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Lesson and learned from the older people in case of Great East Japan Earthquake and Tsunami of 2011

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Abstract

As global aging progress, disaster preparedness for elders is becoming a critical issue because their special needs have not been well accommodated in the case of disaster relief. This study is prepared to share the experience of this crisis in East Japan with both developed and developing parts of world, so that we will be better prepared to accommodate the needs of older population in the future disaster relief effort. The study aimed to examine the lessons and learned older people faced as a result of their displacement, and to assess the impact of the disaster on their wellbeing and the forms of support available to them. The study was conducted in two cities in Iwate and Miyagi prefectures, selected for the severity of impact of the tsunami and the high concentration of older people. Data was collected between December 2012 and March 2013. About 70% of the survey respondents were at home when the earthquake began. More than half the respondents moved to their assigned evacuation sites. Almost half of respondents in both cities evacuated with family members, indicating the large numbers of older people living with or near to family members. Among the females under 75, the number that replied 'Story and wisdom from the past', 'Tsunami Warning' and 'Training in Preparation for Tsunami' were high. Disaster preparedness and training should build confidence and encourage older residents to take immediate and appropriate action in an emergency.

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Keywords: older people; Disaster preparedness; vulnerable; wisdom

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1. Introduction

As global aging progresses, disaster preparedness for elders is becoming a critical issue because their special needs have not been well accommodated in the case of disaster relief. To better prepare the future disaster incidents for older peoples, identifying risk factors and challenges in the everyday lives of older people is critical for effective disaster risk reduction and management, and can contribute to effective policy interventions and appropriate allocation of resources. The East Japan earthquake and Tsunami that occurred on March 11 2011 caused severe damage to the Tohoku Coastal region.15, 883 people lost their lives, and 56.35% people ware over 65 years old [6,7].The affected regions had very high population of older people[13]. While this disaster occurred in Japan where the system of disaster preparedness is in place, its experience among the older population in the case of disaster seems to be similar to other incidents, and many recurring issues were captured in the survey. Therefore, this study is prepared to share the experience of this crisis in East Japan with both developed and developing parts of world, so that we will be better prepared to accommodate the needs of older population in the future disaster relief effort. Considering the number of death and hardships caused by disasters, it is clear that older people requires special supports that was not always met in the case of disaster relief efforts [9]. For example, during Hurricane Katrine in 2005 older people's morbidity increased by 12% in the year following the disaster [17,19]. A preparedness plan should also include information about how older people will be able to re-establish their familiar lifestyle. This requires looking into both the effectiveness of the process of immediate disaster response, as well as the long-term recovery process. The combination of the factors outlined above heighten the important of understanding the situation of older people displaced by the disaster as a basis for the delivery of on-going assistance and future emergency response planning. This study will conclude with our lessons and learned to prospects for the revitalization of the devastated communities, not only from the natural disasters but also the changes caused by the global ageing phenomena. The study aimed to examine the lessons and learned older people faced as a result of their displacement, and to assess the impact of the disaster on their wellbeing and the forms of support available to them.

2. Background to Great East Japan Earthquake

On 11 March 2011, the Great East Japan Earthquake (GEJE) measuring magnitude 9.0 occurred off the Sanriku Coast of Northern Japan. This earthquake caused one of the most devastating tsunamis in recorded history [10].This incident left vast damage in a wide section of the coastal area (561km) of Japan, especially in three prefectures: Iwate, Miyagi, and Fukushima [7,10,11]. This crisis was significant because not only the severity caused by the combination of earthquake, tsunami, and nuclear power plants failure, but also for the fact that disaster occurred in regions that had this crisis were already facing rapid growth of older people and shrinking number of young people[2,12]. Some even struggled to remain as viable communities due to the combination of the high proportion of older people, migration of young people, and low fertility rate [13,21]. 15,883 people lost their lives and 2,668 are missing, which was significantly higher than Kobe earthquake where 6,434 people died [1]. Because of the wide range of damage caused by the tsunami, 126,656 houses were totally destroyed, and 272,300 houses were partially damaged [1,7]. Along with the nuclear power plant accident in Fukushima, this disaster forced approximately 470,000 people to evacuate. Immediately after the earthquake and tsunami, 8,000,000 households lost power and 1,800,000 households had water outage that paralyzed the basic life system as well as communication systems in these region[14].2,182 evacuation sites provided for evacuees to obtain basic life support till they could move to temporary housing units or their family or relatives. 53,194 temporary housing units were newly built and approximately 60,000 existing apartment units were provided to house those evacuees till permanent accommodations will be built [7,15].

As in every disaster, certain older people or disabilities groups were more vulnerable than others to the effects of GEJE. Vulnerability to the impacts of natural hazards normally varies by social and demographic group [3,4,16,18], and the GEJE was no exception, the older people providing to be the most vulnerable. 56.35% of those who lost their lives, and 89.1% of disaster related death of GEJE were over 65 years old [1,14]. They are physically weaker than other groups, and could not run fast enough to reach higher ground.

It is against this background of vulnerabilities that we posed the following research question: what were the main vulnerabilities faced by older people? What past-experience was usefulness for older people to evacuate