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Descriptive Study of Volunteer Disaster Response for the Chuetsu Earthquake in Japan

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Objective: Studies on disaster response and preparation is one of the frontiers in epidemiology. The Chuetsu Earthquake occurred in Oct 23, 2004. The epicentre was about 200 km northwest of Tokyo; the magnitude was 6.8. Number of death from the earthquake was 40; that of injured was 4510. The aim of the study was to describe the characteristics of volunteers in disaster response.

Methods: Most of the volunteers were registered at Volunteer Disaster Response Centres before they participate in response activities. Data collected by the Niigata Social Welfare Council were analysed for the study.

Results: The cumulative number of volunteers was 94,548 from the onset of the earthquake until March 31, 2007. Maximum number of volunteers in a day was 3,096 registered at the 11th day after the earthquake. Such number in weekends and holidays was 1.74 times higher than that in weekdays. By weekly analysis, the number of volunteers decreased exponentially; the half-life time was about 38 days. Proportion of volunteers from outside of the prefecture was under 20% during the first 3 days; increased to about 80% from the 3rd to the 30th week; after, it suddenly dropped to about 20%. Such proportion was 63% in weekends and holidays; while it was 71% in weekdays. The reasons of these specific trends will be discussed to make use for future volunteer management.

Conclusion: The descriptive data of volunteer disaster response may be useful to prepare volunteer acceptance or to recruit volunteers.

Key Words

Descriptive study, Volunteer, Disaster response, Earthquake, Japan

Table 1 Number of non-professional volunteers for response to major disasters in Japan

Year	Name of the disasters	Number of volunteers
Jan 1995	Hanshin-Awaji great earthquake	13,770,000
Jan 1997	Petroleum pollution by shipwreck of the Tanker Nakhodka	280,000
Mar 2000	Eruption of Mt Usu	9,000
Sep 2000	Tokai flood	20,000
Jul 2004	Niigata & Fukushima flood	45,000
Jul 2004	Fukui flood	58,000

Source: Fire and Disaster Management Agency and Cabinet Office of Japan

Fig 1 Number of volunteers and media reports about volunteers

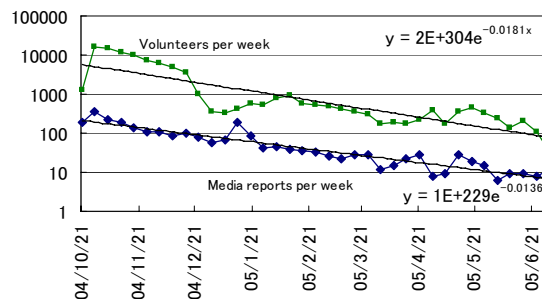


Fig 2 Transition of number of volunteers and media reports about volunteers

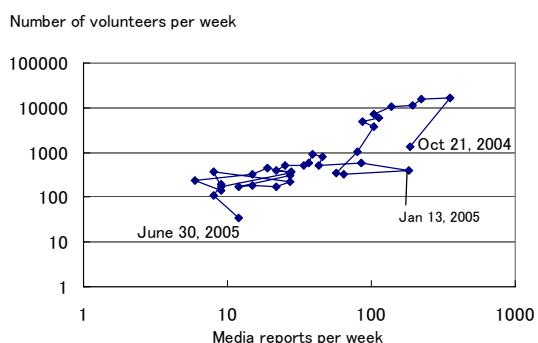
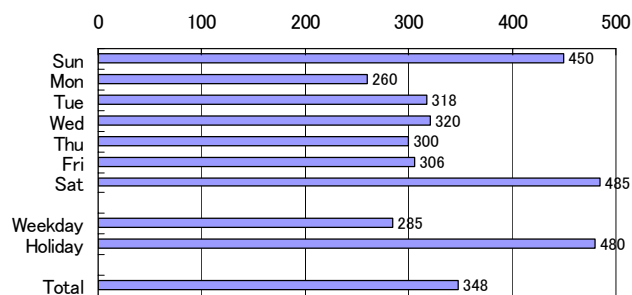


Fig 3 Average number of volunteers by the day of the week



From Oct 24, 2005 to Jun 30, 2007

Fig 4 Proportion of volunteers from outside of Niigata prefecture

