

# Manuscripts Contributed to Other Journals

(Takashi Igarashi et al. Disaster management to reduce mental health risks for children FY2014 Welfare and Labor Sciences Research Grants Community Health Infrastructure Development Research Project “Research on post-disaster mental health support for children.” Published in 2015)

## **Camping for children and parents in the affected areas**

Miyagi Disaster Mental Health Care Center - **Naru Fukuchi**

### **< Introduction >**

I have been visiting the affected areas since the Great East Japan Earthquake, and have been paying close attention to the situation of the affected children and their families while visiting shelters, temporary housing, and schools. Among them, I was worried that ① children had no safe place to play, ② children couldn't leave their guardians because of the terrifying experience, and ③ many children acted as though nothing had happened even though they would have had a difficult experience<sup>1)2)</sup>. Under these circumstances, we planned to take the children to an inland campsite away from the coast and offer a series of programs to restore their usual peace of mind. The emphasis was on playing in nature and sharing thoughts with other children who had the same experience. Also, by incorporating psychological education into the program, the goal was to provide correct knowledge regarding disasters, to understand the mechanism of one's mental health, and to learn how to avoid being overwhelmed by anxiety.

Thus, the first camp was held in July 2011 for children and their parents in the affected areas<sup>3)</sup>. It was carried out with the cooperation of members of a study group that had been working in Sendai for many years, the specialists of related organizations that we often collaborated with, and several volunteer organizations. Recruitment was limited to areas where doctors could provide follow-up support, in case the children became ill after the camp. Currently, the camp is operated as a project of the Miyagi Disaster Mental Health Care Center, where the author is enrolled and is held once a year in cooperation with various local organizations and professionals. In this paper, I would like to introduce a camp attempt for children and their parents and make proposals for future psychological education after a disaster.

### **< Camp Overview >**

As of January 2015, a total of five camp events have been held (in July and November 2011, and once a year in October between 2012 and 2014). The survey was conducted for children in elementary schools in Sendai City and Natori City. A small number of preschoolers and junior high school students were also present because their siblings were participating. Besides, a small number of children who I provided guidance to and children who visited a hospital due to physical/mental illness participated. We prepared a flyer for the event, visited the above elementary school, and distributed them within the school with the consent of the Board of Education. Applicants applied by mail or fax, and the maximum number of participants was about 20. The required number of staff was arranged so that children could be accommodated one-on-one.

Children were brought to a campsite away from the disaster areas without their parents and were provided

with a series of programs including psychological education (Appendix 1). For parents, a separate venue was set up near the meeting place, and a program was provided that included lectures, relaxation, and individual consultations by professionals. The contents of psychological education for the first, second, and third time comprised children drawing using a picture-story show; and in the fourth and fifth times were breathing and muscle relaxation activities using toys.

1. Drawing using a picture-story show (**Appendix 2**)

Children were taught using a picture-story show so that they could express their feelings more easily with shapes and colors. We had them draw their feelings using colored pencils and crayons. After drawing, they showed their drawings to one another, talked about what would make them more fun, and were asked to add more pictures.

2. Breathing and muscle relaxation using toys (**Appendix 3**)

An attempt was made to connect abdominal breathing and muscle relaxation using inflatable pipes. By breathing in and blowing little by little, the ball could keep floating on top of the pipe, and by practicing repeatedly, they could naturally do abdominal breathing.

Before participation, a preliminary survey was conducted by mail to understand the state of damage to the family and the physical and mental state of the child<sup>4</sup>). A questionnaire was also given to both, parents and children, after the event. Only children were asked to fill out the post-traumatic stress response scale (PTSSC-15) before and after the camp. PTSSC-15 consists of a self-completed rating scale consisting of 15 questions that can evaluate PTSD and depression symptoms<sup>5</sup>). The post-camp evaluation scale was returned by mail within two weeks of the end of the camp.

#### < Evaluation Results >

The total number of participants was 124 (64 boys, 60 girls, an average of 24.8 participants per event), and the average age was 8.3 years. Of these, 101 (81.4%) were analyzed excluding children who did not provide all of the required information (Appendix 4). Various events were considered to be painful experiences, with 27 (27%) saying “our house was destroyed,” 11 (11%) “witnessing an injured person,” 36 (36%) “losing a close person,” and 28 (28%) “witnessed the tsunami.” In the second session, many children whose medical treatment I had been in charge of attending, and nine people had “consulted a psychiatrist.” A total of 36 families participated in the parent program, with the largest number of participants in the first and second sessions, and only about 3 to 4 people thereafter.

Appendix 5 shows the changes in mental states before and after the camp. Generally, a PTSSC-15 score of 23 or higher is considered a high risk for PTSD or depression, and 54 children (53.5%) were judged to be at high risk before camp. Since no control group was set, the effects could not be compared unequivocally, but PTSSC-15 values tended to decrease after the intervention in the camps, excluding the 4th camp event. The average value for all participants was the highest in the second session and then tended to decrease over time.

Concerning the picture-story show, younger children could not understand the intention and tended to imitate "Koro-chan" which was used when teaching the activity. Besides, since the lung capacity of children depends on age, the ball may not have floated during the inflatable pipe activity unless the young child blew hard. In the future, in the picture-story show, it would be necessary to have age-appropriate content of teaching and change the type of toy (windmill, soap bubbles, paper balloon, etc.) used in the breathing method activity accordingly.

The greatest harvest gain from the camp was thought to be the unity of the region and the sense of security gained from it. The organizations that cooperated were volunteer groups, various sports clubs in the area, boy scouts, and student volunteers. The children connected to various human resources in the area and sometimes consulted with the staff who helped them when they were upset. Of these children, those who required specialized treatment were sometimes temporarily treated at the clinic of which I was in charge. Besides, several children participated repeatedly, allowing them to meet each other once a year, and were seen to play a role as leaders who were informed of the flow of the program. The staff who repeatedly participated saw the growth and development of the children at each camp and discovered the value of supporting them in the community. In this way, it can be said that it has functioned as a place to connect local children, parents, and various professionals.

Over time, it seemed that the participating children became less conscious of the disaster. Parents were similar and tended to refrain from participating in programs that emphasized stress management after a disaster. For the parent program, lectures were given by specialists up to the third time, but the program was modified to focus on relaxation, taking into account the changing needs of parents. In the future, it will be necessary to carefully monitor the situation in the region and provide a timely and flexible program.

#### < References >

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## Appendix 1 Program of the Third Event

### Children's Program


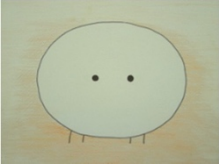




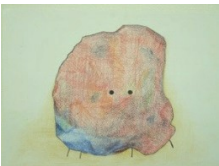

8:30 - 9:30	Transportation by bus	Introductions, recreation, singing while traveling.
10:00 - 11:00	Orientation	Discussing promises and the flow of the day.
	Icebreaker	We prepared name cards for each child in advance, and they exchanged them and greeted each other.
	Groupwork	Divide into groups, decide the goal of the day, and present them.
11:00 - 12:00	Pitching tents	
	Cooking	The ingredients were prepared in advance and the potatoes were cooked.
12:00 - 13:00	Lunch	
13:00 - 15:00	Recreation	Children played and moved a lot.
	Relaxation	Children laid down and were taught simple breathing techniques.
15:00 - 16:00	Psychological education	Teaching using picture-story shows, drawing, and presenting in groups.
	Groupwork	A reflection meeting by each group and presenting ideas.
16:00 - 17:00	Transportation by bus	

### Parents' Program

9:00 - 9:30	Mini Lecture	An expert physician gave a lecture on "Children's mental reactions after a disaster."
9:30 - 10:00	Self-Massage	Simple facial massage that can be done at home.
10:00 - 11:00	Relaxation	Get a hand massage
11:00 - 12:00	One-on-one Consultations	One-on-one consultations for interested individuals.

## Appendix 2 Teaching How to Draw With a Picture-Story Show

(original draft: Fukuchi, drawing: Akiko Miyake)

- |   |   |   |
|---|---|---|
| ① |    | A boy and characters of various shapes and colors are lined up.   |
| ② |    | The character is as plain as possible and colorless. Just a circle with lines for hands and legs.<br>Facilitator: "My name is 'Koro.' I change shapes and colors depending on my mood." |
| ③ |    | A scene where Koro is inside the boy's body.<br>Facilitator: "I'm inside of Taro."  |
| ④ |   | A scene where Koro has his head stroked gently.<br>Facilitator: "When you're nice to me..."   |
| ⑤ |  | Appears all round, bright blue, and with a gentle expression.<br>Facilitator: "I become this shape and color. What happens to you in these situations?"                                 |
| ⑥ |  | A scene that is being shaken violently to recall an earthquake.<br>Facilitator: "When I'm surprised..."   |
| ⑦ |  | Appears with a distorted shape, with red and dark colors and a confused expression.<br>Facilitator: "I become this shape and color. What happens to you in these situations?"           |
| ⑧ |  | Taro appears again. A scene where he is relaxing his body.<br>Facilitator: "When Taro relaxes, Koro becomes a gentle color and shape. Let's draw the Koro inside each of us."           |

### Appendix 3 Breathing and Muscle Relaxation Teaching Method

(After engaging in physical activity by playing outside, move indoors. Implement after wiping sweat and rehydrating)

Facilitator: “Now we’re going to relax and quieten our minds. From now on, we will look into our hearts. Today we’re going to learn about breathing in and out and putting in and releasing force. Please pair up with one child and one adult. Everyone please take a yoga mat and sit on the floor.”

Facilitator: “Today we did a lot of fun things. How is everyone feeling?”

→ Children: “It’s fun” “I’m tired” “I want to go home”

Facilitator: “So how is everyone’s body feeling?”

→ Children: “I sweated” “My heart is beating fast” “I’m out of breath” “I bumped into something so it hurts”

Facilitator: “Our bodies react when we do something fun or are excited, mad, or if we remember something bad.”

Facilitator: “I’m going to pass some toys. Let’s try to play with these first.” (Passes the inflatable pipes to each person)

→ Children: “What is this?” “I’ve seen this before”  
“candy stores have these”

#### < Teaching Breathing Methods >

Facilitator: “To make the ball float, you have to take a deep breath and slowly blow out. Let’s try to practice this. When you breathe in, fill your stomach and slowly breathe out. This is called belly breathing.” (Get in a pair with a staff member and practice belly breathing.)

Facilitator: “Now imagine the ball floating. Without the pipe, close your eyes, imagine this while you lay down on the yoga mat. Let’s turn down the lights and try this quietly.”

#### < Teaching Muscle Relaxation >

Facilitator: “Next we will be using our bodies a little. The key is to put in force and release it. While laying down, put both your hands in a fist and slowly put in more force. Put force into your shoulders... Then release all of that force and relax. Let’s repeat this again.”

#### < Combining Breathing Methods and Muscle Relaxation >

Facilitator: “Now we will breathe in and out 3 times and put in and release force 3 times.”

Facilitator: “How does your body feel?”

→ Children: “I’m sleepy now” “I’m hungry” “I want to go to the bathroom”

Facilitator: “Your feelings and your bodies are connected. Try to do these exercises when you are excited, when you remember something bad, or when you are angry or anxious.



#### Appendix 4 Characteristics of Participants

	First Time July 2011	Second Time October 2011	Third Time October 2012	Fourth Time October 2013	Fifth Time October 2014	Total
Number of Participants	21	22	18	21	19	101
Boys	11	12	10	5	12	50
Girls	10	10	8	16	7	51
Average age	8.1	8.3	8.3	8.3	8.8	8.3
PTSSC-15 scores before camp:						
23 or more	13	16	9	9	7	54
Houses completely destroyed	2	6	6	7	6	27
Almost died	2	6	6	5	5	24
Got injured	0	1	0	0	0	1
Saw someone who got injured	0	4	4	1	2	11
Someone close passed away	5	9	8	8	6	36
Lost something important	2	12	7	10	9	40
Saw the tsunami	2	6	7	7	6	28
Have had a painful experience in the past	4	4	1	3	3	15
Have been to a psychiatrist	4	9	5	2	0	20

#### Appendix 5 Changes in PTSSC-15 Averages Before and After the Camp

