Family and community post-disaster recovery

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I. Introduction

The Great East Japan Earthquake that occurred on March 11, 2011, had a magnitude of 9.0 and caused catastrophic damage on the largest scale in our country's history since measurements were first taken. Five and a half years later, in the area that was damaged most severely, almost all the debris from the earthquake and tsunami has been removed, and the embankments for bulk construction are piled so high that they nearly block one's field of vision. The scenery of the lively town has disappeared, and it is difficult even to imagine that it will change in the future.

Public housing has been newly reconstructed in safe areas with solid ground, and people are steadily moving in. Various volunteer organizations that began activities in the affected area after the disaster are withdrawing one after another due to lack of funding, and the activity of this time has ceased.

Along with such changes in outward appearance, various psychological changes also occur within a community, and phenomena that are difficult to understand without deep consideration are occurring one after another. I have been acting as a doctor treating individuals, but after the earthquake my work began to target the whole community. In treating individuals, we read the background and development of the subjects, draw out the mental dynamics from each landscape, and provide support in the recovery process. Especially in the adolescent clinic, the establishment of identity (self-identity) is often a problem; exploring and establishing the self within the group is an important key to recovery. In supporting the recovery of the community, I perceive that the same kinds of phenomena that occur in the treatment of individuals are arising in this setting. In this paper I would like to give some additional thought and discussion to: 1) The effects of the disaster on children and families, 2) its effects on the community, and 3) what is necessary for reconstructing mental health.

II. Effects on children and families

1. Understanding based on attachment theory

In considering the reaction and recovery process of children after a catastrophe, several attachment theories make these things easier to understand. Bowlby (1980) used the term "attachment behavior" to refer to the act of an individual who, sensing danger approaching, seeks protection from a particular person. [1)] This is the behavior of a child who has a frightening experience in daily life and cries and seeks hugs from his parents. Byng-Hall (1990) [2)] referred not only to the attachment between two people but also the stability and functioning of the entire family as a "secure family base." In families where the secure family base is functioning, family members can support and overcome various crisis situations in cooperation with each other. Powel et al. (2008) proposed the concept of a safety cycle, the "circle of security," and by repeated correspondence between the safe zone and exploratory behavior, children learn how to regulate their emotions and behavior, and their mind and body develop in a healthy way. [3)] Children practice repeatedly while interacting with other children outside of their families and acquire skills to control their emotions and behavior.

These theories are summarized and some modifications are shown in Figs. 1 and 2. As shown in Fig. 1, attachment relationships are mainly formed by caregivers (primarily mothers), the need for security is satisfied, and the child initiates exploratory behavior. When he experiences various types of uncertainty and crisis in the midst of his exploratory behavior, he returns to the safe zone and regains a sense of security. Recharging his energy in the safe zone and then returning to exploratory action again, he gradually acquires the ability to regulate his emotions and behavior. As shown in Fig. 2, through this process, the safe zone and therefore the sense of security expands from the two-person relationship with caretaker to the family, schools (including preschools and kindergartens), and the community. As people age, there are more subjects who can feel secure spread across a larger geographical area.

2. Alteration of safety zone in emergencies

Generally, in a regional emergency such as a catastrophe, the balance in Fig. 1 is mostly concentrated on the left side. The caregiver (mother) who is the object of attachment feels uneasy about the child moving out of her orbit, and strongly draws him toward herself. In the Great East Japan Earthquake, if rubble was not removed from the area, it became impossible to be confident in letting children go outside. As long as aftershocks continued, residents had to be ready to protect their children at any moment, so they kept them close by. In areas where the fear of radioactivity remained, outdoor play was restricted to limit its effects. There was also a significant change in children's exploratory behavior. Rubble was scattered throughout the area, rice was being distributed at a familiar playground, and temporary houses were sometimes built on school grounds. The place where children could play safely had grown smaller, the cycle of safe zone and exploratory behavior ceased to function, and there were not enough places to practice regulating emotions and behavior.

When these conditions persist for a long period of time, more children will have difficulty regulating their emotions and behaviors within the group. As the area recovered, the imbalance in Fig. 1 gradually returned to normal, and this cycle began to function smoothly again. To support the local population in the wake of a major disaster, there is a tendency to focus on "counseling" as psychological care and the creation of a system for providing it. Counseling alone, however, is inadequate. It is also important to ensure that children have an environment in which to play safely so as to guarantee exploratory behavior, a space that allows families to play with confidence and children to practice regulating emotions and behavior. In recent years the importance of the playground has been explicitly recognized; manuals such as "Child Friendly Spaces" on managing playgrounds have been created and workshops on this topic are being developed, mainly by the Japan UNICEF Association.[4)] Because of these experiences, in the wake of the Kumamoto earthquake that occurred in April 2016, various NGOs managed playgrounds in an effective way.[5)]

3. Expansion of safety zone

As shown in Fig. 2, the child's safety zone expands as the child grows. Initially it starts with a bilateral relationship with a caregiver, and then expands to include family members, educational institutions such as preschools, kindergartens, and schools, and finally to a sense of security that extends throughout the whole community and permeates the child's entire worldview. If for some reason a child loses this sense of security, it is thought that the person will instinctively seek a sense of security by turning inward. When a local community loses its sense of security after a disaster, in Japan in many cases people will gather at educational institutions. After the Great East Japan Earthquake, schools became crowded evacuation centers, and when people had lost their usual sense of security, they bonded together with immediate family.

In families who had repeated conflicts due to internal discord, however, children tended to unite with a close caregiver (mother). As the area recovered and the local community regained a sense of security, it was observed that the temporarily narrowed safe zones were gradually restored, expanding in an outward

progression. The symbols of cohesion that represented the security each community sought varied greatly according to local culture. In this paper it was a school (educational institution), but in some areas people sought security at hospitals or temples. Trust in educational institutions is characteristic of Japan, while in many other countries it coalesces around religious symbols, and in Christian areas people are often evacuated to churches.

III. Effects on communities

1 Community dynamics

In addition to the dynamics of the entire family that envelop the child, certain dynamics arose within the community as a whole. As time passed, the local community changed its attitude to one of accepting external assistance, which in most cases is thought to be a characteristic defense mechanism (Fig. 3). The doors were wide open immediately after the disaster, and there was a tendency to accept support without limitation. Residents of the afflicted area needed all the help they could get, and supporters were eager to supply assistance.

The support that the afflicted area sought at that time was mostly heavy work such as mud removal, and there was no great obstacle to having supporters working in shifts of several days each. After a few months, however, the harmful effects of accepting unlimited numbers of supporters started to become apparent and the door closed tightly. At that time the support that communities were seeking had more to do with communication skills, such as those who could facilitate social gatherings for discussion; now it was important for supporters to build trusting relationships, provide a sense of security, and stay for several months in a cycle. In addition, as time went on, the wariness gradually diminished, the doors opened again, and communities came to accept supporters according to long-term plans. Thus with time the door of the community was seen to open and close, and it was clear that supporters needed to provide assistance with a clear timeline in place.

When a crisis threatening the community arises, it often leads to an excessively cautious approach as protective measures are put in place to present the same thing from happening again. In cases of solitary death or suicide in temporary housing, there was a movement to work together to detect changes earlier so as to prevent it from happening again. It was also observed that attention was paid to electric meter readings and mail delivery, and alarms were installed in all the buildings to keep abreast of such an emergency situation. Family members with disabilities experienced the difficulty of seeking understanding at evacuation centers and were observed actively disclosing to local residents the obstacles they had already faced during normal times.[6)] On the other hand, as in the case of super embankments, local residents became uncomfortable with excessive vigilance, feeling that a high embankment in their area is not necessary, and some areas opposed such measures. It was thought that residents would feel uncomfortable but that their wariness would gradually dissipate over time. In this way, characteristic defense mechanisms arose in response to factors that threatened the survival of the community, and this vigilance was repeatedly strengthened or weakened over time.

2 Group identity

Various gatherings naturally occurred in affected areas. Many occurred spontaneously, mainly in prefabricated temporary houses, and various ideas were considered for overcoming the crisis and strengthening the local community. These gatherings took various forms, from tea parties to creative activities. For example, some communities planned events such as do-it-yourself classes, cooking classes, mah-jongg, and fishing to attract the participation of men who might be likely to withdraw from society. In addition, traditional “festivals” rooted in the community have long been a foothold for recovery, and

communities were observed mobilizing for this purpose, with each resident taking on a specific role for participation. Many "festivals" carry the meaning of worshipping deities, Buddhas, and ancestors with gratitude and prayer in order to benefit the spirits of the dead; residents are able to affirm their own origins, rooted in local culture, by playing a role in these activities. Looking back at the long history of the human race, there are similar cases in other cultures, and these traditions seem to offer an important clue for the recovery of afflicted areas. In Ethiopia, the act of drinking coffee is a custom that includes spiritual elements and education and expresses the spirit of appreciation and hospitality for others. Incorporating a coffee ceremony at the milestones of life, including ceremonial occasions, is a deeply ingrained custom in daily life.

In Ethiopia, after a famine or border dispute, more than anything else local residents are known to gather spontaneously to try to regain the habit of drinking coffee. In gathering the tools, roasting the beans, grinding them in a mortar, drinking coffee according to ritual, and engaging in conversation, residents are able to regain a sense of everyday life. This example suggests that in a crisis situation, people can gather together in accordance with local culture, confirm their respective roles, revisit their collective origins, and gradually regain the autonomy of which overwhelming external sources had deprived them. When a specific group or community goes through a trauma, utilizing its own culture is a clue to recovery. I feel that this will be a clue to recovery because it will gather people together according to their own cultural customs and "create a place" based on the difficult experience residents have gone through. To that end, it is necessary to know about the culture and customs that local residents can utilize and actively incorporate them into local activities.

IV. Rebuilding mental health

① The specificity of disaster mental health

Here I would like to discuss strategies for rebuilding mental health. First, disaster mental health[7)] differs in many ways from community mental health during ordinary times, and we will describe its special characteristics (Fig. 4). A major disaster damages existing mental health, and its effects may be divided into several parts. A "residual function" is a resource that is reduced in scale due to the impact of a disaster but can be replenished through future creative ingenuity. "Cultivatable resources" are resources that have not been a central element of existing mental health but that could be developed and expanded for future local recovery. An "unrecoverable function" is a facility or personnel lost in the disaster that can no longer be included in calculations for planning future mental health. On the other hand, as a result of the disaster, there will be many "inflowing resources" in the area, including the activities of various volunteer organizations such as external medical and social service groups, NPOs, and NGOs.

The difficulty of disaster mental health lies in gathering and joining these pieces together to redraw the future vision of mental in light of local circumstances. We will consider each piece within the context of the Great East Japan Earthquake disaster. "Cultivatable resources" can be understood as the collective function of local resident volunteers, such as district welfare officers and dietary improvement committee members, as well as Youth Chamber of Commerce chapters and women's associations. Clinics, hospitals, and other institutions that were severely damaged by the tsunami cannot be included, and these can be considered "unrecoverable resources." Volunteer workers who join specialized organizations in the disaster area and put down roots in the community are considered "inflowing resources." In post-disaster mental health, the situation in a community changes rapidly and significantly over time, and it is necessary to keep track of the big picture when determining how to intervene.

② Post-disaster mental health tendencies

Psychiatric medical treatment in Japan is a hospital-centered system, in which the tendency for professionals to wait for patients to come in for treatment is deeply ingrained. Therefore, there is a history in

which the academic study of psychiatric medicine as public health supporting regional mental health has not been sufficiently developed. After the earthquake, however, a movement has gained momentum of shifting professionals to the area, conducting educational activities, and reaching out to high-risk local residents. In other words, the project of strengthening existing communities is advancing rapidly. On the other hand, it is assumed that mental health suffers in the wake of a major disaster, and large-scale screening studies have been repeated many times. In other words, it cannot be denied that the field has narrowed due to excessive monitoring in this realm. Residents selected by means of health surveys are "visibly high-risk," while clinicians do not end up reaching out to those who do not reply, those who are "invisibly high-risk." Five and a half years after the earthquake, the number of temporary residents is decreasing each year, and the return rates for health surveys is expected to decrease accordingly; the use of this method of extracting high-risk individuals through a health survey is expected to decrease, and the number of high risk individuals extracted by previous methods is therefore decreasing.

It is thought that there is a need to shift to a population approach, not only for "visibly high risk" cases but also in order to focus on specific populations and areas. It is difficult to devise a strategy of population approach that corresponds to the current state of the community by means only of supporters like the author who are from within the community itself. It is necessary to take note of the characteristics of the region and devise ways to bring it to life, and it is more difficult to notice local characteristics when you are a member of the local community. To that end, we believe it is indispensable to cooperate with specialists in epidemiology and conduct analyses based on the theory and practice of mental health as public health. Is it too much to say that psychiatry in Japan has been too dependent on the intuition of supporters and professionals who have developed direct support at affected sites? A major disaster is an opportunity to review strategy and shift from having the user wait for treatment to bringing treatment to the area, from an emphasis on the high-risk approach to the development of a balanced strategy. I think it can be a first step to build a mental health system imbued with a scientific spirit of public hygiene.

V. Conclusion

Based on current activities, I am deeply convinced that technology is required to consider regional health as a whole rather than pursuing technologies that address and treat individual mental health symptoms. Rather than techniques of psychology, psychotherapy, or pharmacotherapy, we need the power to facilitate public health ideas and groups. Also, more importantly, I think that there is technology that can connect well with local residents and other organizations that provide the same support. It is a posture to draw out the feelings of the other person, honor and respect the other person, and cooperate without criticism. I deeply hope to confirm once again what is necessary for community development and to transform this great disaster into a turning point for mental health.

References

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Figure 1 Safe zones and exploratory behavior

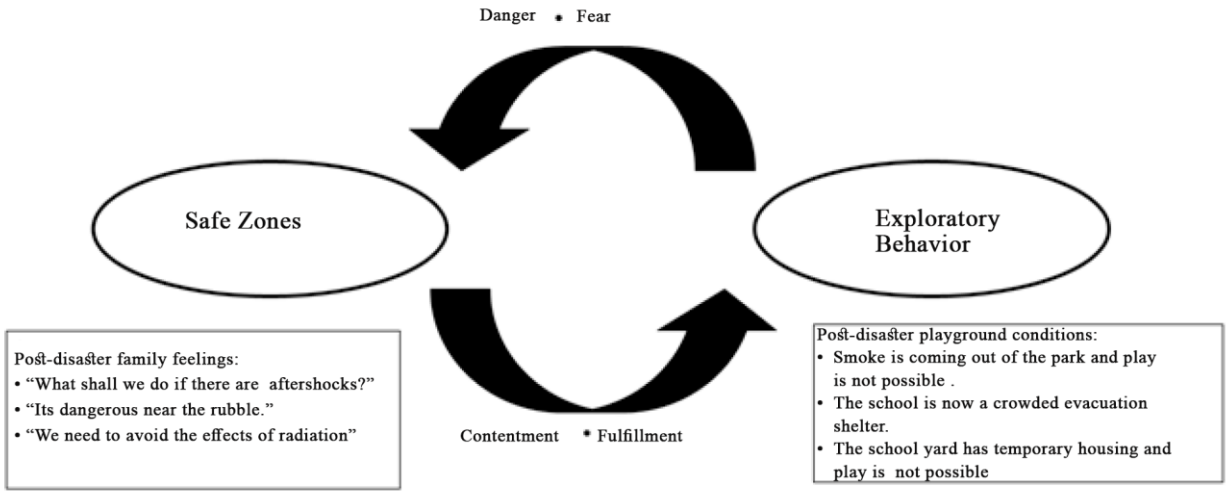

Figure 2 Expansion of the safe zone

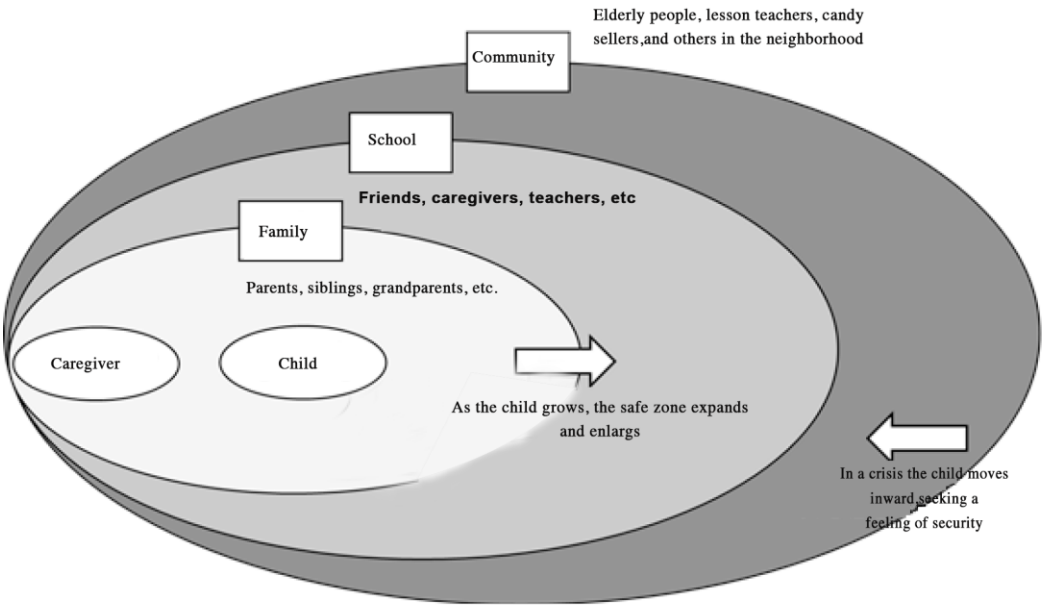

Figure 3 Opening and closing of a community

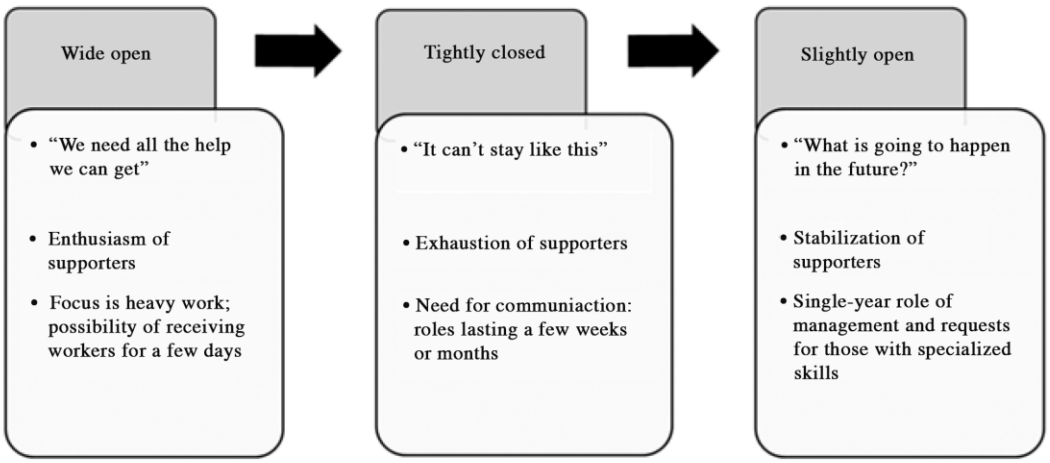

Figure 4 Characteristics of post-disaster mental health