## Practical report on psychological education in Miyagi prefecture

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Miyagi Disaster Mental Health Care Center (MDMHCC)

Naru Fukuchi

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#### Introduction

I do not conduct general medical examinations in child psychiatry in his present role but focuses exclusively on developing support for parents and children in disaster areas. Therefore, those who receive support are those who consult a specialized organization due to a particular medical condition, but rather parents and children living with stressors in the community. In this paper I would like to report on parent-child camp projects<sup>1, 2</sup> that target these residents, and also consider future psychological training/education after a disaster.

#### I. Camp overview

In principle, a total of five meetings for elementary school students were held from July 2011 to the present, January 2015. I created a leaflet introducing the program, visited an elementary school that suffered great damage, and distributed it at the school with the approval of the respective local board of education. We took the children by themselves to a campsite away from the afflicted area and offered a series of programs that included psychological education. By incorporating psychological education into the program, we aimed to provide accurate knowledge about disasters, help participants understand the workings of their own minds, and offer an approach that will allow them not to be overwhelmed by anxiety. For parents, we set up a separate venue close to the meeting place where we provided programs including professional lectures, relaxation activities, and individual consultations.

#### II. Contents of psychological education

As for the content of this pediatric psychological education program, in the first and third sessions children drew pictures using a picture story show (*kamishibai*), and in the fourth and fifth sessions they used a toy to practice breathing and muscle relaxation techniques. The details of this program are described below.

1. Drawing using a picture-story show (reference 1)

We presented a picture-story show that made it easy for the children to express their feelings through shapes and colors, and then asked them to make drawings with colored pencils and crayons reflecting their feelings. After drawing, we had them show each other their pictures, discuss the question of whether they could add anything to make the pictures more fun, and then go back and add to their pictures.

2. Breathing using toys and muscle relaxation techniques (reference 2)

I attempted to convey abdominal breathing using a blow pipe and muscle relaxation techniques. They breathed in deeply through the pipe and exhaled little by little so that the ball continued to hover over the pipe, and by practicing this repeatedly they naturally engaged in abdominal breathing.

#### **III.** Evaluation and results

We conducted a preliminary survey by mail prior to families' participation in the program in order to grasp each family's situation in the aftermath of the disaster and the children's mental and physical conditions. After the program was concluded, a questionnaire was once again given to both parents and children. Only children completed the Post-Traumatic Stress Symptoms for Children-15 (PTSSC-15) before and after the camp.<sup>3</sup> Changes in participants' psychological state before and after camp participation are shown in Fig. 1. In general, PTSSC-15 scores were 23 or higher for PTSD, indicating a high risk for

depression, but 54 children (53.5%) were judged to be high risk before the camp. Since a control group was not established, it is not possible to compare the effects overall, but except for the fourth session, PTSSC-15 scores tended to decrease post-intervention.

#### **Project background**

In this program for children, one static program, two dynamic programs, and three ceremonial programs were devised in an alternating progression to provide a smooth sequence in a short period of time. Because psychological education was conducted after play involving intense physical exercise, it was observed that some children were not able to readily switch over to psychological education because of their elevated moods. These children were paired with staff members in a slightly darkened room, where they were able to gradually regain their concentration. Because the target age group for this camp was broad, it is possible that in some cases the content was not well suited to their ages. For example, some younger children who were not able to understand the intention of the picture story show activity tended to mimic the drawings that were depicted in the teaching session. Also, in the exercise with blow pipes, because lung capacity varies with age, younger children had to blow as hard as they could just to get the ball to float. In the future we will also need to adjust the content of the picture story show according to age and to change the type of toy used for the breathing technique (pinwheel, bubble ball, paper balloon, etc.).

The greatest outcome obtained through this camp was thought to be local solidarity and the sense of security that accompanied it. Groups associated with the project ranged from volunteer groups, various sports clubs in the area, boy scouts, and student volunteers, among others. Children were connected with various people in the area, and they sometimes consulted staff who had taken care of them when they were in trouble. Among these children, there were cases in which the medical treatment facility for which the author was responsible sent children who required specialized care for temporary treatment at a hospital. In addition, a number of children participated in the program several times, which became an opportunity for them to get together once a year, and, because of their knowledge of the program, they were also able to act as leaders. Staff who returned to participate more than once were able to experience the reward of supporting the growth of children in the community and witnessing their growth and development during each camp session. In this way the camp functioned as a place that connected children in the community, their parents, and various professionals.

#### Conclusion

As time goes on, children with an awareness of the disaster are less likely to participate, and the psychological education included in the program needs to be changed so that it can be applied to everyday life. There is a similar tendency among parents to avoid programs concerning stress after the disaster, and instead to seek consultation on topics such as developmental disorders. The difficulty of mental health after disasters is that the needs of the community change over time, and supporters must accurately grasp these changes and provide assistance according to what is needed at the time. It seemed necessary to disseminate more general stress coping strategies for local children who lived with stress but may never have visited a medical care setting.

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#### Source 1: A teaching method of drawing with use of a picture story show (Original concept: Fukuchi; image: Akiko Miyake)

$\bigcirc$		
Ψ	235+62 LIDLA	Characters of various shapes and colors lined up beside a boy.
$\langle 2 \rangle$	$(\cdot \cdot)$	A character that is as plain as possible, colorless, just a circle with hands and feet. Leader: "My name is "Koro." My shape and color changes with different feelings."
3		A scene in which "Koro" is inside a boy's body. Leader: "I am inside of Taro."
4		A scene in which "Koro's" head is gently stroked. Leader: "When you treat me gently"
( <u></u> )	$\overline{\bigcirc}$	He appears with a vivid aqua blue color and a gentle peaceful expression." Leader: "This is how I look, and this is the color I turn. When do you all become like this?"
G	1000	A scene in which he is being shaken violently to recall an earthquake. Leader: "When I am surprised"
9		He appears with a distorted shape, red and dark colors, and a bewildered expression. Leader: "This is how I look, and this is the color I turn. When do you all become like this?"
8		Taro appears again. In this scene his body is relaxed. Leader: "When Taro relaxes, Koro will also have a peaceful color and a peaceful shape. Now let's draw how Koro looks inside of each of you."

#### Source 2 Methods for teaching breathing and muscle relaxation techniques

(Children were moved inside after active outdoor play. The activity was carried out after helping them to wipe away sweat and supplying them with water.)

- Leader: "Now I am going to calm myself down. Now we are going to study our own minds. What we are learning today has to do with breathing in and out, and how to tense and relax our muscles. Please get into pairs of one child and one adult. Each pair please take a yoga mat, and let's sit down on the floor."
- Leader: "I have done a lot of fun things today. How do you feel now?"
  ⇒ Children: "That was fun," "I'm tired," "I want to go home."
- Leader: "How is your body doing?"
  ⇒ Children: "I got sweaty," "My heart is pounding," "I'm out of breath," "I bumped myself and it hurts."
- Leader: "The body responds when you do something fun, do something exciting, get angry, or remember something you didn't like."
- Leader: "I will give toys to everyone. First let's try playing with this." (Distributes a blow pipe to each person.)
  - ⇒ Children: "What is this?" "I've seen these before," "They have these in sweet shops."

<Teaching the breathing technique>

• Leader: "To get the ball to float, I have to take a deep breath and then let it out little by little. Let's try practicing this. When you breathe in, let your belly fill with air, and then slowly breathe out. This is called abdominal breathing."

(Pair with staff and practice abdominal breathing.)

• Leader: "Now I am imprinting in my mind the image of the ball floating. Next time, without using the pipe, I will close my eyes and in my head I will get the ball to float. Let's lie down on our backs on the yoga mats, let's darken the room, and now let's quietly try it."

<Teaching the muscle relaxation technique>

• Leader: "Next I will use my body a little bit. The point of what we are doing is to tense and relax your body. Still lying down, let's try tensing both arms. Now put a little more strength into it. Tense your shoulders . . . Now, all at once, let your body relax completely. Good. Let's do it again."

<Bringing together the breathing and muscle relaxation techniques>

- Leader: "Let's try breathing in and breathing out three times, and then tensing and relaxing our muscles three times."
- Leader: "How is your body doing?"
- ⇒ Children: "I am sleepy," "I am hungry," "I have to go to the bathroom."
- Leader: "Your feelings and your body are connected. Let's do this when you feel excited, when you remember something you don't like, when you feel frustrated or your heart is pounding."





In both cases, no significant difference was observed in the paired *t*-test.

### Family and community post-disaster recovery

Source: Japanese Association of Family Therapy, *Japanese Journal of Family Therapy*, Vol. 33, No. 3, 63–68 (2016)

Miyagi Disaster Mental Health Care Center (MDMHCC)

Naru Fukuchi

#### 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.<sup>1)</sup> 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)<sup>2)</sup> 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.<sup>3)</sup> 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.<sup>4)</sup> Because of these experiences, in the wake of the Kumamoto earthquake that occurred in April 2016, various NGOs managed playgrounds in an effective way.<sup>5)</sup>

#### 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.<sup>6)</sup> 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 <sup>(7)</sup> 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 highrisk 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.

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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







# Five years after the 2011 Tohoku Earthquake and Tsunami: Disaster psychiatry

Source: WPA, Child and Adolescent Psychiatry Section's Official Journal World Child & Adolescent Psychiatry, 10–12, 2016

Miyagi Disaster Mental Health Care Center (MDMHCC)

Naru Fukuchi

Dr. Fukuchi, first of all, thank you very much for agreeing to do an interview for "World CAP." It is our pleasure to interview you. Before we discuss details of your work in the Tohoku region, Japan, could please tell us a little bit about yourself?

I initially started working as a pediatrician in the northern area of Japan. I was mainly engaged in the assessment of developmental problems in infants and young children. A few years following my career as a pediatrician, I changed my major to psychiatry and have since worked in the field of community mental health ever since. I also obtained a Ph.D. in Public Health for suicide prevention in rural areas of Japan. Shortly after the earthquake and tsunami in Japan in 2011, I went to the affected areas and provided mental health care for the victims. Since then I have been deeply engaged in the field of disaster psychiatry.

I am currently working in the Miyagi Disaster Mental Health Care Center, the main facility focusing on the care and the recovery of people affected by mental health problems caused by the Great East Japan Earthquake of 2011.

Could you please describe how the earthquake and tsunami in March 2011 impacted the city and the psychiatric hospital where you were working at the time? Could you also tell us what your role was for the first couple of weeks and for the first couple of months, respectively?

At the time of the disaster in March 2011, I was working as a child psychiatrist in a hospital where I served as the chief psychiatrist in the child psychiatry unit. Despite the fact that the hospital had been built just 4 years prior to the earthquake (and thus it was considered a new building), the damage due to the earthquake was so tremendous that a large part of the ceiling fell down and the water pipes were ruptured, leading to severe water leakage. I was relentlessly providing emotional support, and I continued treatment for 20 hospitalized children in the unit at that time. Because no information was available, the children were not aware of this unprecedented disaster immediately following its occurrence and did not exhibit any signs of emotional disturbances. Along with serving as a physician, my other roles there were to provide them with accurate information and brief psycho-education and to contact their families.

After I confirmed that the number of inpatients requiring emergent/urgent medical and psychiatric care had decreased, I decided to go out of the hospital to provide mental health care for people in the community. I joined the local support team and went around the disaster areas. We went to the evacuation sites and cared for survivors. We wore pink parkas to identify ourselves as mental support team members and approached them to offer mental health support, but they declined our offer despite the fact that many of them obviously seemed upset and confused due to this disaster. We did not realize that there was such a degree of stigma against mental health services. We took off our pink parkas the next day and cleaned the floors of evacuation sites so that people in the community could trust us and reduce their resistance to access to mental health services when required. Most of the evacuation sites were school gyms. There were some

children who gathered near the power outlets at the evacuation sites and who played portable video games all day.

They were mostly playing fighting games. I tried to talk to them, but most of them did not pay much attention or even look at me. After many visits, they slowly opened up to me and their attitudes changed. They told me that their parents were away to take care of their damaged houses and that their parents were very busy getting the official documents required for financial support from the government. I thought children could not find anything to make them feel safe when their parents were unavailable; thus, they seemed to be trying to escape into the virtual world. They seemed to be fighting with monsters just as they were struggling to survive.

My role for the first couple of weeks was connecting survivors with mental illness to medical institutions and giving survivors appropriate psycho-education. A couple of months later, my role changed. I started to assist supporters who did not have knowledge of mental health. I also began managing the Miyagi Disaster Mental Health Care Center, the new facility that could provide people in the community with mental health services in the long run.

Please tell us what psychiatric problems, symptoms, and diagnoses you saw during those periods? What were the challenges and obstacles in providing mental health support/care? How did you deal with them?

We found some people who had mental health problems prior to the disaster and who had not been receiving appropriate treatment. For example, they were socially withdrawn due to an autism spectrum disorder or due to negative symptoms of schizophrenia. In some of the communities affected by the earthquake and tsunami, families of these individuals were ashamed of them and tried to hide them in their houses. Many of them, therefore, received no mental health care. However, given that all residents, including these individuals, had to escape from the affected areas to survive, they ended up evacuating to the school gyms and appearing in public. Most of them eventually returned to their destroyed houses or escaped in their cars due to their difficulties engaging with people in the community.

According to our data, the number of residents who started showing signs of mental disorders, including schizophrenia and depression, shortly following the disaster and who received our support increased considerably right after the disaster. Residents who did not initially show psychiatric symptoms and who tried to endure their painful situation started exhibiting depressive symptoms a few years following the disaster. The number of clients who have had depression after the disaster has been increasing these days.

The rural areas were most heavily affected due to this disaster, where insufficient medical institutions and public awareness of mental health disorders existed. Due to this lack of awareness, residents in these areas had a strong stigma against mental illness and tended to refuse conversations with regards to mental health. To overcome this challenge, we attended local events, such as agricultural events and festivals, to understand the culture of the community, and then through these events we could gain opportunities to speak on mental health problems related to the disaster. We also arranged several social gatherings for the residents, including tea parties, cooking events, and mah-jongg tournaments, where we attempted to provide them with opportunities to learn about mental health problems.

Would you be able to describe the differences in psychiatric signs, symptoms, and problems that you currently see five years after the disaster in comparison with ones you encountered during the acute and sub-acute phases of the disaster?

I met many individuals who talked about their emotional experiences at the evacuation sites. They vividly described their experience in forceful tones. In hindsight, I think they were in a hyperarousal state at that time due to emotional trauma. Traditionally, following their belief that affecting others by showing emotions is rude, Japanese tend to hide their emotions. They often are not willing to speak to others about their experiences and their feelings, even though they have just experienced tragic accidents or disasters. Although huge numbers of residents were affected by the disaster, we were challenged by the fact that most people did not desire to seek help from medical and psychiatric facilities. Younger elementary school children started opening up and speaking about their experiences a few years after the disaster. Their parents and teachers were surprised by this fact, because these children had been preschoolers who could not fully express their feelings in the moment of the disaster because of their lack of verbal abilities. At that time they instead showed behavioral problems, including excessive crying and enuresis. I think the process of speaking to mental health professionals is important for these children to deal with their experiences and the associated emotional trauma.

### Could you please describe your current work and future projects you would like to accomplish at the Miyagi Disaster Mental Health Care Center?

I would like devote efforts to support children, since they bear the future in the disaster-affected areas. Although there are several ways to support their well-being, I think providing psychological education with the aim of enhancing their resilience is most important of all. If they could appropriately acquire healthy coping skills and subsequently adapt to any stress caused by the 2011 disaster, they would likely cope well with future potential difficulties and challenges. We have been consistently holding workshops for high school students in some cities located in coastal areas where the earthquake and tsunami hit in 2011. These workshops include discussions about how to rebuild their cities, lectures about how to cope with stress, and relaxation technique practice sessions. We also have been holding outdoor camp activities for elementary school children. For safety reasons, the camping facility is not located in coastal areas. The camping programs include cooking, outside play, group talks, campfire experiences, and psychological education on disaster mental health. We use traditional Japanese toys, such as the "picture story" and "blowing pipe," for psychological education. The psychological burdens on children following camp participation seem to be reduced, suggesting that these activities might be useful for improving the psychological well-being of children who experienced the 2011 disaster.

Photo 1: Jumping rope at camp



Note: As published in original text



