

# What we have learned from the Tagajo Disaster Survivors Health Support Project

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## Introduction

Fully one-third of the city of Tagajo was flooded during the Great East Japan Earthquake and Tsunami of 2011. During the disaster, it was one of the hardest-hit regions in the country. From FY 2012 onwards, and at the city's request, the Miyagi Disaster Mental Health Care Center began providing health support to disaster-affected residents.

Disaster-affected municipalities have each developed their own unique disaster-victim support initiatives. Some of the characteristic features of the methodology adopted by this city are that: it conducted several health surveys and used the results to identify individuals with health issues that needed to be followed-up on. The city of Tagajo also deployed support teams made up of individuals from four different support organizations. To ensure the smooth running of support activities, the Miyagi Disaster Mental Health Care Center team has endeavored to develop a variety of support tools and systems. For example, proposing shifts to normal business operations and suggesting measures, based on compiled resident support data, to help disaster victims. In this section, we will look back on our work in this regard and discuss the characteristics of individuals who required follow-up visits.

## 1. Background

The city of Tagajo is located almost exactly in the middle of Miyagi Prefecture, along the coast. As of August 2018, it had a population of 62,365 and 26,839 households. In the Nara Period, it was the site of a large military base, and the history of that period lives on to this day, as ruins from that time can be found around the city. It is a commuter town for Sendai, and every year many individuals move there.

Concerning post-disaster housing reconstruction, by the end of March 2011, the final outfitting of container-type temporary housing had already begun, in six different parts of the city, and move-ins had begun. Disaster public housing was built in four places inside the city as of December 2016 and move-ins were complete. Not long after, in April 2017, the teardown of container-type temporary housing finished. In FY 2011, 1,402 households were living in Miyagi Prefecture private rented housing (prefectural public temporary housing) in the city. By September 1, 2018, only 8 remained. These 8 households had all been affected by the disaster outside of the city itself.

In the wake of the disaster, the city of Tagajo conducted several health surveys. Out of all the residents that responded, those who seemed to require support were designated “individuals requiring follow-up;” and the city began to construct a support system to address their needs. Rather than just set up a support desk, supporters made in-person visits to the homes of these individuals, took stock of the situation, and determined what type of outreach support (if any) was necessary (Figure 1).

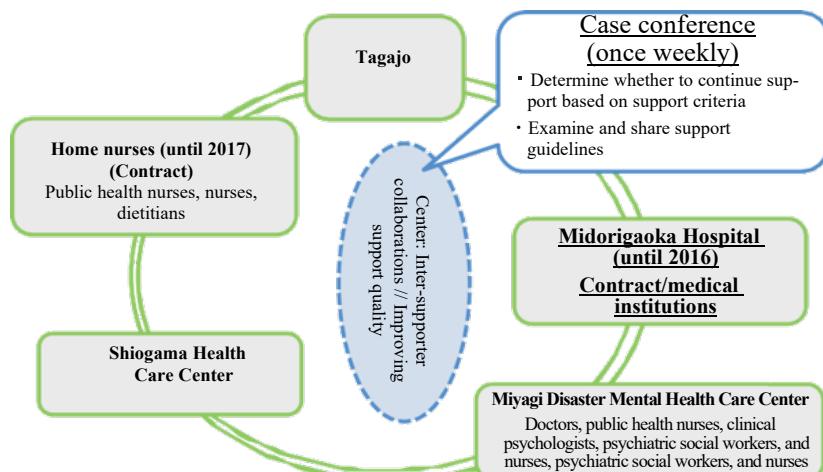


Figure 1. Disaster Survivors Health Support Team

Early on in our support work, in FY 2013, many support organizations that were operating in the city were doing so only because of the results of multiple health surveys. This sort of support system introduced a lot of variance into the health assessments of the city's residents, and our conferences also started to take a lot of time. At this point, we decided to set up disaster victims' support teams. To provide effective and efficient support, the MDMHCC drafted a set of "Support Withdrawal Criteria" (Table 1), enabling us to provide more consistent support to each supporter.

**Table 1: Support Withdrawal Criteria**

① Regularly visits the hospital	⑥ Has hobbies and pastimes (methods to reduce stress)
② Has someone they can seek out for counsel	⑦ Has a good relationship with their family
③ Has a relationship with a supporter, etc.	⑧ Sleeps well
④ Is socially active (volunteering, clubs, etc.)	⑨ Eats well
⑤ Meets and interacts with friends, relatives, etc.	⑩ Is in good physical health

\*These "Support Withdrawal Criteria" were drafted in FY 2013 by disaster victim support teams

## 2. Progress

Immediately after the Great East Japan Earthquake, the city began receiving support both from within and without the prefecture; it continued to develop its support initiatives, which included health surveys and home visits, as it entered each new phase of the post-disaster reconstruction process. From FY 2013 to FY 2018, teams continued to deploy support based on ① the "Health Survey of Miyagi Prefecture Private Rental Housing" (the Prefectural Temporary Housing Health Survey), and ② the "City Disaster Victim Survey," administered to individuals requiring follow-up. Survey results were entered and tabulated by an external agency, that handed its data over to the city at the end of every FY. Thus, individuals requiring follow-ups received support at the beginning of the following FY.

**Table 2: Progress of the Disaster Victim Health Support Project**

Health Survey Deployment Status from FY 2013 – FY 2018						
	Circles indicate that the listed initiative was implemented that fiscal year. Individuals requiring follow-up visits were given support the following year in accordance with survey results.					
	2013	2014	2015	2016	2017	2018
Prefectural Temporary Housing Health Survey	○	○	○	○	○	○
City Disaster Victim Survey	○	○	○	○	✗	✗

◆ Flagging criteria for individuals requiring follow-up  
 ① Prefectural Temporary Housing Health Survey: K6 score  $\geq 13$ , drinking problems, stopping treatment  
 ② City Disaster Victim Survey: K6 score  $\geq 13$

## 3. Objectives

Multiple health surveys were combined to flag which individuals required follow-up visits, and we continue to send out waves upon waves of supporters to home visits. Teams pointed out that "many individuals requiring follow-up did not need any further support after the one visit," and that "individuals requiring multiple support visits should have certain common characteristics." We thus endeavored to compare the cumulative survey and home visit data, to reevaluate our support system.

## 4. Methods

### (1) Subjects

The 241 individuals who required, and received, follow-up visits from support teams in FY 2017 became our subjects. They fell into the following three categories: ① individuals requiring follow-up based on the FY 2016 Prefectural Temporary Housing Health Survey, ② individuals requiring follow-up based on the FY 2016 City Disaster Victim Survey, and ③ recipients of ongoing support from FY 2016. All individuals in all three of these categories had received and finished receiving support in FY 2017. Based on the characteristics of individuals who had required follow-ups in FY 2017, we analyzed the characteristics of individuals who “finished receiving support after one visit” and those that “finished receiving support after two or more visits.”

#### ① FY 2016 “Prefectural Temporary Housing Health Survey”

The number of target households for this survey was 163; responses were obtained from 74 households (response rate: 45.4%) and were provided by a total of 152 individuals. Criteria used to flag individuals requiring follow-up visits were: “K6 score  $\geq 13$ ,” “drinking problems,” and “stopped treatment” (Table 2). After excluding various system users and residents who had moved out of the city, we were left with a total of 8 individuals requiring follow-ups, as our subjects.

#### ② FY 2016 “City Disaster Victim Survey”

The number of target households for this survey was 5,027; responses were obtained from 3,023 of them (response rate: 60.1%); they were provided by a total of 7,417 individuals. The criterion used to flag individuals requiring follow-ups was: “K6 score  $\geq 13$ ” (Table 2). After excluding various system users and residents who had moved out of the city, we were left with a total of 200 individuals requiring follow-up visits, as our subjects.

#### ③ Individuals requiring follow-up visits who needed continued support

We provided support to 33 people whose support programs had carried over from FY 2016.

### (2) Support period

The support period for these individuals extended from April 1, 2017, to March 31, 2018. We tabulated all our results from April 1, 2018, to August 31, 2018.

### (3) Methods

In this study, the 241 individuals whose support programs ended in FY 2017 were divided into two groups: Group A comprised individuals who “finished receiving support after one visit,” whereas Group B comprised individuals who “finished receiving support after two or more visits.” We then compared these two groups across the following categories.

Table 3: Compared attributes

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- ① Basic information (sex, age, living situation), family structure, profession, the effect of the disaster
- ② Support impetus (K6 score  $\geq 13$ , drinking problems, stopped treatment)
- ③ Assessment status (physical health, mental health, living situation)
- ④ Support status (physical health counseling, mental health counseling, use of and connection to social resources)
- ⑤ Outcome

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Determination of continuation or conclusion of support was made following the Support Withdrawal Criteria (Table 1) created in FY 2013 by teams after they had examined the Group A and Group B cases. Individuals that met more than one of these criteria had their support withdrawn. We held team case conferences for all cases.

### (4) Ethical considerations

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

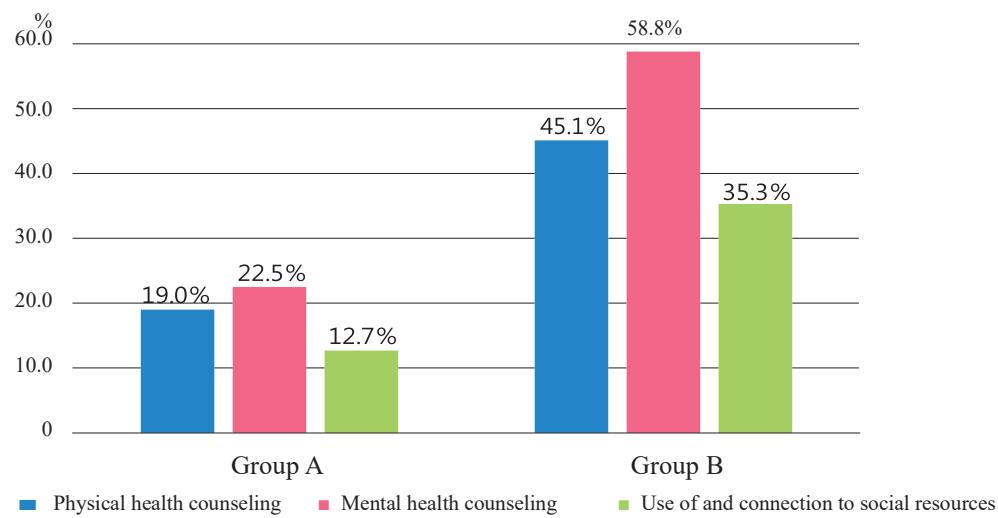
## 5. Results

Two hundred and forty-one individuals were selected as subjects for this survey; 194 of them were analyzed and finished receiving their support in FY 2017. One hundred and forty-two fell into Group A, “finished receiving support after one visit” (73.6%), and 51 fell into Group B “stopped receiving support after two or more visits” (26.4%). Comparison results have been listed in Table 4. In both Group A and Group B, the percentages of people who had “K6 score  $\geq 13$ ” or were “under treatment for physical illness” were high. Group B had higher rates of “has received psychiatric care,” “difficulty sleeping,” and “financial issues.”

**Table 4. Subject Characteristics (Comparison of Group A and Group B)**

	Group A	Group B
	Finished receiving support after one visit	Finished receiving support after two or more visits
Subjects	142 (74 men, 68 women)	51 (23 men, 28 women)
Mean age	60.6	61.4
Disaster damage (house completely destroyed)	40 (28.2%)	26 (51.0%)
Tsunami-affected area	103 (72.5%)	36 (70.6%)
K6 score $\geq$ 13	139 (97.9%)	41 (80.4%)
Drinking problems	22 (15.5%)	10 (19.6%)
Under treatment for physical illness	107 (75.4%)	48 (94.1%)
Has received psychiatric care	13 (9.2%)	9 (17.6%)
Difficulty sleeping	16 (11.3%)	14 (27.5%)
Financial issues	14 (9.9%)	13 (25.5%)

Figure 2 depicts the actual support status of these individuals. The results of a comparison of Groups A and Group B revealed that Group B had higher percentages of individuals supported by “physical health counseling,” “mental health counseling,” and “use of and connection to social resources” than Group A.

**Figure 2. Results (Comparison of Support Status Between Group A and Group B)**

The various combinations of support types that we considered are depicted in Figure 3. Group B had higher percentages of individuals receiving the following support-type combinations: “physical health counseling and mental health counseling,” “physical health counseling and use of and connection to social resources,” “mental health counseling and use of and connection to social resources,” and “physical health counseling and mental health counseling and use of and connection to social resources.” The primary forms of health counseling were as follows: in terms of physical health, many people were under treatment for high blood pressure and orthopedic diseases and had been referred to doctors for health counseling. In terms of mental health, many were in counseling for depression, drinking, and sleep problems, and we provided listening support and close support, and then referred them to psychiatric therapy. Individuals who ran into financial or employment difficulties when they were undergoing physical or mental health counseling, were referred to independent counseling support desks or welfare departments.

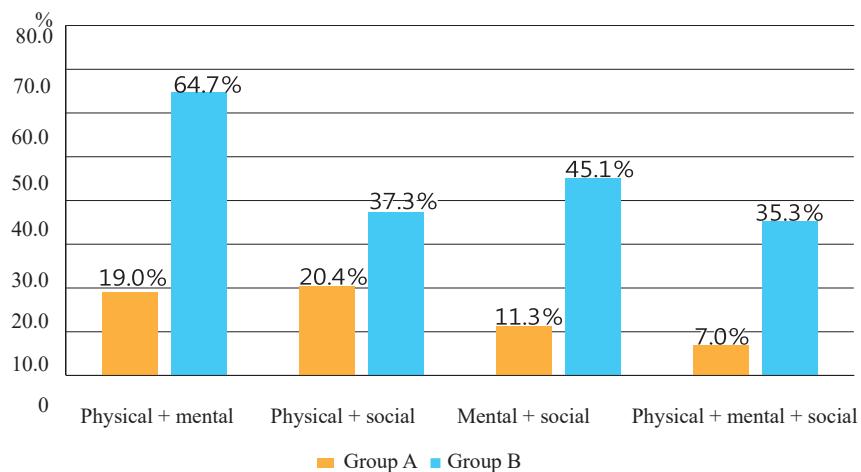
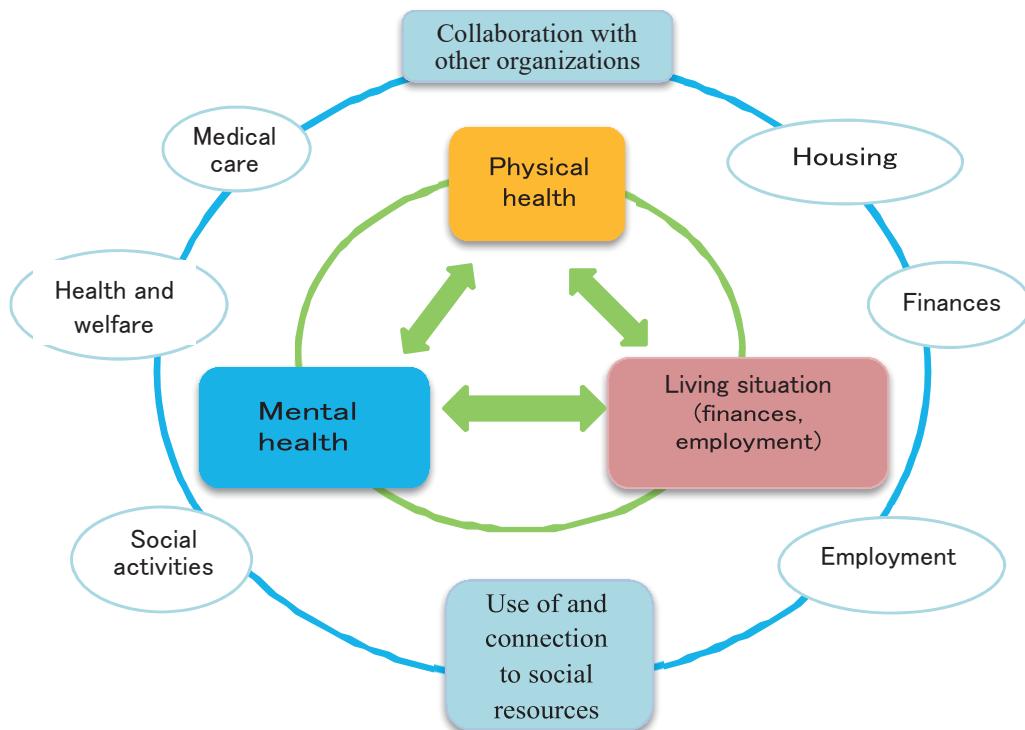


Figure 3. Results (Group A and Group B Comparison of Multiple Support Types)

## 6. Discussion

Based on the results listed above, it is apparent that disaster victims who required follow-up visits received a combination of physical health, mental health, and lifestyle (financial, employment, etc.) support. These measures appear to interact in complex ways.

Figure 4. The Importance of a Comprehensive Perspective in Disaster Victim Support



In addition to being aware of the usual medical, health, and welfare services that are available to disaster victims, supporters need to also obtain information on support systems and services that can cater to survivors' housing-, social-, financial-, and employment-related needs and endeavor to share the information with each disaster victim. This information must be tailored to their needs, involve other organizations, and provide comprehensive support. Since both Group A and Group B included high percentages of subjects "under treatment for physical illness," we believe that furnishing supporters with pertinent knowledge and support techniques will facilitate the formation of victim-supporter relationships.

There are limits to what one can deduce from tabulated health survey results. By conducting home visits, we were able to learn several things, such as the necessity for psychiatric care and financial/employment-related issues. Subjects' needs and issues became clearer after these visits. Health surveys have given us a chance to come into contact with isolated individuals—like alcoholics and hikikomori—and with households struggling with multiple latent issues—like being cut off from medical care and other support services. A K6 score of 13 or greater as an index of mental health is a very useful tool that enables us to quickly ascertain the mental state of a resident during a home visit. However, because both Group A and Group B had a high percentage of individuals with a K6 score  $\geq 13$ , that score alone cannot be used to determine the need for continued support or the severity of a particular individual's issues.

### Acknowledgments

This study was made possible thanks to the assistance of the employees and staff of the Tagajo Health and Welfare Department. Thank you so much for all of your help. Using the results compiled as part of this research initiative, the city of Tagajo will hold a mental health promotion awareness project called the “Body Health Salon” for disaster public housing tenants and nearby residents in FY 2018, and they will use a team-based system therein. We hope that this summary of our work will prove useful in health support initiatives for victims of future disasters.

The content of this manuscript was presented as “What we have learned from the Tagajo Disaster Survivors Health Support Project” by Chika Chiba and Shu Kimura, public health nurses in the Division of Social Welfare, Department of Health and Welfare at Tagajo City Hall, and the staff of the MDMHCC at the 9<sup>th</sup> Annual Meeting of the Tohoku Mental Health and Welfare Association in Yamagata on September 30, 2018.

### References

- 1) Chika Chiba; Tagajo Disaster Victim Health Support Project: through inter-supporter collaboration. FY 2017 Miyagi Mental Health Care Forum. [http://miyagi-kokoro.org/me-dia/files/%E8%B3%87%E6%96%99%EF%BC%91%E3%80%80%E5%A4%9A%E8%B3%80%E5%9F%8E%E5%B8%82%E5%8D%83%E8%91%89%E6%B0%8F\(5\).pdf](http://miyagi-kokoro.org/me-dia/files/%E8%B3%87%E6%96%99%EF%BC%91%E3%80%80%E5%A4%9A%E8%B3%80%E5%9F%8E%E5%B8%82%E5%8D%83%E8%91%89%E6%B0%8F(5).pdf), accessed 2019.5.31.