※Source: Journal of Public Health Nursing, Vol. 74, Issue 3, pp 189-193, 2018

Special Edition: Reconsidering Disaster Health Work from a Medium-Term Perspective

The Effects of the Great East Japan Earthquake on Health and the Development of Public Health Activities

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Introduction

When the Great East Japan earthquake struck the Tohoku region on March 11, 2011, approximately 400,000 people were evacuated to shelters, many of them with special needs, including children and people with disabilities. Over time, as children were moved out of the evacuation center and into temporary housing, they reacted in a variety of ways. Even though we already had experience with such events following the Great Hanshin Earthquake of 1995, we were still not prepared for such a large-scale disaster, where support was provided in such an ad hoc manner [1, 2, 3].

The objective of this manuscript is to create a narrative that can help minimize the chaos that could occur in the event of another disaster of similar magnitude.

About the author

The author of this manuscript is a psychiatrist that specializes in working with children going through puberty. Before the disaster, he worked in a local psychiatric hospital and served as the supervising doctor at a child mental welfare ward. During the disaster, he witnessed children resorting to violence and self-harm to protect themselves. The local Health Care Center, doctors from the Child Counseling Office, and representatives from the various Boards of Education were all involved; there were many opportunities to work with local specialists. Because he majored in public health studies in graduate school, he had always wondered whether the presence of specialists in disaster-affected communities could prevent mental illness in children.

Nine months after the Great East Japan Earthquake occurred, in December 2011, the Miyagi Prefecture Mental Health and Welfare Council established the Miyagi Disaster Mental Health Care Center (our center), and the author got involved, as a member of the staff, almost immediately.

Currently, there are five "disaster mental health care centers" across the country, in Hyogo, Miyagi, Iwate, Fukushima, and Kumamoto. One has been built in every prefecture that has dealt with a large-scale disaster [4]. Because these are not legally mandated organizations, they each have different parent organizations and management strategies. Our center's teams of doctors, psychiatric social workers, psychologists, nurses, and occupational therapists have contributed to the process of restoring community mental health.

The special characteristics of this center include (1) a focus on outreach support rather than walk-in counseling, and (2) a commitment to the regional Mental Health and Welfare Department, and we expand our support following its guidelines. For this reason, most of our work involves conducting home visit surveys alongside regional supporters, including public health nurses. Public Health Nursing Journal is the translation.

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Because the author is a psychiatrist of this Center, his primary responsibilities include offering advice to support teams and visiting residents suffering from various mental illnesses. Of course, he sees people of all ages, from children to the elderly. Below, we will focus on child mental health work; in particular, we will discuss our medium-term prospects now that several years have passed since the disaster.

The effects of the disaster on children

In the acute phase, we saw child victims of the disaster in evacuation shelters and temporary housing, but in the medium-term phase, we tend to see them in schools or counseling organizations. Overall, the most important thing for a specialist is to keep child growth and development at the forefront of their minds at all times.

The timing needed to accurately understand the current picture In 2012 after a year had passed since the disaster, the MEXT determined that the health status of children who had changed residences or schools in the wake of the disaster was not very good [5]. When one lives in an area with little human traffic, or about which very little information is available, it becomes difficult to objectively view one's lifestyle. However, by connecting with external supporters or leaving disaster-affected districts, one can compare one's own experiences with those of others, enabling us to form a more accurate picture of the status quo.

For example, the author supervised a case involving a middle schooler from a coastal region, who had been affected by the disaster, and relocated to a more inland region. While at his new school, there was an aftershock; the student panicked and hid under his desk. When he noticed that he was the only one that did so, he realized that his disaster experience was unique.

However, when one does not relocate and instead remains in the same area, a strong sense of unity develops between children that have undergone similar experiences, and this feeling can protect their mind and body. Unfortunately, the middle schooler I mentioned earlier had no one to share his experiences with, and he started to feel as if he didn't fit into his school. Based on these cases, specialists should realize that children cut off from their communities or tight-knit groups require special consideration.

Stopgap behaviors

After about two to three years had passed since the disaster, when I was contacted by a parent complaining that their child "stopped using their allowance money wisely." At first, I thought this was a psychological issue, but I wasn't too sure. After interacting with the child, however, I was able to form a more accurate hypothesis.

For example, let us say that there was a child who, before the disaster, deliberately saved his allowance, perhaps because he wanted to buy a $200 bicycle. However, when the earthquake occurred, all his hard-earned money was swept away by the tsunami, and he was left with nothing. After going through such an experience, a child might think "Something like that can happen at any time. Better to just spend my allowance when I get it."

I also dealt with a case in which a child's school mentioned that he wouldn't pass food around to everyone and that he'd only eat his favorite foods. I immediately thought of the same mechanism as in the previous case. When they cannot believe in a stable and reliable future, children become unable to adopt planned, calculated behavior, and they instead revert to stopgap behavior.

However, this phenomenon does not persist for very long; it slowly disappears as safety and security return to a child's environment. As professionals responsible

 for giving children the psychological support that they need, it is our responsibility to create safe societies and communities for children to grow up in.

Children who Tend to Talk

After about five to six years had passed, I was contacted by an elementary school teacher regarding a "lower-grade child in poor condition." That same child had been flagged in a survey conducted by the Board of Education in that area. However, this evaluation was an impartial measurement and had been carried out at the request of a teacher.

Upon hearing more of the case details, I learned that the child in this particular case was prone to telling the story of his disaster experience to other children. His teachers were worried that this tendency indicated that he was having "flashbacks" or something else of the sort.

After observing the children involved in these cases, I learned a couple of things. They were all in the early

elementary school years, which meant they were between the ages of 1 and 3 when the earthquake hit. Like it would be for almost anyone, they found their experience of a natural disaster to be a terrifying and overwhelming one. However, because they did not have the verbal ability to express what was happening to them, they simply screamed or sat transfixed. Now, five to six years later, their memory of the incident remained, albeit slightly blurred. However, because they now possessed the verbal ability to discuss what happened to them, they began to tell everyone they knew

While these children might, at first glance, appear to suffer from mental or physical instability, their tendency to talk about what they have gone through is evidence of them having reached the developmental phase where they can organize and categorize their memories.

The effects of a child's environment

Around the same time, approximately 5-6 years after the disaster, I heard from public health nurses in coastal areas who were complaining of an uptick in worrisome children. However, because they hadn't used any scales or other instruments to evaluate the development of these children, the PHN's complaint was still very much their subjective impression of the situation and was not reflective of any longitudinal trends.

Upon listening to them for a while, it became clear to me that while there was no apparent bias in the students' development, this PHN had the feeling that there was a sudden increase in children who could not stay still and had poor impulse control. A teacher at a nursing school shared the same opinion, telling me that these kids had "a lot of cavities" and "often forgot things."

As these nursery school teachers and parents continued to pile on observations and diagnoses, I was struck by the thought that these children's home lives might be affecting their behavior. Their parents were probably far too involved in reconstruction to give their children the time of day. Rather than the disaster contributing to an increase in patients with ADHD or some other developmental disorder, there had instead been an increase in the number of parents that were too busy to provide a stable living environment to their kids and failed to notice them developing a loss of impulse control or an inability to sit still.

Thus, one thing we must be aware of in the medium term is not to get so caught up in judging a child's developmental trajectory that we forget to account for the effects of their environment as well.

Community changes

In my disaster support work, I have seen countless community transformations, and I have come to realize that these changes can affect a child's mental and physical development. A child's community is the "vessel" in which he or she is raised. Specialists that work to support childcare and parenting must remain acutely aware of changes to this vessel and must respond in a timely fashion. Here, I will describe a few examples of this phenomenon. How a community opens and closes its doors

As time passes, changes occur in a community's attitudes towards external support, and we can make sense of many of them as community defense mechanisms. Immediately after a disaster occurs, a community keeps its doors wide open and tends to accept supporters without reservation. Disaster-affected regions are always short-handed, and the supporters that flow in are always in high spirits. The support that a community is looking for often requires backbreaking work, like mud scraping, and there is no harm in supporters coming and going every few days.

But, after several months have passed, the community has begun to notice problems that come with accepting supporters without limit, and its doors are shut tightly. The support such a community then begins to look for requires the ability to communicate, someone who can take charge of the conversation in a salon. Relationships based on trust and a sense of safety become important, and supporters must be able to stay for several months, at the very least.

After some more time passes, that sense of wariness slowly recedes, and the community's doors begin to open once more. The community is now able to accept supporters that fit with its long-term plans.

I have seen how communities open and close their doors in this way, and I believe external supporters must be able to provide time-appropriate support.

Wariness as a defense mechanism

If a threat to the community manifests itself, it is not uncommon for a community to formulate defense strategies to prevent such a thing from happening again. One inadvertent side effect of this process is that the community can become overly wary.

For example, if an individual dies from loneliness in container-type temporary housing, people become mutually attentive to changes in one another, to prevent such a thing from happening again. Neighbors check

each other's electricity meters and mailboxes, and alarm systems designed to broadcast emergencies outside the home are even installed in every house. Families with disabled children, having experienced how difficult it was for people to be sympathetic to their situation in an evacuation shelter, work overtime to get their neighbors to understand their child's condition by telling them about it [6]. I have seen all this myself.

Nevertheless, like a super-levee, community residents soon grow uncomfortable with this excessive level of wariness, and they realize their community doesn't need such a high level, so to speak. They switch over, as it were, to the opposite tactic. I, therefore, believe that as time passes, residents grow uncomfortable with such a high level of wariness, and the community slowly trends back towards normal levels.

Thus, in response to threats that jeopardize the survival of the community, it activates its unique defense mechanisms, and as time passes, the community's wariness waxes and wanes.

Gatherings and the recovery of autonomy

Different kinds of gatherings were spontaneously organized in disaster-affected regions. Most of them occurred in container-type temporary housing, and they incorporated a variety of techniques to help the community tide over its crises and experience happiness once again. From simple tea parties to elaborate on crafts activities, these gatherings took many forms.

For example, to get hikikomori-Esque men to meet with one another, some communities planned Sunday carpentry classes, cooking lessons, mahjong meetups, and fishing expeditions. There is a long-standing tradition of celebrating festivals in many communities. Some have used it as an occasion to allot odd jobs to fellow residents, as the entire community comes together to put on the event. Many festivals are significant because they involve worship of gods or ancestors out of gratitude, for one's edification, or to comfort the dead. When each resident has their role, everyone can see quite clearly the effects of a strong, home-based resource.

From these cases, we can see that when in danger, communities will organize events that are in line with their own culture, and while confirming each other's roles, community members will have a chance to witness their community's inner strength, and can slowly move towards regaining the autonomy they lost at the hands of an overwhelmingly powerful external entity. When specific organizations or regions bear significant trauma, determining how to make use of their unique culture can be the first step to recovery.

Necessary support systems

Although it is often discussed, it is nevertheless true that the most important thing in regional mental health work is to "connect" entities. After experiencing the Great East Japan Earthquake, while it is of course important to prepare oneself for future disasters, we must also consider equipping individuals and communities to respond to whatever happens.

When large-scale disaster damage occurs, the organizations that oversee a community are themselves destroyed, and until they regain their usual functions, "connections" come to play a large role. Rather than focusing on charismatic leaders, communities should prioritize developing an institution that can play a hub-like role. This hub is responsible for very freeform work during peacetime. They ought to go out into the community, get acquainted with each other, and essentially wander from place to place. If two organizations do not normally collaborate, even under challenging circumstances, arranging such a collaboration is not as easy as simply saying "let's collaborate!" An ideal situation would be a complex network of connections that spontaneously form and fall away, much like a living thing.

When it comes to child mental health, I believe that individuals that should bear this responsibility are public health nurses and school social workers.

The mental health welfare system of this country is centered on hospitals, and the expectation that specialists should simply wait for patients to come to them remains strong. For this reason, I believe that psychiatry has not been sufficiently developed as a public health good. However, since the Great East Japan Earthquake, this trend has flipped. We now use public funds to carry out large-scale screening initiatives, and specialists have begun to travel out to communities to provide support. At first blush, this seems like the sort of change we have wanted for so long, but factors driving this pattern can include a strong sense of wariness, as well as a desire to erase one's anxiety. Of course, as time passes, screening parameters and response rates will fall, meaning that the number of flagged high-risk individuals will also decrease.

We cannot merely focus on "flagged" high-risk individuals. We must also consider population approaches that target specific demographics and groups. To that end, we have collaborated with an epidemiologist to develop theories and carry out repeated analyses. We continue to believe that mental health welfare practice

is an essential feature of public health.

Conclusion

If nothing else, my current work has taught me that rather than consider each individual as a separate entity and then attempt to employ the appropriate support and treatment techniques, we must consider entire communities as one unit and aim for health promotion techniques that target the entire group. These will not be psychological, psychiatric, or psychopharmacological techniques, but efforts that facilitate public health-minded thoughts and work.

Finally, more important than all of that are the techniques required to connect community residents and organizations that provide the same sort of support. The willingness to make the effort to understand another person, to respect their wishes, and to cooperate with them without critique. We must confirm what is necessary for building effective communities. Once we do, I fervently hope that we can turn the aftermath of this horrible disaster into a turning point in the history of public mental health work.

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