. Returning the completed questionnaire was regarded as the consent to participation.
4. Result The result was every items(20 items) made after score high comparison before. It is clear that the practice has effected the knowledge with judgment, technique, attitude and the capacity for achievement.
5. Consideration It was recognized the ability of judgment based on knowledge, basic relief techniques, preparedness and attitude and practice, which are all necessary for the nursing activity in disaster emergency were acquired through "table top" exercise and total simulation.

Key words: [Disaster Nursing Education Program] [Disaster Emergencies] [First aid station]

B-15 Disaster prevention seminar for foreigners(2) -Examination of effective disaster support measures-

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[Purpose] This study aimed to verify the effect of the disaster prevention seminar to the residents including foreigners that was designed with analyzing newspaper article about Hanshin-Awaji Earthquake, by semi-structural interview. [Method] The disaster prevention seminar was held twice for Japanese and foreigners who reside in A prefecture. The seminar installed seven aims such as "Understanding disaster", "Understanding vulnerable people", composed sixteen items (eleven lectures and five exercises), and went in Japanese. After the seminar, semi-structural interview was done, using easy Japanese or English for foreigners. [Ethical Consideration] This research obtained approval in Ethical Review Board concerning the epidemiologic study of Faculty of Medicine at Gunma University. [Results] Seventeen Japanese and five foreigners were interviewed. The foreigners answered "All contents were fresh", "The disaster prevention seminar should be appealed for foreigners". Japanese who participated with foreigners worried "Foreigners seemed not to understand the Japanese language", and they proposed "Guide by the mother tongue", and "Holding the seminar that foreigners participate easily". All participants answered "Foreigner was recognized as vulnerable people", "International exchange is necessary for mutual cooperation.", but dissatisfied about "few participant". [Discussion] Participating with foreigners, Japanese experienced a role as supporter and thought about concrete assistance measures. There is a possibility that the lecture using only Japanese is not understood easily for foreigners. Since all were new experiences for them, the language problem might not have been considered under interest or happiness. [Conclusion] Holding a disaster prevention seminar prepared interpreter, and easiness of participation is effective disaster support measures, therefore, the future task is to increase the participants devising the method of transmitting information to the foreigners. It seems that international exchange in the region is also useful, and is hoped for the approach by the administration.

Key words: [Disaster] [Foreigners] [Education]

B-16 A report of student initiative in disaster-preparedness activity as part of university crisis-management measures

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Hiroshima Bunka Gakuen University, Faculty of Nursing, located in Kure-city suburbs, is not only surrounded by rich natural environment of the sea, the mountain, and the river, but also venerable to the natural disasters. Therefore, Faculty of Nursing, as a whole, has reinforcing the everyday effort to raise educational awareness in disaster prevention and preparedness as a part of crisis management measures.

In 2006, Student Initiative Disaster Preparedness Committee was established. It is one of student initiative activities, and the committee activities provide students a safe learning environment to be involved and an opportunity to learn disaster prevention and preparedness as a citizen and future health care professionals.

The Student Initiative Disaster Preparedness Committee members and designated faculties discuss about realistic disaster in the area, and simulate disaster drills on paper. The simulated training is shown on the time table with the activities such as the establishment of disaster relief headquarter, which is the self-defense fire brigade which consists of the university president as a commander, reporting system, fire extinction, evacuation conduction for life-form and non life-form and first-aids group. The disaster drill plan is consulted by the committee members and university administration, local fire departments.

The disaster drill is executed by all university students and faculties on campus on that day with the Kure-city Fire Department. Chief of Fire Department, our university president, and chairperson of Student Initiative Disaster Preparedness Committee give reflective comments upon the disaster drill is completed. Then, as educational awareness education are given by the Fire Department fire fighters assisted by students. The Student Initiative Disaster Preparedness Committee evaluates all the activities at the end of year and pass on to next committee members.

Key words: [Student Initiative] [Disaster Drills] [Disaster-preparedness]

Poster C Disaster Management System

C-1 Survey of nursing activities at disaster sites in the wake of the Noto Hantou earthquake

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The Noto Hantou Earthquake occurred in the morning hours on the fourth Sunday in March, 2007. The epicenter was just offshore of the Noto Peninsula, located in affected prefecture, Japan. It registered a magnitude of 6.9 on the Richter scale. Reported damages throughout the affected prefecture were one death, 360 people injured and 638 houses completely destroyed.

We conducted an interview survey of local public health nurses&PHNs at public health centers in the disaster area, who had been engaged in disaster nursing in the community for a period of one month after the earthquake. The purpose of the survey was to understand the actual contents and coordinating functions of their activities as well as clarify future challenges of creating a support network for professional nurses in disaster areas. Our institutional review board approved this survey prior to its implementation.

Professional nurses who were engaged in disaster nursing in the disaster area were public health nurses from both the affected and unaffected areas of the stricken prefecture, as well as from neighboring prefectures. Additionally, nurses were dispatched from nursing associations in both stricken prefecture and neighboring prefectures. A backup system comprised of nurses from outside of the disaster area was well established eight days after the earthquake and continued to offer support for up to 35 days. The PHNs in the disaster area identified the following complications: making appropriate decisions to meet needs that changed continuously as time passed and coordinating external support personnel. Moreover, some of the PHNs in the disaster area were at risk of over exhaustion and stress because they had to execute their nursing duties under conditions in which their own places of work and families were also affected by the earthquake.

Key words: [Earthquake] [Nursing activity] [Public health nurse]

C-2 The management system for disaster support nurse using the mobile telephone

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Background At the time of the large-scale disaster, the dispatch of the disaster support nurse from the outside is required. However, many dispatched disaster support nurses do not know local circumstances. They have to get appropriate information and carry out an appropriate nursing activity in the inexperienced spot. **Purpose** To propose the management system for disaster support nurse using the mobile telephone aiming effective disaster nursing. **Method** The prototype of the management system was created using the action research method based on the contents proposed in the Kochi disaster nursing support network project team's meeting. In addition, the opinion of a cellular phone company and local administration, etc. were took in, and aimed at reexamination of the prototype. **Ethical considerations** Permission of the announcement was got from the post concerned. **Result, consideration and a conclusion** The following were required as the function of the management system for disaster support nurse. 1. Database (registration), 2. Communication (summons), 3. Report(reporting), 4. Information inquiry (inquiry), 5. Pinpointing position (place to stay). 'Database' function had registration, data store and data searching. 'Communication' function had oral and mail communication for summons. 'Report' function had activity reporting. 'Information inquiry' included suffering and supporting situation. 'Pinpointing position' had position information of disaster support nurse who was active locally.. In the normal, the system registers and updates the information of the disaster support nurse, and conveys educational disaster nursing information. At the time of a disaster, the disaster support nurses use some functions of the system and at first start activity originally. The system guides them to the right position and administrate their staying.

Key words: [Disaster support nurse] [Management system] [Mobile telephone]

C-3 A proposal of the ID which can warrant, guarantee and compensate a disaster support nurse

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Background At the time of the large-scale disaster, the dispatch of the disaster support nurse from the outside is required. However, some ID is necessary to confirm that it is a disaster support nurse at the confused disaster. The ID must warrant the quality of the disaster support nurse, must guarantee the situation and must compensate the disaster support nurse for the damage. **Purpose** To propose the ID which can warrant the quality of the disaster support nurse, guarantee social position and compensate for the damage. **Method** The prototype of the ID was created using the action research method based on the contents proposed in the Kochi disaster nursing support network project team's meeting. Next, the opinion of the specialist who experienced at the past disaster, a cellular phone company and local administration, etc. were took in, and aimed at reexamination of the prototype. **Ethical considerations** Permission of the announcement was got from the post concerned. **Result, consideration and a conclusion** The following were required for the ID of disaster nurse. 1. Turning out to be a disaster support nurse immediately. 2. Being able to receive the registration information of them immediately. 3. Waterproofing and dirt-proofing. 4. Good portability. For these reasons, a character of 'NURSE' was written on background of the ID to be able to perceive from far away that they were the disaster support nurse. The size was made into B8 size. Moreover, the ID was put on a chest. The ID was laminated in order to maintain waterproofing and dirt-proofing. The registration information can be read with QR Code. Considering a leak, the personal information was indicated at the back side. Discussion of size was required as a future subject.

Key words: [Disaster support nurse] [Guarantee] [Compensation]

Poster D Disaster Nursing Intervention

D-1 A literature review regarding the nursing practice of flight nurses in Japan

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Purpose: The purpose of this study was to clarify the current status of research on the nursing practice of flight nurses in Japan.

Methods: The Igaku Chuo Zasshi website was searched for studies on the nursing practice of flight nurses over the past 5 years with the keywords [flight nurse] and [education]. The search parameters were limited so that only original papers were extracted. Issues to be discussed included educational programs for flight nurses, their nursing practice, and current challenges.

Ethical considerations: Measures were taken to protect personal information presented in the papers, while considerations were made so that individuals would not be identified through presentations at congresses or contributions to journals.

Results: A total of 26 papers were extracted, of which only 6 were found to be original papers. They consisted of 2 survey-based studies and 4 practical reports. The authors were nurses assigned to emergency medical care centers. These papers addressed such issues as criteria for selecting flight nurses and the details of their practice, their roles and job descriptions, and the current situation and tasks of their educational systems.

Discussion: It was clarified that flight nurses were involved in various aspects of emergency/intensive medical care and critical care transport. In rescue activities, they were required to exercise fieldwork skills as well as knowledge of clinical conditions. It is necessary to establish educational systems for flight nurses in addition to their roles as coordinators for collaboration, arrangement, and cooperation.

Conclusion: In the paramedic helicopter service, a high-profile activity in pre-hospital care, flight nurses assume considerable responsibility. It is therefore essential for the development of disaster-related nursing areas in Japan to prepare criteria for selecting flight nurses and their educational programs.

Key words: [Flight nurse] [Disaster nursing] [Nursing practice]

D-2 Effects of experience of eruption disaster on families with children - From an interview survey after the eruption disaster in Miyake Island -

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1) Purpose Miyake island (in the Izu Island chain, Tokyo) was hit by the eruption in August, 2000. After the all-out evacuation period of 4.5 years, the islanders returned February, 2005. They must have faced drastic environmental changes and felt serious stresses during the evacuation. The survey was conducted to clarify how the prolonged evacuation had affected the families with children. 2) Method A survey was conducted from March, 2006 to March, 2007 by interviewing seven parents having children under 18 at the time of the disaster about their experience of the disaster and the changes of their families. Their assent had been obtained and ethical consideration for privacy had been taken. Using the KJ method, the contents collected from the interviews were divided into categories according to the context. 3) Results and Consideration There were the following twelve categories: "experience of disaster", "children's disaster experience observed from parent's viewpoint", "urgent decision-making from parent's standpoint", "strengthened family bond", "unstable identity", "children's growth", "their own change", "change in marital relations", "hope for reconstruction", "survival on the island", "loss of hometown", and "awareness of living together with volcano". Typically, the parents talked about their burden felt when they had pressed to make an urgent decision related to their children although they could have no prospects for future. This means urgent decision-making from the parent's standpoint was taken as a serious stress, in addition to the direct stress by the disaster. Supporting the disaster victims in times of decision-making is considered important. Also, the family bond was strengthened through the process where various problems were discussed and overcome in the family. It is essential that the family members should be in such close communication with each other that they can talk about themselves based on the common experiences.

Key words: [Miyakejima] [Eruption Disaster] [Family Relationship]

D-3 Mental Health conditions of islanders after eruption disaster in Miyake Island - From questionnaire survey conducted three years after returning to the Island -

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1. Purpose Miyake Island (Izu-Islands, Tokyo) was hit by the volcanic eruption in August, 2000. After the all-out evacuation period of 4.5 years, about 75% of the islanders returned in February, 2005. Reconstruction of their livelihood in the volcanic gas still spewing must have caused serious stress. This survey was conducted to grasp the islanders' mental health, family and life three years after returning.

2. Method The survey was conducted from August to October, 2007 by questionnaires to the islanders, with consideration given to them that no disadvantage would be caused even if they didn't cooperate. The General Health Questionnaire (GHQ-30, western version) was used to measure the tendencies of neurosis and depression on a one-to-four scale. The GHQ score refers to a total score obtained by adding the scores in all questions. The questionnaire also asked about their physical condition and lifestyle.

3. Results and Consideration Out of 130 questionnaires 55 were returned (including two men's) and 42 were valid (32.3%). The percentage of the over-50 age bracket was 92.7% and that of the over-70 age bracket, 49.1%. Most of them lived alone or with their spouse. The GHQ scores (0 to 20) showed an average value of 7.53 ± 6.30 . The ratio of high scorers (≥ 8) was 46.3%, showing that about half of them were not in good mental condition. The increased depression tendency was confirmed from the following symptoms: anxiety (34.5%), fatigability (29.1%), sleeplessness (23.6%), and weight loss (23.6%). This tendency was considered to result from high ratio of the elderly in the respondents. In addition to their old complaints and diseases, some elderly suffered from anxiety and sleeplessness. Care and consideration to the disaster victims' mental and physical condition is considered important not only at the occurrence of disaster, but also during the prolonged reconstruction period.

Key words: [Miyake Island] [Eruption Disaster] [Mental Health]

D-4 The influences of social backgrounds to take-out food use and health status among community dwelling older people.

Hiroe Hitomi

University of Kindaihomeji

OBJECTIVE: To investigate whether older people' social backgrounds influence to the purpose of take-out food use and health status. METHOD: Sixty five and over years old people who purchased take-out food everyday were interviewed in food shops in both A and B city. The semi-structured interview consisted of demographic information, the purposes of take-out food use, and subjective health status. Consent explaining the study, confidentiality and anonymity was obtained from both the managers of the shops and the study participants. RESULTS: the study participants who use take-out food were 51 (A city, n = 10; B city, n = 41) with an average age of 74.1years. There were less men ($P<0.00$), living alone ($P<0.00$), and financial difficulties ($P<0.01$) in A city compared to B city. Moreover, there are increasing volunteer workers in the A city since it had great damage in earthquake. The purposes of take-out use in the A city dwellers tended to point out social relationship including meeting people ($P<0.00$) and going outside ($P<0.01$) than the B city dwellers. The B city dwellers tended to use take-out food because of cheap ($P<0.03$). The number of people referred that they were healthy as same as last year were more in A city ($P<0.00$) and that they sometimes feel lonely were more in B city ($P<0.00$). DISCUSSION AND CONCLUSION: The result indicated that old people use take-out food with many reason and their social background including financial status and living condition may influence to the purposes of take-out food use. People who use take-out food due to financial reason, tend to feel lower subjective health status and more loneliness than those who not. If take-out food providers have health promoting and support functions for community dwelling older people, it can be a social capital.

Key words: [Take-out food] [Older people] [Community]

D-5 Supporting for health and life through experience of flooded victim at Typhoon No. 9 in Hyogo

Takako Sasatani

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Background and purpose

The deadly storm, known as Typhoon No. 9, struck western and northern parts of Hyogo Prefecture on August 9, 2009. It caused widespread damage in this particular part of Hyogo and claimed the lives of eighteen people. In addition to the loss of life, many people were injured or went missing after the torrential downpour. Of the 7,263 households in this local small town, 1,036 homes were severely damaged. I was also personally affected by this powerful typhoon as my own home was flooded and damaged. This paper reflects on what I have learned through my own experience about the various kinds of support that are needed during and after such a disaster.

Living and health need for support

The more than 16,520 volunteers were vital in helping local residents cope with this disaster. Residents were given immediate essential information that addressed the basic needs of the residents at the time of the disaster.

The volunteers were especially crucial for the recovery process in the under populated areas and as well as areas with an elderly population. The establishment of first-aid stations and mobile relief efforts by medical teams sent from hospitals in the vicinity of area were important because they preserved the health of many victims. Public health nurses visited each ruined household, and assessed their health needs. The local populace found strength and this and it helped with their overall attitude during such a difficult situation.

Conclusion

The support immediately after the disaster necessary to preserve health and life of the flood victims are as follows: provision of timely information for daily necessities by the regional disaster prevention information system; the support of volunteers; relief activities by medical institutions in the vicinity of the disaster area and house-to-house visits conducted by the public health nurses.

Key words: [Typhoon No. 9 disaster] [Experience flooded victim] [Health and life support]

D-6 Disaster relief activities in Sayo town, Hyogo, Japan after the flood - Report from head nurse of the Red Cross Medical Relief Team -

Mariko Imagawa

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This report is based on an experience of Flood Disaster relief activities in Sayo town, Hyogo, Japan on August 11-13, 2009. A summary of activities there and the problems encountered are discussed. The individual was not specified as an Ethical consideration.

After several discussions with Sayo town officers, the first-aid station was established in the elementary school gym where a lot of evacuees taking shelter. Common symptom there was insomnia, muscular pain and foot injury. Also, considering hot weather, there heavy clean up work and only water or green tea fluid intake Heat Disorder was concerned. From second morning, Outreach Medical service was started with cooperation of local doctor. Several community halls where people evacuated were visited and it was founded that the elderly who need nursing care was in difficult living condition and people who need Drug therapy was struggling because all medicine have been washed away. During those activities all kind of information gathering was delayed or confused.

Although initial disaster information collection should be done as much as possible before dispatch of the team, most of the case those information is none or confusing. The information collection and needs assessment should be continuously done in the field. It has required the cooperation of local medical personnel. Disaster relief in the summer season should be prepared for Heat Disorder not only trauma because of sun exposure, and non air-conditioning environment. In addition, chronic diseases also need attention because those were often affected by loss of medicine, interrupt of daily life, anxiety and insomnia. Furthermore, the systems of preparations for the emergency dispatch at pre-disaster phase and rapid preparations of additional medicaments based on actual situation should be in place and practiced.

Key words: [Disaster Nursing] [Flood] [Red Cross]

D-7 An introduction of the activity of Disaster Nursing Support Organization (specified nonprofit corporation)

Tatsue Yamazaki, Mariko Ohara, Hiroko Kuroda, Akiko Sakai

The Nonprofit Organization Disaster Nursing Support Mechanism

Disaster Nursing Support Organization was certified as a nonprofit organization from Cabinet Office in December, 2006. It is naive in Japan to have received the certification in the field of disaster nursing and it is a beginning worldwide. The main purpose of the activity is to create of "the rich social citizen-based town planning to overcome the disaster damage". There are several plans, disaster-relief activities, manpower development and so on. As the past activities, we visited quickly many big disaster-affected areas in Japan and worked on the support at those areas. In the foreign country, we visited twice the stricken area after massive earthquake in China's Sichuan Province. By the second visit, we performed a lecture for the medical staffs to rescue victims at Sichuan University, west china hospital. The lecture was co-hosted by this hospital and our organization. Furthermore, three times of the seminar in term of disaster nursing were hold in a year.

Key words: [Disaster Nursing Support Organization] [Disaster nursing] [Volunteer]

Poster E Information

E-1 Research on information transmission in hospital nursing departments in the event of an earthquake

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Aim: This study aimed to clarify the ideal way for more effective information transmission in the nursing department, and to examine a system and strategies to further improve disaster prevention power and disaster mitigation power. **Method&Ethical considerations:** A survey targeted the disaster medical care in each nursing department of hospitals which are core disaster medical centers with 300 beds or more in areas which have been ruined by large-scale earthquake disasters as well as the hospitals in regions of less earthquake generation with 300 beds or more. A written notification was attached to the questionnaire, declaring that returning the questionnaire indicated consent. And anonymity of personal information was guaranteed. Furthermore, a reassurance that the results would be analyzed statistically and used only for this study was clearly stated. **Results:** The study found that disaster prevention manuals had been developed in the nursing departments of 80% or more hospitals. Especially, production of these was higher in hospitals in regions with core disaster medical centers where earthquakes had occurred than in the hospitals where earthquake experience did not exist. At core disaster medical centers, in particular, charts such as checklists, matrices or flow charts were utilized to facilitate effective information gathering and communication. However, a means of telecommunication that can be used in a time of disaster was not yet installed. Additionally, half of hospitals do not even have earthquake drills once a year. **Conclusion:** From the above-mentioned result, first of all, as a nursing department, manuals are needed. Next, it is necessary to advance the introduction of a means of information transmission. And, an increase in earthquake drills is vital.

Key words: [Information transmission] [Nursing department] [Earthquake]

E-2 Research direction for Society of Disaster Nursing focusing on the elderly in Japan

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Overview and Objective : Japan has experienced major natural disasters including the Great Hanshin-Awaji Earthquake in Kobe (1995) and the Mid Niigata Prefecture Earthquake in Niigata (2004). Because Japan is an earthquake-prone area, we must improve our disaster response preparedness. Furthermore, Japan's aging population requires special approaches to care and assist disaster victims. Until now, the study of disaster nursing for the elderly has been inadequate; therefore, we aimed to evaluate research directions in disaster geriatric nursing in Japan.

Methods : We searched within Ichushi, the Japanese medical literature database provided by NPO Japan Medical Abstracts Society. This database consists of approximately 5000 journal titles and posts 6,300,000 articles using thesaurus vocabulary for indexing and retrieval. We used the following search terms: "society of disaster", "nursing", and "elderly person" and retrieved 122 articles, 27 of which were original research articles with abstracts. Then, we analyzed these articles using text mining software "Trend search" (FUJITSU) to map relational words and analyze relational line size and distance to determine relationship strength.

Ethical consideration : We analyzed anonymous articles.

Results and Conclusion : We searched 3,723 articles from 1983 to 2009 but only retrieved only 27 eligible articles, which suggests that insufficient research has been conducted in this field. Mapping yielded four wedges: "home care or communities", "systems", "nursing care" and "individual factors." We conclude that research is necessary to improve information about disease and social behaviors. Lobbying at institutions and in the government is also required to prepare in advance for disaster by assessing potential hazards, and systematic training sessions for nursing personnel is needed so that they can effectively handle crisis/emergency situations (ICN-position Statements: Nurse and Disaster Preparedness in 2006).

Key words: [Society of Disaster Nursing] [Elderly] [Research direction]

E-3 Review of literature on the nursing care activities of dialysis and of those at disasters

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"Purpose" In this study, we did a literature review in order to have a general overview of the Japanese studies of the nursing care activities of dialysis and of those at disasters and their contents. "Method" We used the Igaku Chuo Zasshi (Japanese Medical Abstracting Journal) and searched for dialysis (hemodialysis and peritoneal dialysis), disaster, and nursing as keywords, and found 135 papers. Setting the search period as all years, we narrowed down the search to original articles and came up with 30 papers. We reviewed 26 papers excepting four, which had different study goals. "Results" The 26 studies were published in 2003 through 2009. Of the 26, 21 papers dealt with hemodialysis; five dealt with peritoneal dialysis. Of the 21 that dealt with hemodialysis, 17 papers dealt with patients (and two dealt with nursing staff members as well). Of the 17, 15 papers dealt with emergency departure and self-hemostasis during dialysis at the time of disasters, and patient education and training such as emergency evacuation. As for the studies on the patient education assuming the case where hemodialysis patients were hit by disasters at home and the thoughts of patients toward disasters in general, there were seven papers (of which three dealt with the cases during dialysis as well). The chief researchers of 24 studies were dialysis nurses. "Discussion" As the nursing care studies on dialysis and disasters have just begun centering the sites of dialysis nursing, there were many intervention studies of patient training assuming the cases where patients were hit by disasters during dialysis sessions. There were a small number of studies on the cases where patients were hit on non-dialysis days. Their contents included the habit of carrying dialysis cards and the ways of contacting hospitals.

Key words: [Dialysis] [Disaster] [Nurse]

E-4 Trends in original articles and reports published in the Journal of Japan Society of Disaster Nursing (2003 to May 2009)

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Objective We aimed to survey, summarize the contents of, and clarify trends in original articles and reports published in the Journal of Japan Society of Disaster Nursing following publication of the study by Yamamoto (2003) until May 2009.

Methodology We carefully read and analyzed content from original articles and reports printed in 12 issues of the Journal of Japan Society of Disaster Nursing from 2003 to May 2009 (Volumes 5-10), excluding the annual convention proceedings.

Results We found 8 original articles and 29 reports, which included 10 reports of earthquakes, 3 of contagious diseases, 3 of torrential rains and flooding, 2 of heavy snowfall, 1 of a volcanic eruption, and 1 of conflict. Papers which did not clearly identify a particular type of disaster discussed disaster awareness, disaster education and disasters in general. We found 10 papers on disaster awareness, 9 on disaster education and training, 6 survey reports, 4 on measures and systems for medical relief teams, 4 on functions and roles of nursing during times of disaster, 3 on health and living conditions of disaster victims, 2 on health and living conditions of medical care recipients, and 1 on victim mental health (including duplicates).

Discussion Similar to the report by Yamamoto (2003), most articles surveyed earthquakes and most content pertained to disaster awareness, but an increasing number of articles are being published on disaster education and training. Original articles now report concrete methodology such as structuring education models for disaster nursing and development of disaster education programs.

Conclusions Knowledge about disaster nursing is accumulating and being systematized through publication of original articles and reports, but original articles are still very sparse in number. We should aim to promote disaster nursing research and make efforts to publish original articles in this field.

Key words: [Journal of Japan Society of Disaster Nursing] [Literature review] [Disaster nursing]

Poster F Network / Networking

F-1 Disaster survey activities undertaken by Japan Society of Disaster Nursing

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The Japan Society of Disaster Nursing has conducted disaster surveys since the fiscal year 2000. These surveys can be divided into two groups: initial surveys and preliminary surveys. Initial surveys are carried out through telephone calls and internet search, while preliminary surveys are conducted by visiting affected areas. Both surveys are conducted according to certain criteria devised by the society, and we have garnered knowledge with regard to disaster nursing through these surveys. Past preliminary surveys include natural disasters such as earthquakes, typhoons, tornadoes and snow damages as well as human disasters such as the poison curry incident in Wakayama and the crude oil spill accident in Fukui. Through these cases, we have accumulated knowledge regarding the needs of disaster victims and supporters. A group of three people take turns to engage in survey activities for a period of one month at a time. In December 2008, an open invitation was made to the members of the Japan Society of Disaster Nursing to be on the survey teams, and a group of 22 new members has been on a mission since April 2009. The members meet three times a year to share information, exchange opinions and discuss the current condition and challenges of disaster nursing activities.

Key words: [Disaster survey] [Disaster nursing] [Japan Society of Disaster Nursing]

F-2 Activities of advance team at the time of disasters in Japan

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The Japan Society of Disaster Nursing has conducted initial and preliminary surveys at the time of disasters since the fiscal year 2000. Preliminary surveys on the site used to be conducted in one to four months after the occurrence of disasters, when the affected area was ready to receive a preliminary survey team. However, it became clear that making interventions at this pace was not timely enough and that nursing care providers became exhausted due to the lack of support, which should have been provided from immediately after the disaster. The missions of an advance team are to get involved in relief activities from right after the occurrence of a disaster and to identify the health-related needs and the nursing needs of local residents through their relief activities by utilizing the accumulated knowledge of disaster nursing. To dispatch an advance team, the scale of a disaster has to be over a designated level and the approval of the president of the Japan Society of Disaster Nursing is required. At present, there are 6 people who can serve as members of an advance team. An advance team was sent to Okazaki City, Aichi Prefecture, which suffered torrential rainfall in FY 2007, and to Sayo Town, Hyogo Prefecture, which also suffered torrential rainfall in FY 2008. We believe that an advance team helps mitigate anxiety felt by disaster victims and supporters as well as establish an appropriate support system from an early stage.

Key words: [Advance team] [Disaster Nursing Network] [Disaster Nursing]

F-3 Disaster prevention awareness of residents of Miyakejima, model area for disaster prevention, and their network in disaster

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Purpose: To provide materials for considering community-based disaster prevention by investigating the Miyakejima residents' awareness of disaster prevention and their network in disaster.

Method: Interview survey Subjects: 15 residents of Miyakejima Period of survey: from August 2008 to May 2009

Results and Discussion: With respect to the disaster prevention, the islanders said, "we are used to adapting to disasters. The direction of the wind tells us where to evacuate. We have experiences of evacuation in our childhood, so that we have always emergency supplies ready at home. It is completely natural for us to provide against the disaster," and "No food is available, even for one week when any ships cannot come into port because of the bad condition of the sea. Thus, we are prepared to be self-sufficient in daily life." They answered a question as to the network among the residents, as follows: "All the islanders are aware of being social workers," and "This island has been repeatedly hit by volcanic eruptions. Once there occurs a volcanic eruption, the communities in the areas less damaged will extend a helping hand to the damaged area without delay, for example, by distribution of food. In light of this, as a natural result of the repeated disasters a keen awareness about disaster prevention has been created among the Miyakejima residents. The residents generally try to store food at home, for example, by devising a manner of cooking, not in preparation for the future disaster, because they know the geographical features of Miyakejima. They take advantage of their life style for disaster prevention. Further, it is demonstrated that a system for helping each other is established in the neighborhood, which can form a strong network in the disaster.

Keywords: [Miyakejima] [Awareness of disaster prevention] [Network in disaster]

Poster G Response and Recovery

G-1 Changes in the health status and dietary habits of adults living in temporary housing during a disaster recovery period

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Objective: It is necessary to maintain and promote health for life reconstruction. The objective of this study was to elucidate the changes in the health status and dietary habits of adults living in temporary housing during a disaster recovery period.

Methods: Surveys on health and life were conducted by interviews and mailed questionnaires in adults living in temporary housing 4 months (November 2004) and 22 months (April 2006) after a flood disaster. The significance level was 5%.

Ethical considerations: Approval for the survey was obtained from the ethical committee of the Faculty of Medicine, Niigata University.

Results: The subjects were 120 individuals (mean age, 55.5 ±16.9 years) in 2004, and 46 (51.9±18.2 years) in 2006. The incidence in 2004 and 2006 of hypertension was 10.8% and 8.3%, of dyslipidemia was 8.0% and 14.6%, and of diabetes was 3.0% and 2.1%, respectively. Although the incidence of subjective symptoms increased from 28.3% to 41.5%, the percentage of subjects with insomnia and anxiety decreased from 33.3% to 16.7%(p=0.05) and 52.5% to 6.3% , respectively. As for the dietary habits, the percentage of subjects who "eat three meals a day regularly" decreased from 81.7% to 58.3%(p=0.01) , "eat a lot of stir-fried foods" increased from 14.2% to 45.8% (p=0.00), and "eat confectionery often" increased from 15.8% to 33.3% (p=0.00).

Discussion: As recovery proceeded, the frequency of symptoms such as insomnia improved, whereas the dietary habits showed a tendency toward consumption of simple and fatty foods, potentially increasing the risk of dyslipidemia. **Conclusion:** Worsening in the subjects' dietary habits associated with a prolonged disaster recovery period was observed.

Key words: [Recovery period] [Temporary housing residents] [Dietary habits]

G-2 An early investigation report for nursing needs about "heavy rain at the end of August 2008"

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Okazaki city of Aichi prefecture had been hit by torrential rainfall from August 28th, 2008; the amount of rainfall measured was 398mm from 8:00 am of the 28th until noon of the 30th. The amount of rain was such that it reached three times as much of the whole August. This heavy rainfall caused overflowing of small rivers flowing in the city and drowning of two in their houses due to inundation. Furthermore, the houses were flooded above the floor level, thereby causing a great damage. An evacuation order was issued to the people residing in Okazaki city, which is amounted to 1.4 hundred thousand families (about 3.7 hundred thousand people), to leave the city before dawn of the 29th. Moreover, Disaster relief act was invoked in August 29th, 2008 and Natural Disaster Victims Relief Law was invoked in September 1st, 2008. Both these laws were applied. Usui and Kanazawa, who are the members of Japan Society of Disaster Nursing Network Act, got the information of condition of torrential rainfall in real time by news. Especially focused on that evacuation instructions were announced against about 37 thousand hundred people, a sheer necessity of going to the devastated area promptly and performing investigation was realized since nursing needs will be concerned to grow dramatically. Arriving earlier at the devastated area since approved as a dispatched member of advance team from Japan Society of Disaster Nursing, the contents of action were reported since an opportunity was obtained to grasp the nursing needs.

Key words: [Disaster caused heavy rain] [Early nursing needs] [Japan Society Disaster]

G-3 Disaster nursing

Hiromi Sekiguchi, Misako Seto, Shuhei Arao

NPO TMAT

Background; NPO TMAT has provided disaster medicine and medical technical support since 2005. Our ideal is "All living beings are created equal". In Mid Java Earthquake in 2006, TMAT arrived at the disaster area as the first Japanese team and started medical treatment within 48 hours after earthquake. In Niigataken Chuetsu-oki Earthquake in 2007, TMAT cared of victims in some shelters especially seniors living alone. In Myanmar Cyclone Disaster in 2008, we worked for displaced persons in the cooperation with a local community.

Nursing practice; Under disaster, medicines and equipments are always shortage. We have managed to treat patients with alternative ways.

In Mid Java Earthquake, TMAT made brace with the rubble and used a bottle occupied with small stones as traction. With humid climate, wound was kept moistness with film without antiseptic. At first, local doctors wondered why there was neither antiseptic nor gauze. But they understood its availability through process by degrees. Through those activities, counterpart got advanced technique from TMAT. They expanded it to other staff and contributed medical development in Indonesia.

Ethical niceties; Our activities have been based on respecting and understanding custom, culture and religion in disaster area in cooperation with counterpart. We use local equipments as much as possible. We stand on victims as an independent organization.

Conclusion; TMAT is concerned with speed to reach the disaster area as much as possible. To reach the area, relationship with the local community is needed. Imagination is also very important in different culture and a shortage of medicine to treat patients. In addition to them, we have learned to keep the common nursing practice like to share pain with patients through taking hands or rubbing backs. We believe our activity in emergency approach medical development of the world.

Key words: [Emergency] [Disaster nursing intervention] [Networking]

G-4 The international exchange at ordinary times is important in international help at the disaster.

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1. Background On May 12, 2008 an earthquake measuring 8.0 on the Richer scale hit Sichuan province in China. For this disaster, Japanese government sent Japan Disaster Relief Medical Team .

2. Content of practice Our team consisted of 23 members and were sent for two weeks from May 20th after the request from the Chinese Government was received. The team was deployed to the West China Hospital of Sichuan University which is separated from the focus of the earthquake.

3. Logical consideration Our activity puts into operation for victims and stricken country with full respect toward Chinese government's view.

4. Consideration, Result Our usual activity style was offering medical treatment by ourselves in stricken place. But, our activity in this time was different from what we do usually. We did not have enough experience like this form, so we foresaw a difficulty. However, We solved the problem, and we made a good result for both sides. First of all, we expressed our respect to Chinese staff, and we tried avoiding any confusion to their medical system. Also, West China Hospital gave us enough support. Specially, there was nurse in that hospital who got a PHD from a Japanese University. She was a very important person. She really understood Japan, and she adjusted in a good way for both sides. Moreover, many translators and volunteers supported our activity. They studied in Japanese university or learned Japanese in Chinese university or worked with Japanese people. Therefore, they understood enough Japanese culture. So, we could communicate both sides real intention. All of these were so important for us to do collaborative work. To do international medical support smoothly, technical skills in ordinary times and cultural exchanges are advantageous factors.

Key words: [International Disaster Relief] [Disaster Nursing] [International exchange]

G-5 Predictive variables on demand and need to health forecasting using decision tree method

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Purpose: Climate change has a serious effect on the lives of the world's people and affects human health. Especially ultimate changes of climate and environment are a casual factor in weather disaster. For example, heat and cold wave, low atmospheric pressure and Asian dust are often the root of the health problem, e.g. sunstroke, CVA, arthritis and respiratory disease. So they call for health forecasting service. The purpose of this study was to predict variables to demand and need to health forecasting.

Method: This study used a descriptive design through structured self-report questionnaires. This survey was made to randomly-selected 1,000 adults above 18 years old and living in Busan, South Korea from June 1 to July 31, 2009. 956 out of 1,000 agreed with purpose of this study and were given gifts in return for their answer. Data were analyzed using decision tree method, one of the data mining techniques by SAS 9.1 and EnterpriseMiner 4.3 program.

Results: Just 290(30.33%) person demanded health forecasting and 3 factors showed that most of them expressed the demand on health forecasting; perception of need($\chi^2=38.12$, $p<0.0001$), coping to warning and think of importance. And 505(52.82%) person needed health forecasting and 3 factors showed that most of them expressed the need to health forecasting; Think of important to health forecasting($\chi^2=44.34$, $p<0.0001$), environmental disease and age revealed need to health forecasting. In this result, %response, %captured response and lift chart for decision-tree model was appropriated to the predictivemodel on demand and need to health forecasting.

Conclusions: The significant and predictive variables for demand and need health forecasting were age and environmental disease. For whom have environmental disease and the older, I suggest to improve meteorological information system technically and to develop a health forecasting service resulting to healthier and comfortable life.

Key words: [Health forecasting] [Meteorological information] [Decision-treemethod]

Poster H Pandemic

H-1 Proposal about health information management of pandemic of novel influenza A (H1N1) 2009

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In April 2009, the WHO changed the pandemic alert level for novel influenza A (H1N1) from phase 3 to phase 4. As our center is a designated medical institution for specific infectious diseases, we have set up a high-fever outpatient department (Hatsunetsu gairai) according to the guidelines issued by the Ministry of Health, Labor and Welfare of Japan. A total of 776 patients have visited the Hatsunetsugairai. Survey period From May 2nd to August 23rd, 2009 Method We reviewed the procedure of borrowing paper medical charts at the Hatsunetsugairai based on a newly developed patients' database Ethical consideration We used a database that did not disclose patients' individual information for our review. Results 1. Paper medical charts frequently needed to travel back and forth between the medical record department and the Hatsunetsugairai. For Waiting at home patient, we had to check their medical condition by phone everyday. 2. An outside laboratory PCR test is needed for a confirmed diagnosis of the H1N1 virus infection and it takes some time to check patient's information such as name and order number. 3. Medical institutions with a Hatsunetsugairai are required to report to the prefecture on the situation of the patients who have visited the hospital. However reporting an ever-changing situation using paper medical records is practical. 4. Unification of recording methods is difficult because the patients are different from those physicians treat in their routine practice. Conclusion Based on these factors, we propose that medical records used at the Hatsunetsugairai which handle novel influenza patients should be electronic records because of the following three reasons; 1) An immediate assessment and response to the situation of the outpatients is required, 2) A well-organized medical record management system for improving patient information accessibility is required to shorten the time to definitive diagnosis and 3) As a preventative measure to avoid the disease being transmitted via paper charts.

Key words: [Novel influenza A (H1N1)] [Pandemic] [Health Information Management]

Poster I Preparedness

I-1 Survey on awareness of disaster prevention among student nurses

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[Goal] Since Japan is a country that has a lot of natural disasters such as typhoons and earthquakes. This survey is designed to examine the awareness of disaster prevention of those student nurses who will undertake nursing care in times of disaster, and to identify the basic findings.

[Methodology] A total of 47 student nurses living in mountainous regions were surveyed. As for the survey method, a questionnaire sheet was adopted. The survey sheet contained questions about what the image of disasters, awareness of potential risks of disasters, and disaster-prevention measures. For data analyses, SPSS was used for basic statistics and one-way analysis of variance was conducted.

[Ethical Consideration] With ethical consideration, written explanations were given about the anonymity and confidentiality of the survey and the objective and significance of this study, and written consent was given by signing of the questionnaire sheet.

[Results] 33 of the informants responded as "living alone", and 14 responded as "living with someone". Many of the informants had an image of disasters associated with "fear". As for fear against earthquake and awareness of earthquake risks, awareness of regional costs, and awareness of subjective norm (home), a significant difference ($p < 0.05$) was shown.

[Discussion & Conclusion] It was thought that fear against natural disasters influences the awareness of risks. As for the factors that improve the intention of disaster-prevention measures, it was believed that there was an influence from homes, but not from regions. It was thought that there was a low sense of community, as many of the students were living alone in housing that was temporary. Therefore, it was suggested that it was important to raise awareness of disaster prevention in the regional community from the time when individuals are students.

Key words: [Natural disaster] [Disaster prevention] [Student nurses]

I-2 Action research for promoting disaster preparedness in special schools

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[Purpose] Disasters frequent Japan. To protect children in special schools, preparedness in such schools needs to be promoted. [Method] Under this action research, induction meetings for relevant governing/related prefecture offices were held during June 2008 and July 2009 in "A" prefecture. Interview of teachers from six schools were conducted to investigate the present level of preparedness. Based on the findings, two to three visits were made to each school, meeting and advising the personnel in charge of school management and disaster prevention. Awareness among the teacher and the provision suitable for each school was promoted. Workshops in collaboration with prefecture offices were organized. [Ethical consideration] Approved by the Ethical Committee, Ibaraki Prefectural University of Health Science. [Result] The interview found that most schools have no provision for disaster with teachers sharing assumptions that "we will manage on the day" and "schools are safe places". The teachers also shared a recognition that "understandings of managers were necessary" and it should be "led by the Board of Education" in order to increase preparedness. Thus under collaborating with relevant governing, on the first visit to each school, the necessity of preparedness was explained to the management with the example of the Hanshin Awaji earthquake and the planning and the appointment of a disaster manager was advised. As a result, preparedness such as evacuation of children of wheelchair, provision for children with medical care and collaboration with the PTA were found on the second visits. Information was shared in the workshop. [Discussion] Effective intervention by multiple visits led the teacher realize disasters as real threats, resulting the actions. Information sharing among schools was effectively achieved with the collaboration with the local government. [Conclusions] The next challenge is to spread the preparedness in all schools in the prefecture.

Key words: [Special school] [Collaboration with Prefecture] [Preparedness]

I-3 Role-playing by community residents in support of those needing care during a disaster and their families as part of disaster prevention and reduction

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[Background] It is said in Japan that "preparation is the key to success." Being prepared is crucial in preventing and reducing disasters, particularly in the preparedness phase. As nurses, we support voluntary disaster prevention activities in regions with earthquakes expected in the near future. This document reports the role-playing results in support of those needing care during a disaster and their families as part of disaster prevention and reduction. [Contents of the nursing practice] Participants in the role-playing were volunteers of a town development study group in A-town, reporting on their experience to the residents. First, five groups with five participants each were formed. Then facilitator cards with the following information were distributed: 1) personal attributes, family situation; 2) behavior during the disaster; and 3) behavior in the shelter. Using these cards as guides, participants discussed what they felt and actions they would have taken.

[Ethical considerations] The request to local residents for the role-playing was made through the town development study group of A-town. Research goals and contents, the voluntary nature of the exercise, privacy policy, and plans for publicizing the research results were clearly explained to participants and their agreement regarding publication was procured.

[Results Discussion] Before and after the role-playing, participants were asked whom they imagined would need care in times of disaster. Before the role-playing, participants did not realize that their family or relationships with neighbors were also important, but did realize this afterward. It is important to focus not only on those who need care during disasters, but also on their families. There were comments that the "card setting is complex" due to the wide age range of participants, from 50 to 80 years old. Points for improvement include making the cards more understandable and with a difficulty more closely matched to participants' ages.

Key words: [Disaster prevention and reduction] [Role-playing] [Those needing care during a disaster and their families]

I-4 The preparedness in Japanese disaster base hospitals: Relation of the experience of injured patient's admittance and preparedness in Japanese disaster base hospitals: Part1

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Purpose : In Japan, numbers of disaster base hospitals were improved by the lesson of the Great Hanshin-Awaji earthquake, and now over 570 hospitals are specified as such. The purpose of this study was to clarify whether the experience of injured patient's admittance to disaster base hospitals or not is influenced to the preparedness for disasters.

Method : In order to clarify the state of the preparedness for disasters at disaster base hospitals in Japan, questionnaires were sent to the nursing departments of all 572 hospitals in 2007. The state of preparedness of these hospitals was analyzed by comparing the experience of injured patient's admittance with 39 items including mitigation plans, training and education made by researchers.

Ethical considerations : The questionnaire was distributed with explanations of the purpose, method, and others. The answer was sent back anonymously. The research was approved by a research ethics committee at the University of Hyogo.

Result : The responses were obtained from two hundred twenty two hospitals, and 216 hospitals out of them had an answer for survivors admissions. Although the disaster patient's admission situation changed with location, there were no differences in other factors (installation personnel and class of disaster base hospital). Of those, 90 hospitals had experience, but 126 institutions did not. There were four significant differences; "Disaster manual", "Coordination plan of duty in the time of disaster", "Disaster training except fire fighting" and "Disaster education and training of hospital staffs". The hospitals with experience meet the condition of four items above.

Discussion : It was surmised that these items (manual, plan, training and education) were enforced, because the preparedness for a disaster was improved by experience.

Conclusion : The experience of injured patient's admittance significantly influenced to the manual and training.

Key words: [Disaster base hospital] [Preparedness] [Disaster experience]

I-5 The preparedness in Japanese disaster base hospitals: The preparedness in Japanese disaster base hospitals and its evaluation: Part2

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Purpose : Although the disaster base hospitals are improved in Japan, the preparedness situations of these differ. The purpose of this study was to investigate the situation of the preparedness for disaster among the disaster base hospitals and an examination was carried out to compare and evaluate preparedness.

Method : All 572 disaster base hospitals in Japan participated for this study, and then cross-tabulated the 44 items concerning disaster preparedness (disaster mitigation planning, training, and education) were compared.

Ethical consideration : The questionnaire was distributed with explanations of the purpose, method, and others. The answer was sent back anonymously. This research was approved by a research ethics committee at the University of Hyogo.

Result : Two hundred twenty two hospitals answered, and 218 hospitals replied to the evaluation concerning disaster preparedness plans. 28 departments reported "Satisfactory" and "Almost satisfactory", yet 190 departments reported "Dissatisfactory" and "Not satisfactory". In the preparedness surveys conducted this time, there were significant differences in 23 items among the hospitals; "Knowledge of the manual", "Decision of the clinical record at the disaster", "Beds at the disaster", and "Disaster education and training of the staff", etc. Hospitals which prepared well for disasters meet the condition of all the item above. 21 items had no significant differences; "Plan organization", "Reexamination of the manual", "Personnel urgent connection network", "Grasp between the personnel arrival time", etc.

Discussion : Even though 28 disaster base hospitals answered satisfactory for their preparedness, but preparations to treat survivors and the disaster education were made in the "satisfactory" hospitals.

Conclusion : There are 28 hospitals which think they are satisfactorily prepared for disasters, even including disaster base hospitals. The kind of thing that make preparedness difficult need to be shown clearly.

Key words: [Disaster preparedness] [Disaster base hospitals] [Evaluation]

I-6 Disaster preparedness in nursing at the health center, Japan

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Purpose: The purpose of this study was to identify factors of the disaster preparedness in nursing.

Method: The focus group interviews were utilized for data collection. The participants for research were the public health nurses in the area who had experienced the disaster. The content analysis was used.

Ethical consideration: Before obtaining consent form, the purpose and the meaning of research were explained, and after obtaining consent, it was investigated. The research was approved by a research ethics committee at the University of Hyogo.

Result and Discussion: Fourteen public health nurses with two public health centers in Niigata, Japan were participated for this study. They experienced the earthquake, the snow damage and the flood. Their concerns were to occur tsunami and outbreak of influenza. The following twelve factors were identified with content analysis. 1) To develop the guideline that is easily understood for newcomer public health nurses. 2) To clarify vulnerable people and their individuality planning. 3) To clarify role assignment. 4) To share the disaster through visualization. Furthermore, booklets and the study meeting of disaster were required. 5) To prepare medicine and foods for survivors and caregivers. 6) To prepare for the communication equipment such as cellular phone. 7) To prepare recognized official identity as a professional care provider. 8) To have knowledge such as law, dispatched medical teams and disaster terms. 9) To imagine the disaster situation. 10) To recognize it happens to oneself. 11) To prepare spare closings that cannot return home at the time of disaster. 12) To provide the disaster education for community people.

Conclusion: The preparedness includes not only behavior level but also recognizable level.

Key words: [Disaster-preparedness] [Japan] [Public health nurse]

I-7 Development concept of disaster reduction based on the hospital nurses' flooded experiences in the United States

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Purpose: Unexpected disasters frequently occur all over the world today. The purpose of the study was to explore about the concept of disaster reduction through nurses experiences and knowledge. Methods: The research design was on focused group interviews, and purposive sample of 18 participants in January 2008 in two hospitals in the US. The interviewed nurses were both victims, and responders of the disaster at their victimized hospitals. For these interviews, a semi-structure and a major content of the subjects were their experiences the hurricane disaster. All interviews were tape-recorded verbatim and transcripts for analyzed across the text. Human subject approval was obtained from at University of Hyogo before data collection. Results: Based on information obtained from nurses' experience the flood, the nurses utilized current knowledge and colleague advice to best care for the patients and hospital staff to reduce the impact of the disaster. All hospital nurses understand the system of how to act as one's role as a nurse and their responsibility. They also established various responses to protect patients and nurses in their hospital. Nurses always learned from their disaster experiences and other's disaster experiences regarding what worked, mistakes made and then how to improve their responses in the future. It was observed that the nurses know how to consult outside sources about their experiences and share the information they obtained the disaster to other nurses for future reference. The relationship among the nurses working in the hospital was noted to be one of mutual trust in everyday life. Conclusion: Explanation of the nurses' disaster experience on disaster reduction showed several crucial points for the concept of effectiveness of the disaster reduction in the hospital. These ideas would contribute to the improvement of patient care and hospital protection during and after the time of any disaster.

Key words: [Disaster reduction] [Hospital nurses' disaster experience] [United States]

I-8 Study of support for senior citizen at disaster in the depopulation and aging area

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- 1.Purpose To discuss the actual situation of preparedness for disaster of senior citizen, and to consider the support for them as public health nurse in A area, Mie prefecture, Japan.
2. Method, Ethical considerations The objects were over 65 years old who live in A area. They were explained about a purpose of this study, if they refuse interview, it won't be inexpedient for them. The dates of interview and research results were analyzed by a qualitative contents analysis.
- 3.Results Objects were total 122(average age 76.0), Males 48(39.3%) and Females 74 (60.7%). The response rate was 96.1%. People who didn't know about their household medicine's name, effect and side effect were 10 (10.4%). And people who didn't prepare emergency goods for in disaster were 31(25.4%). The results of contents analysis in free answer were 131 date among 98 people. Category were [Damage will be lower estimate] [Fear of disaster] [Anxiety of support] [Request to town government] [Sharing of personal information] [Community strategy] .
- 4.Discussion, Conclusions In disaster, people have to control of one's health and require to be able to tell the medicine care or medicines to medical care workers, and to prepare notebooks (such as an Identification Card , Address , family doctor, medical history). It is necessary to consider about a evacuation training in community include need of disaster vulnerable people. Therefore public health nurse have to participate in these conferences and training in community, and we need to educate these things for people in daily life.

Key words: [Preparedness for disaster] [Senior citizen] [Public health nurse]

Poster J Psychosocial Issue

J-1 Feelings regarding care during a natural disaster among family caregivers of the homebound demented elderly

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[Purpose] The current state of care provided by families is such that in the occurrence of a sudden change in their situation such as during a natural disaster, families tend to take actions in their own way despite having apprehension over the judgments they make. It was decided to conduct a qualitative factor search analysis for the purpose of determining the feelings of family caregivers of the homebound demented elderly regarding the providing of care during a natural disaster.

[Methods] Family caregivers were asked to describe their feelings regarding providing care at the time of a natural disaster. After using the contents of those replies as the primary source of data and transcribing that data, the contents of the replies were analyzed using a qualitative factor search.

Ethical Considerations: The subjects were provided with a general explanation of the study and informed that data processing and storage would be kept strictly confidential, that their privacy would be protected, and that they were under no obligation to participate in the study, after which the consent of the subjects was obtained.

[Results-Consideration] As a result of analyzing the data, four categories were extracted, consisting of "securing a special place for providing care", "presence of persons able to depend on in the community", "shallow social relationships" and "importance of information exchange". When caregivers were asked to consider providing care in the event of a natural disaster, although they indicated a desire to secure a special place for providing care while still maintaining contact with someone nearby such as in their neighborhood, they also were aware of the importance of not only receiving information, but also providing information.

Key words: [Family Caregivers] [Natural Disaster] [Demented Elderly]

J-2 Identifying the effects of nurses' stress from experiences in disaster relief nursing

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Purpose The purpose of this study was to investigate the effects of disaster relief nurses' experiences in disaster nursing.

Method A questionnaire based on an extensive review of the literature and previous interviews was sent to 766 nurses in 74 Red Cross hospitals, all of whom had experienced disaster nursing during the previous ten years. The resulting data was analyzed quantitatively and statistically.

Ethical considerations This study received the approval of the Kochi Women's University Nursing Research Ethical Review Board.

Results 1) The questionnaire response rate was 72.6%. The valid response rate was 97.5%. 2) Principal-component factor analysis was applied to the 26 items listed as effects of nurses' experiences in disaster nursing, and 7 factors were identified. These were: (1) regrets and feelings of inadequacy (2) tiredness, physical and mental stress as a result of human relations and working conditions (3) continuing mental pain resulting from experiences in disaster nursing (4) painful memories after disaster nursing (5) heightened tension caused by disaster nursing (6) sleep disorders caused by disaster nursing, and (7) fear and shock experienced while disaster nursing.

Discussion These results indicate that nurses experience considerable physical and mental stress, both while participating in disaster relief nursing activities, and on their return to normal, hospital-based nursing duties. The findings suggest that essential sources of support for this stress can be obtained through improved human relations and working conditions.

Conclusions The identification and categorization of the various effects of stress, together with the insights into how nurses manage their stress have important roles to play in improving pre-disaster training and post-disaster relief nursing support.

Key words: [Disaster nursing] [Effects of experiences] [Questionnaire]

J-3 Correlation between psychological stress response and stress markers in relief workers participating in a disaster relief drill

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Objective The objective of this study is to measure psychological and biochemical stress responses in relief workers participating in a disaster relief drill and to understanding their connection.

Methods

1 Study participants: 54 relief workers who participated in a Japanese Red Cross disaster relief drill in 2007

2 Measures 1 Essential attributes 2 Psychological stress response scale (SRS-18), salivary cortisol levels

3 Methods of Analysis 1 Analysis of variance 2 Salivary cortisol measurement (stress marker in saliva)

Ethical Considerations We explained the purpose of the study to the relief workers, who then agreed to participate in it.

Results We analyzed data of 54 of 66 relief workers to determine the correlation between the SRS scores or salivary cortisol levels and the roles of the relief workers before and after the drill. There was a main effect on SRS scores: $F(2,100)=6.950$, $MSe=40.092$, $p<.01$. There was also a main effect on salivary cortisol levels: $F(2,74)=6.143$, $MSe=0.874$, $p<.01$. Salivary cortisol levels changed over time, but the changes did not depend on the roles. While there was no significant difference in average cortisol levels before and after the drill, they were lower before the drill, highest immediately afterwards and tended to decrease one day later. However, they did not decrease to the baseline.

Discussion Based on the results, it was demonstrated that, while psychological stress such as tension and anxiety was immediately relieved, physical stress after the drill was not clearly felt. By understanding changes in stress response due to the drill, the necessity of stress control will be better understood. Awareness of stress will lead to early intervention and prevention of worsening.

Key words: [Psychological stress response] [Stress markers] [Relief workers]

J-4 Using focus group to explore nurses' experience of rescuing care for the victims of Morakot Typhoon

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Disaster management training for emergency response in China has been conducted in Hubei and Zhejiang provinces as well as Macau and Hong Kong for interdisciplinary groups. The training sessions were 2 - 3 days including both didactic and skill stations. The content of the training sessions presented the incident command system, medical response to disaster, public health response, decontamination, response to terrorism, care of specific injuries in disasters, environmental considerations and psychological response as well as care of the dead and their families. The trainer of trainer approach has been used at the provincial level and those trained have trained those in their area of responsibility. A pretest and post test was given to evaluate the cognitive knowledge and the skill stations evaluated skill competence. The entry level scores median is 50% while the post test scores reflect significant learning with the median at 95%. Participants are restricted to 30 participants to allow for mastery in the six skill stations. The participants are doctors, Communicable Disease Center personnel, public health officers, police, nurses, emergency medical technicians, psychologists, morticians, fireman, and social workers. The content of the workshops is based on research from the field by the team from response to international disasters both natural and man made as well as years of practice and research related to patient response in various types of disasters. The basic reference for the training is Briggs, SM and Brinsfield KH, Advanced Disaster Medical Response now published in eight languages.

Key words: [Nurse experience] [Focus group] [Disaster] [Rescue care]

J-5 Nursing interventions for grieving and trauma of post west Sumatera's earthquake

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Disaster is a sudden or slow moment which creates consequences to the normal life so that emergency action is needed to save human victims and their environment. Indonesian Meteorological, Climatological and Geophysical Agency noted at least 30 earthquakes happened in Indonesia with the scale above 5 of richter scale in 2009, and the recent earthquake happened in West Sumatera (7,6 RS), last November 30, 2009 especially in Padang, Pariaman and Padang-Pariaman. One of the problems that is found most in the post disaster area e.g earthquake is a psychological stress. Psychological responses of one person to another are different, including to children, teenager, adult, or elderly. This research wants to know kinds of problem that emerge on the clients with Post Traumatic Stress Disorder (PTSD) of post earthquake, the interventions applied and their results. Action research was used as a design of this research. The sampling method of this research was purposive sampling with 50 respondents from three earthquake areas in West Sumatera that were Padang, Pariaman and Padang-Pariaman. The result showed that there were four common problems emerged from Post Traumatic Stress Disorder clients of post earthquake. They were grieving on mother, trauma on mother, trauma on children and problem on mother bearing baby. Interventions were done appropriate with the problems which emerged such as mother's grieving interventions through individual and group therapy; mother's trauma interventions through individual, family and group therapy; children's trauma interventions through play therapy; health education and counseling to the mother bearing baby, so that resulted an intended adaptive behavior and coping mechanism of the earthquake's victims based on the problems. From the result of this research, researchers suggest that nurses should cooperate intra and inter-sector in handling post earthquake client with grieving and trauma's problems.

Key words: [Post Earthquake] [Grieving] [Trauma]

J-6 Prevalence of mental health disorder caused by flood disaster in Dki and Depok

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This research aimed to identify prevalence of mental health disorder because of floodwater strike the territorial of DKI Jakarta and Depok. The epidemiology descriptive research design with cross sectional study (prevalence study) was used. The population with criteria: 1) suffer from the first flood disaster in February 2007); 2) can read and write; and 3) loss of properties or beloved person.

It was identified that a great part of people in 3 PHC (Public Health center) suffered from mental health problem due to flood (60.9%-68.1%) compare with those who did not experience it. The greatest PPR experiencing health problem due to flood were: 1) PHC Koja – range of age 25-31 years old = 182.3 per 1000 inhabitants; 2) PHC Cilincing – range of age 6-11 years old and 40-46 years old = 127.8 per 1000 populations, and 3) PHC Kebun Jeruk with range of age 32-39 years old = 125.6 per 1000 populations. PPR indicated that women is the major part who suffered from mental health problem because of floodwater in each sub district PHC. The greatest PPR indicated those who suffered from mental health problem due to flooding was: 1) PHC sub-district Koja: private employee = 171.9 per 1000, 2) PHC sub-district Cilincing: student = 240.6 per 1000, dan 3) PHC sub-district Kebun Jeruk: private employee = 253.5 per 1000 populations. PPR indicated that Moslem is the greatest part of people who suffered from mental health problem. PPR demonstrated the greatest number who suffered from mental health problem was: 1) Income \geq Rp. 900.000,- at PHC sub-district Koja = 322.9 per 1000 populations, 2) having no income at PHC sub-district Cilincing = 383.5 per 1000 populations and PHC sub-district Kebun Jeruk = 285.4 per 1000 populations. The greatest PPR who suffered from mental health problem because of floodwater was: 1) PHC sub-district Koja: Javanese = 213.5 per 1000, 2) PHC sub-district Cilincing: Sundanese = 188.0 per 1000, and 3) PHC sub-district Kebun Jeruk: Javanese = 259.5 per 1000 populations.

Key words: [Flood] [Prevalence rate] [Mental health]