Earthquake and psychiatry in Kobe

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At 5.46 am on 17 January 1995, an earthquake of magnitude 7.2 on the Richter scale hit Kobe, a port city with 1.4 million population, and Awaji Island, lying just in front of the city. The quake caused the death of 5348 people, injured 33 222, and ruined 109 464 houses. Most of the casualties were asleep and were crushed by heavy furniture or by destroyed walls and ceilings.

Nearly half of the victims were over 60 years old, some of them lived alone, with no supporting family. Moreover, older people tended to live in older wooden houses which were destroyed more easily by the quake.

A fire occurred immediately after the earthquake which was just as fatal. This was a complete replication of what had happened in the Kanto earthquake in 1923, the largest in Japanese history. The fire caused relatively few casualties compared with the quake itself, but it further ruined survivors' lives by burning their houses or offices.

People

Rioting and social panic did not take place in Kobe. Far from being thrown into any sort of turmoil, most citizens remained very quiet and behaved in a dignified manner, even if they were injured or had lost family members and their houses.

After the earthquake, most homeless people sought refuge in school buildings or in tents on the school grounds. Some very fortunate and rich citizens migrated to hotels, which soon became full.

The new communities in the schools were well managed, with a spirit of mutual cooperation. The city Government of Kobe started to build thousands of temporary dwellings in relocation sites, but obviously these could not be supplied immediately. Moreover, even if houses were provided, some people did not want to move because they preferred to stay near their ruined houses and their home town.

Although scarcely mentioned in Japanese reports, the quake had specific implications for the Korean residents, who comprise the largest foreign ethnic group in Japan. First, because the most severely devastated part of Kobe was the district which was mainly inhabited by Korean residents, and second, because such a great earthquake in a big city evoked the nightmare of the Kantoh earthquake, where thousands of Koreans were massacred by panicking Japanese citizens who falsely believed that the Koreans would attack them. Happily, the sight of friendly cooperation between Japanese and Korean residents after the earthquake this time was a kind of healing experience for the Koreans in Japan.

Psychiatric morbidity

Just after the quake, medical schools and hospitals from all over Japan sent teams to Kobe. As for psychiatric aid, the Mental Health Center of Kobe and the psychiatric department of Kobe University assumed the role of an operating centre (Yamaguchi *et al*, 1996). Mental health clinics in the community, which are abundant in Kobe city, resumed their work soon after the disaster, to maintain the therapeutic tie with the patients as well as to manage new cases of psychiatric morbidity (Ikumura, 1996). The Ministry of Health and Welfare of Japan meanwhile established psychiatric care counters, as well as emergency medical services, in almost all refugee camps.

At first, psychiatrists were worried about the relapse of severe mental disorders such as schizophrenia due to the discontinuity of medication. This did not happen. The reason could be partly attributed to the number of active local psychiatric clinics in Kobe which restarted their work soon after the quake.

Iwao *et al* (1996) and Yamaguchi (1996) reported that in-patients with schizophrenia showed scarce exacerbation after the incident, adding that only a few people with schizophrenia had to be hospitalised due to the worsening of their symptoms. Some people with schizophrenia needed hospitalisation because their defensive life style or social supports, such as day care and the community nursing system, collapsed.

Incidences of the first onset of psychosis caused by the shock of the quake were very rare

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Figure 1. A ruined motorway (©Yomiuri Newspaper Company)

(even some of the previously untreated cases were suspected to have had some kind of mental disorder) and 85% of the patients newly hospitalised after the quake were hospitalised for the recurrence of a previous psychotic illness, most of which were mania and atypical psychosis, the Japanese equivalent to schizoaffective psychosis. Sleep deprivation during the turmoil as well

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Figure 2. A bus barely escaped from the fall (©Yomiuri Newspaper Company)

as the stress of the quake itself may have precipitated manic exacerbation. Even a few volunteers became 'manic' at the sight of the earthquake on television and then came to Kobe only to be hospitalised.

Anxiety, depressive moods, and sleep disturbance were also common during the first few months after the shock. According to a survey carried out by a team of one of the authors (M.K.) in the psychiatric clinic of the Hyogo College of Medicine, most patients of the anxiety disorder suffered from the direct impact of the traumatic disaster itself. The disorder was most common during the first month after the quake and steadily decreased afterwards.

On the other hand, the cases of depression were much more concerned with actual loss of jobs or enormous expenses for residual reconstruction,

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physical fatigue or interpersonal hardships at the relocation sites. The number of cases of disaster-related depression gradually decreased with time, although some cases of late manifestation are still expected.

During the first several months after the earthquake, the importance of psychological care, especially for those who came to suffer from post-traumatic stress disorder (PTSD), was repeatedly emphasised by the media. Some psychologists even came from overseas to Kobe, appealing for the necessity of psychological intervention, with sheets of questionnaires in hand.

It should be conceded that this journalistic sensationalism was effective in making the Japanese Government and society in general recognise the importance of psychiatry and psychology, whose status has not been established to the same degree that it has in Western Europe and the USA. The Japanese Association of Clinical Psychologists encouraged the Government to legislate to promote mental health care in Kobe, which was epoch-making in Japan.

However, the notion of PTSD according to DSM–IV criteria has not proved to be as helpful as expected, either in understanding or intervening in the sufferings of the affected people. The main reason is that there have been only a few patients who strictly met the DSM–IV criteria for PTSD. One of the authors (M.K.) and his team experienced only six cases of the disorder among 322 psychiatric out-patients at first onset or recurrence during the six months after the quake: four of them exhibited comorbidity with major depression and two anxiety disorder.

Do Japanese PTSD patients not consult the clinic because the disorder is not well known or because they hesitate to be regarded as mentally ill? It seems unlikely that knowledge of PTSD is lacking among the people, for the disorder has been intensively reported by the media, as well as being addressed by medical staff in Kobe. The actual incidence of PTSD in the community in Kobe is also estimated to be very low, judging from information obtained through the observations made by community nurses who occasionally visited the camps. It is possible that Asian people are more ready to accept the aggressions of nature or they have a particular type of stress reaction. However, a systematic survey will be needed.

Future

The current problem is how to restore the community, especially in the temporary dwellings in the relocation sites, which will actually be 'permanent' homes for those who cannot afford to move into new houses: some of them even have to repay the loan they took out to buy the house that was destroyed by the quake. The people at the relocation sites are sometimes isolated, not only from their former communities, but from one another. There were even some cases of old people who lost their family dying unnoticed. Either in their old neighbourhoods or at a new residential site, the psychological healing process of the earthquake victims will be completed only when they have recovered their bonds to a stable community.

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