Parent-Child Survivors Camping Project

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1. Background and objective

It has been pointed out that a major disaster that destroys communities across a broad geographical area has a severe physical and psychological impact on children, as it causes significant changes to their living environment[1]. As a result of the Great East Japan Earthquake in 2011, there were fewer places for children living in coastal areas that had been affected by the tsunami, to play freely. These children were taken to an inland campground, some distance away from the coastal area, where a series of programs were conducted to get them outdoors, pique their interest in mental health, and reduce their psychological burdens. Additionally, by incorporating psychological education into the program, the children were taught methods to help them deal with anxiety and not be overwhelmed by it and allowed them to better understand their minds.

As a part of Tohoku Fukushi University's support for disaster-stricken areas, a camp project was set up in July 2011 with help from professionals and several volunteer organizations that were active in the region [2]. It became a center-run project from the third year onwards, in 2012; it continues to be held once a year. This paper is the ninth annual report on this project, and it concerns the camp held in October 2018.

2. Methods

The camp session consisted of two parts—a program designed for elementary school children, the "Parent-Child Survivors Camping Project" (hereinafter referred to as the "day camp project"), and a "Sub-leader Training Workshop for Teenagers," (hereinafter, "sub-leader workshop")—for past participants who were teenagers.

(1) Day camp project

① Target audience

In the three coastal cities that were affected, we received consent from six elementary schools and had them distribute information to the children at the schools. Beginning with the third session since the center inherited this project, we have surveyed whether or not participants wished to have us send them information on the next session. We sent information about the event to 50 past participants who requested it.

② Survey procedure

Explanations were given and the agreement was obtained from the board of education of each of the three municipalities. Next, an explanation was provided to each target elementary school, and application guidelines were distributed to children in the elementary schools where consent had been obtained. The purpose of the project was explained to the families who applied, and their cooperation with the survey was requested. At the time, we explained that they were free to cooperate with the survey if they wished to do so, and they could withdraw their consent at any time.

③ Survey content

To understand the topics that required attention, we conducted pre- and post- questionnaires with children and parents to verify their living situations and the effects of the disaster at the time of the earthquake. To understand their effectiveness and psychological state, children took the Pre- and Post-Traumatic Stress Symptoms for Children 15 items (hereafter referred to as PTSSC-15)3,4, while parents took the Kessler Psychological Distress Stress 6 (hereafter referred to as K6)5. The pre-questionnaire was conducted two weeks before the start of the parent-child camp, and the post-questionnaire was mailed around two weeks after completion. Only the data of those from whom research participation consent was obtained were analyzed.

④ Implementation

The camp was held at the Matsushima Outdoor Activity Center on Saturday, October 13, 2018. We included instruction on fire-starting as part of our disaster-preparedness education during our outdoor cooking activities. After lunch, we held a recreation period titled "Study of the Heart and Mind," where we provided a program including a picture-show story incorporating simple psychological education (Document 1) and a breathing method using a blow-up pipe.

⑤ Evaluation methods and feedback

Evaluation of the children's psychological state was done using the PTSSC-15. The recommended cutoff score of 23 was used as a benchmark for flagging children needing support. Scores before and after the camp were compared to analyze the effect it had had on the children's mental state. The K6 scale was used to evaluate parents' and guardians' psychological state, and a score of 13 or greater, widely considered indicative of moderate mental illness, was used as a benchmark for flagging individuals requiring support. Scores before and after the camp were compared to analyze the effect it had had on parents' and guardians' mental state. Children flagged as needing support was given an individual interview where their results were explained to them, and any necessary support was provided.

⑥ Ethical considerations

This study was approved by the Miyagi Disaster Mental Health Care Center Ethics Committee and was carried out with the necessary safeguards for personal information in place.

(2) Sub-leader training workshop

① Target audience

We contacted the families of children that had participated in at least one of our past eight camps, were currently middle-schoolers, and had indicated that they would like to receive further information in the event of future camps.

② Survey procedures

The purpose of this project was to explain to each family applying for the event, and their cooperation was requested. It was explained that participation was optional and that it was possible to withdraw consent at any time.

③ Survey content

The questionnaire survey was conducted in advance with participating junior high and high school students to verify the effectiveness of the sub-leader training session. The PTSSC-15 was used as a measure to grasp the subjects' psychological state in advance. The questionnaire was conducted two weeks prior to the start of the sub-leader training session, and the post-questionnaire was mailed around two weeks after completion. Only the data of those who gave their consent to participate in the research was analyzed.

④ Implementation details

The session was held at the Ashinaga Sendai Rainbow House on Wednesday, August 8, 2018. A total of five hours of morning and afternoon training sessions were offered. In the morning, we planned group work, including icebreaker activities. In the afternoon, the facilitator of the international NGO Save the Children Japan gave a lecture, and the senior students conducted a training session on psychological first aid (PFA) to support the junior students[6].

⑤ Evaluation methods and feedback

The evaluation of junior high school students' psychological state was conducted using the PTSSC-15; it was necessary to implement the 23 points recommended as a cutoff value. Results were delivered in the form of personal feedback given to the parents of the junior high school students who were assessed as needing support, with an evaluation according to the criteria and the observation conducted on the day of the camp. We compared the PTSSC-15 results before and after the sub-leader workshop and camp project and analyzed whether the teenagers' psychological burden had changed.

⑥Ethical considerations

This study was approved by the Miyagi Disaster Mental Health Care Center Ethics Committee and was carried out with the necessary safeguards for personal information in place.

Table 1: Overview of day camp project and sub-leader training workshop

	"Parent-Child Survivors Camping Project" (day camp project)		Sub-leader training workshop for middle schoolers
	Children	Adults	(Sub-leader training workshop)
Targets	Current elementary school children and their parents whose families have participated in any of the past eight sessions and asked to receive information about future events Elementary school students of 7 schools in 3 disaster-affected coastal municipalities from which we obtained prior consent		Families of children that had participated in at least one of our past eight camps, were currently middle-schoolers and had indicated that they would like to receive further information in the event of future camps.
Survey content	・Pre-event questionnaire ・PTSSC-15 ・Post-event questionnaire	・Pre-event questionnaire ・K6 ・Post-event questionnaire	・Pre-event questionnaire ・PTSSC-15 ・Post-event questionnaire
Program	・Psychological education through a picture-show story ・Breathing techniques using a blow-up pipe	・No parent/guardian program	・Group work (icebreaker, "What is a sub-leader" "Finding your strengths" "Let's think about what we can do" ・senior students conducted a training session on psychological first aid (PFA) to support the junior students

3. Results

(1) Day camp project

① Target attributes

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14 children participated (4 boys, 10 girls), with a mean age of 8.7 years. Their disaster experiences have been summarized below. Two of these children were born after the disaster and did not suffer any direct harm as a result of it.

Table: Attributes of participating children

	Number of children (%)
Participants	14
boys	4
girls	10
mean age	8.7
Born after the disaster	2 (15.4%)
Damage to their home (destroyed or worse)	0 (0%)
Dangerous experience	4 (30.8%)
Saw wounded individuals	0 (0%)
Lost something important	0 (7.7%)
Had a loved one die in the disaster	0 (0%)
Witnessed the tsunami	2 (15.4%)

② Changes in children's psychological state

The pre- and post-camp scale values of 12 of the 14 children that participated were analyzed (two children were excluded due to not completing the measurement forms). Figure 1 shows PTSSC-15 scores for these 12 participants before and after the camp. Before the camp, 5 children exceeded the 23-point cutoff value for the PTSSC-15, while afterward, 3 exceeded it. Mean PTSSC-15 score for participants was 17.6 (15.7 = SD) prior to the camp and 11.9 (13.3 = SD) afterwards. No statistically significant difference was observed as a result of verifying pre- and post-camp scores with a corresponding t-test ($t(11) = 1.72$, $p = .11$, $p < 0.05$).

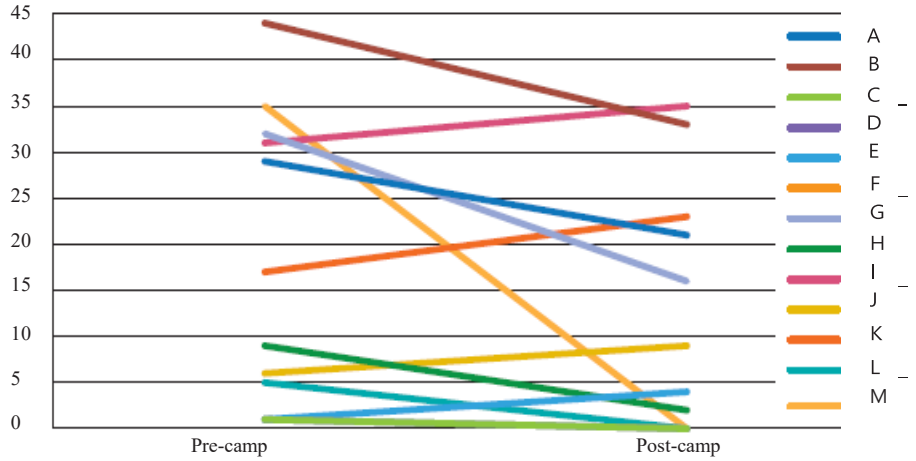

Figure 1: Changes in children's pre- and post-camp PTSSC-15 scores

③ Changes in parents' psychological state

The pre- and post-camp scale values of 10 of the 15 parents of the children that participated were analyzed (5 were excluded due to not completing the measurement forms or not providing consent). The average value of the K6 was 2.1 (2.5 SD) before the camp, and 1.8 (1.7 SD) afterward. No statistically significant difference was observed as a result of verification of pre- and post-camp scores with a corresponding t-test ($t(9) = 0.46$, $\Delta = .66$, $p < 0.05$).

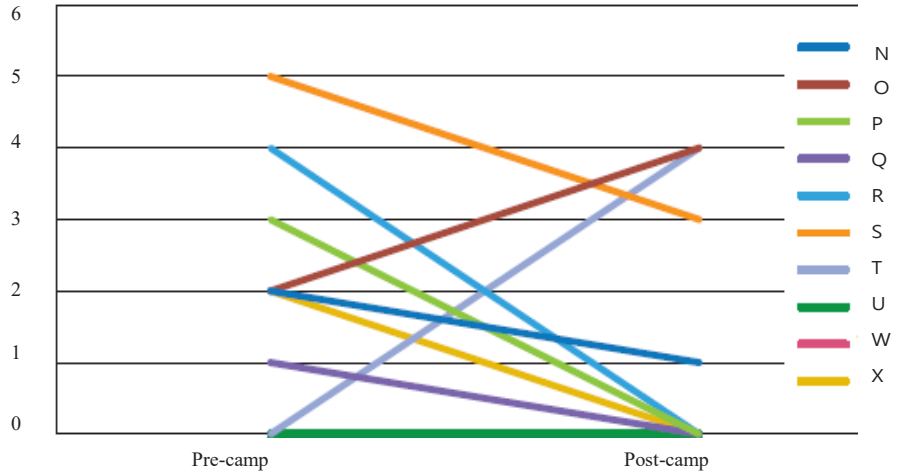

Figure 2: Changes in parents' pre- and post-camp K6 scores

(2) Sub-leader training workshop

① Target audience

Four children applied to participate, but only 3 participated on the day of (2 tenth-grade boys, 1 ninth-grade girl, and 1 child that canceled on the day of). All of these children had participated in the camp several times in the past.

② Changes in participants' psychological states

We evaluated our three participants. Figure 3 depicts their pre- and post-camp scores. No participants scores exceeded the PTSSC-15 cutoff value of 23 either before or after the camp. Mean PTSSC-15 score was 14.7 (5.1 = SD) before the camp and 16.3 (9.8 = SD) after the camp. Because we did not have enough subjects for this metric, we did not test these values for significance.

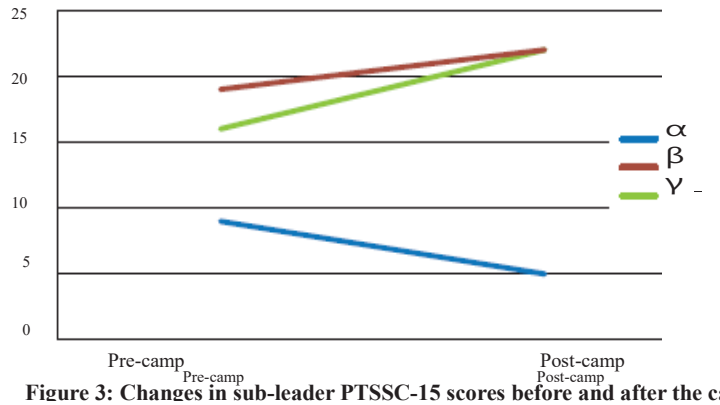

Figure 3: Changes in sub-leader PTSSC-15 scores before and after the camp

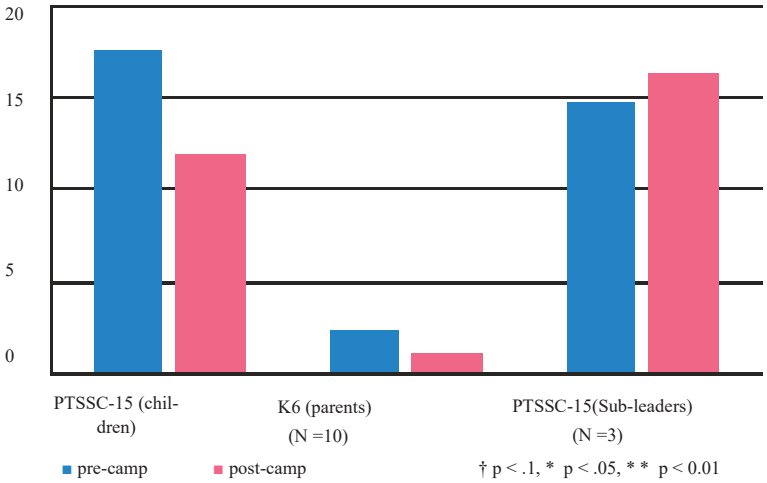

Figure 4: Changes in mean scores for each group before and the camp

4. Discussion

The first camp session was held in July 2011 by Tohoku Fukushi University, and the center has continued these sessions since that time. A total of nine sessions have been conducted to date. Seven years have passed since the disaster, and with each passing year, the number of participants decreases. This year, the number of children who faced traumatic experiences during the earthquake, such as the loss of family members and sightings of the tsunami, was quite low. Two children that attended this year's camp were born after the disaster, and our initial objective of "teaching disaster-affected children ways to not be consumed by anxiety" no longer seems appropriate. We must very carefully examine this project's nature and determine, following the needs of the regions it serves, whether or not it bears continuing.

In this year's camp, approximately 1 in 3 participating children had pre-camp PTSSC-15 scores above the cutoff value. We conducted short pre- and post-camp evaluation interviews with children and parents, and we determined that none of these children were in severe enough condition to warrant treatment. Because these children bore little direct trauma from the earthquake, we realized that they may be affected by non-disaster sources of stress or by the disaster indirectly. We tested pre- and post-camp PTSSC-15 for statistical evidence of improvement, but no such improvement was found.

No K6 scores exceeded the cutoff value before or after the camp project, and the number below the reference point was less than 5% compared to the general population[7]. No improvement in K6 scores was observed in pre- and post-camp scores. Therefore, the psychological health of the parents of participating children was considered to be unchanged. The bias in studying families with a history of participation cannot be disregarded; homes, where children have been confidently entrusted in the wake of this event, have a certain psychological flexibility, and there is a good chance that their life is becoming more stable. It is necessary to research the kinds of support that can be offered to families who are not able to participate in such a project, including methods other than a camp.

The sub-leader workshop was a new initiative beginning with the eighth camp session. We asked junior high school students who were past camp participants to participate as camp staff once they participated in preliminary training sessions. In the eighth session, 2 individuals participated, and this time, 3 participated. Junior high school students become busy with schoolwork and extracurricular activities, so there were not many who wanted to participate. We provided subleaders with a simplified version of the "psychological first aid for children" psychological guideline training, and we endeavored to have them use what they learned on the day of the camp itself. There have been nearly no reports of teaching PFA to middle schoolers, but we plan to continue to provide this training as part of a framework to develop socially conscious children like this into a human resource that supports their communities.

References

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Document 1: Psychological education via a picture-show story

①

Studying the Heart and Mind

②

Sometimes, bad things happen. They can make you feel…

③

Sad and blue

④

Or red and angry

⑤

Let's try to fix those bad feelings

⑥

The trick is to breathe!

⑦

Deep breaths

⑧

When you breathe in, stick out your tummy!

⑨

Let's try it using our blow-up pipes

⑩

Now you can do it too!

⑪

Close your eyes, and take deep breaths