Experience of evacuees in the 5 days after the 2016 Kumamoto earthquake

Ayumi NISHIGAMI¹, Tatsue YAMAZAKI², Sumi MISAWA³, Yoko SUENAGA⁴ and Aiko YAMAMOTO⁵

¹Baika Women’s University, Faculty of Nursing and Health Care, Ibaraki, Osaka, Japan
²Tokyo Medical University, School of Nursing, Tokyo, Japan
³Tohoku Fukushi University, Faculty of Health Sciences, Sendai, Miyagi, Japan
⁴International University of Health and Welfare, Fukuoka School of Nursing, Fukuoka, Japan
⁵University of Hyogo, Research Institute of Nursing Care for People and Community, Akashi, Hyogo, Japan

After the 2016 Kumamoto earthquake on April 14, 2016, the first advance team of the Japan Disaster Nursing Society was active from April 16 to April 18. As stated on the website of the Japan Society of Disaster Nursing (http://www.jsdn.gr.jp/), when a disaster occurs in Japan, our advance team of experts in disaster nursing enters the disaster area to gather and assess data on health problems and nursing needs, and to clarify the nursing support required.

The main features of these particular earthquakes were that twice in only 3 days they reached a seismic intensity of 7, and further aftershocks were frequent (Japan Meteorological Agency; as of April 18, seismic intensity at 1 or above occurred 571 times). On April 16, 3 days after the first earthquake that had a seismic intensity of 7, the Advance Team first squad started out by visiting Mashiki town in Kumamoto Prefecture, which was the epicenter of the earthquake, and the authors visited several shelters up until April 18.

This time, we visited evacuation shelters that were designated shelters as well as those that were non-designated as shelters. Even at designated shelters, people overflowed from not only the rooms, but also the hallways, and every space was utilized, including in front of the shoe cupboard and the toilet, and under the eaves (Figure 1). At one shelter that was a gymnasium, cardboard partitions had been set up, but they were removed due to the large number of evacuees. One non-designated evacuation shelter was an industrial exhibition hall with a large parking lot (Figure 2). Because damage had affected the interior of this industry exhibition hall, the whole interior, including the toilet, was made off-limits, with the parking lot the only usable area. At the time of our visit, 10 temporary toilets had barely been installed. When a large proportion of evacuees rushed to the parking lot, cars were overflowing up to the passage leading to the parking lot.

All evacuees could not be accommodated at the designated shelters because some were damaged (e.g. the gymnasium) and therefore entry was forbidden, so fewer people than expected could be accommodated. In contrast, many people gathered at non-designated evacuation locations for reasons such as the designated evacuation shelters being overcrowded with evacuees.

Figure 1 A shelter where the corridor is being used (the gymnasium behind the doors could not be used because of safety reasons).

Correspondence: Ayumi Nishigami, Baika Women’s University–Faculty of Nursing and Health Care, Ibaraki, Osaka 567-8578, Japan. Email: domi32000@yahoo.co.jp
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people with pets thought they would not be able to bring them into the shelter, people felt anxious about being inside a building at all because of the earthquake and large aftershocks, and also because people felt that April was a time when it would be relatively comfortable to spend outdoors.

People evacuating to other areas than designated shelters makes it difficult for relief workers to account for them. If an evacuee lives in their car, it increases the risk of deep vein thrombosis and this is a factor that can contribute to a variety of health problems. In these circumstances, there are three things a nurse can do in response. In the current situation, in addition to the designated shelters, there are many survivors living in non-designated locations such as their own home and parking lots, among other places, so the locations where survivors are staying must be identified as soon as possible. It is also necessary to understand and assess the living conditions and health status of people who have been displaced, in order to stabilize their living environment. At the same time, it is necessary to support the improvement of the self-care ability of the survivors themselves by warning them about potential health problems that are anticipated to possibly occur in the future.

Key words: disaster nursing, earthquake, health problems, shelter