

Progress Report of Mental Health and Lifestyle Survey

Reported on 12 February 2015

1. Progress Report of Mental Health and Lifestyle Survey for FY 2014

1.1 Purpose

Results of the Mental Health and Lifestyle Survey for FY 2011-2013 show that ongoing care is needed by understanding the residents' mental health and lifestyle changes. We will continue to conduct the survey using survey forms.

For the survey respondents requiring support, we provide effective and efficient support by offering over-the-phone or other support services, as well as by promptly sharing participants' information with municipal governments and the Fukushima Center for Disaster Mental Health.

1.2 Group

Residents of Evacuation Zones (when the FY 2011 survey was sent) as of 15 January 2015

(212,738 people)

[Evacuation Zones]

Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate
Minami-soma, Tamura, Kawamata, part of Date (the area with a specific spot
recommended for evacuation)

1.3 Survey Methods

We plan to send survey forms (to be filled out by self or parent/guardian) to the participants from early February 2015.

1.3-1 Classification

Category	Age Criteria	Method
Adults	Born before 1 April 1999	Self-administered
Middle school age	Born between 2 April 1999 and 1 April 2002	Partially self-administered
Primary school age	Born between 2 April 2002 and 1 April 2008	Completed by parents
4-6 years	Born between 2 April 2008 and 1 April 2011	Completed by parents
0-3 years	Born between 2 April 2011 and 1 April 2014	Completed by parents

1.3-2 Survey Items

- Mental and physical health
- Lifestyle (diet, sleep, smoking, alcohol and exercise)
- Activities
- Living environment and relationships (for adults)

1.3-3 Support after the Survey

- Doctors and other professionals at Fukushima Medical University (FMU) will evaluate and analyse the survey responses. The Mental Health Support Team consisting of clinical psychiatrists, public health nurses and other professionals will provide phone or other forms of support to respondents determined to require counseling or support for mental health or lifestyle problems.
- Participants determined to require examination by a doctor will be referred to a registered physician (*see next section) at a medical facility in the Fukushima Prefecture. Those requiring continued support will be connected to the municipal government of the area to which they evacuated and the Fukushima Center for Disaster Mental Health, where their support needs will be reviewed and met.
- At the registered doctor's discretion, participants determined to require further professional mental health care will be handled by FMU and cooperating institutions in the normal course of treatment. Specifically, children will be handled at the Children's Mental Health Treatment Center and all others will be handled in the Department of Psychosomatic Medicine.

- The Mental Health Support Team will offer information and advice about radiation to participants, and those participants determined to require assistance from a particular relevant specialist will be handled by the Radiation Health Consultation Team comprised of professors from FMU. If an individual inquiring about the health effects of radiation or some other issue needs to have a medical examination, specialist doctors and other professionals will determine the course of action.

2. Registered Physicians

Registered physicians are psychiatrists or pediatricians who provide services to participants determined to require healthcare services based on the Mental Health and Lifestyle Survey.

To be eligible for registration, a psychiatrist or a pediatrician needs to attend the accredited workshops held by FMU. The number of registrants is 143 from 83 medical institutions as of 31 December 2014.

Result of Mental Health and Lifestyle Survey for FY 2013

1. Purpose

The Great East Japan Earthquake on 11 March 2011 and the following accident at the Fukushima Daiichi Nuclear Power Plant brought the residents of Fukushima Prefecture psychological distress or post-traumatic stress disorder (PTSD) caused by anxiety, evacuation, loss of property, and fearful experiences. The survey started in FY 2011 to understand the residents' mental health and lifestyle, and provide them with appropriate care.

As mental health services should involve medium- and long-term support, we will continue to conduct the survey to convey a strong message of ongoing care and support to the participants. Additionally, further support is needed based on understanding the changes in their situation that have occurred as well as the causes of these changes.

The survey responses were analyzed by doctors and other professionals at Fukushima Medical University (FMU). A Mental Health Support Team consisting of clinical psychologists, public health nurses and others performed consultations to those determined to require counseling or support for mental health or lifestyle problems.

2. Methods

2.1. Support Group

Respondents to the Mental Health and Lifestyle Survey for FY 2013, who are residents of nationally designated evacuation areas born on or before 1 April 2013, and apply to the following selection criteria.

We have five types of surveys according to age.

Age 0-3 years : Participants born between April 2, 2010 and April 1, 2013.

Age 4-6 years : Participants born between April 2, 2007 and April 1, 2010.

Primary School : Participants born between April 2, 2001 and April 1, 2007.

Middle School : Participants born between April 2, 1998 and April 1, 2001.

Adults : Participants born on or before April 1, 1998.

2.2 Criteria for Support

We provided telephone counseling or support by sending written materials according to the urgency and severity. In this survey, 'children' refers to the participants of middle school age and below.

Criteria for support are based on A) Scale scores and B) Items other than scales.

2.2-1 Telephone Counseling

Respondents who required support (A):

- Children with SDQ (Strength and Difficulties Questionnaire) score ≥ 20 , adults with K6 (general mental health conditions) score ≥ 13 and PCL (trauma response) score ≥ 50 , or adults with K6 score ≥ 17 regardless of their PCL score.

Respondents who required support (B):

- Children and adults identified based on the content of free-answer questions and in urgent need of support.
- Adults with a previous history of hypertension or diabetes who have not received treatment with a BMI ≥ 27.5 (calculated from weight and height written in the survey) and a weight gain of ≥ 3 kg after the disaster, or those who consume, on average, ≥ 540 ml alcoholic drinks per day.
- Adults with a history of mental disorders who are not currently visiting a clinic.

2.2-2 Written Materials

Respondents who required support (A):

- Children with SDQ score ≥ 16 (criterion in initial screening) and adults with K6 score ≥ 13 or PCL score ≥ 44 (criteria in initial screening), who did not meet the criteria for telephone counseling.

Respondents who required support (B):

- Children and adults identified based on the content of free-answer questions and not in urgent need of support.
- Adults who neither meet the above criteria nor receive medical treatment with sleep disorder, depression and decreased activity.
- Adults with CAGE (method of screening for alcoholism) score ≥ 2 out of 4.

We sent the respondents who required written support materials a letter with a special phone number for support, and a return postcard asking their desire for telephone support. Telephone support was provided for those who indicated their desire for support, or those who were determined to require support based on the reply content.

2.3. Categories of Results and Continued Support

The results of the telephone counseling were categorized into four groups: Follow-up 1, 2, 3, and ‘Declined support.’ The participants requiring continued support were given follow-up with telephone counseling, or connected to municipal governments and the Fukushima Center for Disaster Mental Health. Participants determined to require examination by a doctor were referred to a registered physician, or informed of the medical institutions and services they needed. When necessary, we contacted the participants’ physicians to share information.

2.3-1 Categories of Results

- Follow-up 1 : Participants confirmed to be improving or self-managing their problems.
- Follow-up 2 : Participants not recovering from health problems, the emotional aftermath, adjustment problems, etc.
- Follow-up 3 : Participants whose status could not be confirmed.
- Declined support : Participants who clearly conveyed that they did not want support.

2.3-2 Continued Support

- Follow-up : Participants requiring continued telephone counseling.
- Municipal government : Participants required to be connected to municipal government.
- Referral : Participants referred to registered doctors.
- Sent list of registered doctors within Fukushima Prefecture:
 - Participants sent information of registered doctors.
- Sent information of medical institutions outside the prefecture:
 - Participants sent information of institutions outside the prefecture for support.
- Sharing information : Participants’ information was shared with their home doctors.
- Provided information : Participants were provided information of medical institutions or services they needed by telephone during or after the telephone counseling.
- Handled by other departments:
 - Participants needing services related to the Basic Survey and/or Thyroid Ultrasound Examination of FMU’s Radiation Medical Science Center.

3. Results

3.1 Numbers of Respondents Requiring Support and the Support Provided

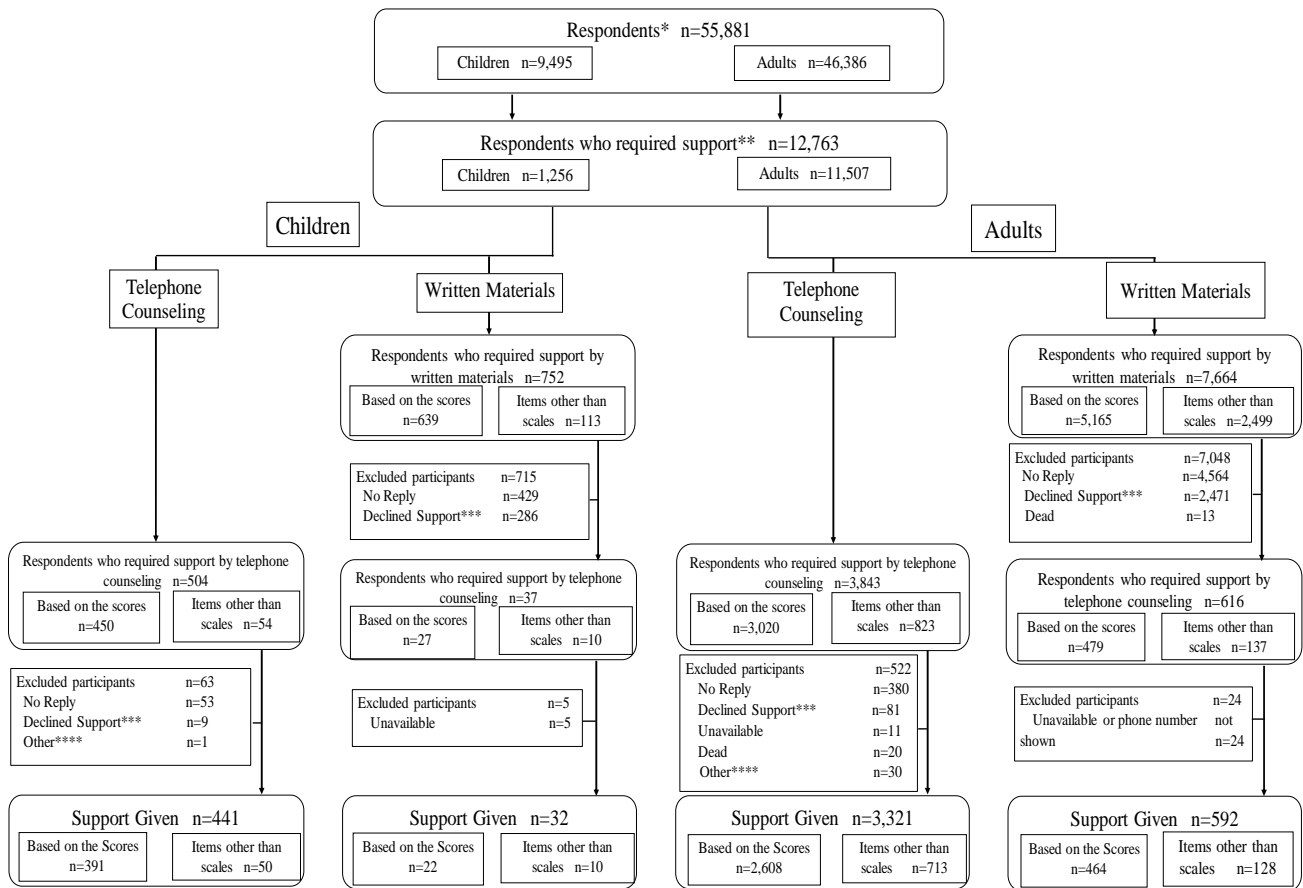
A total of 1,256 children required support; 504 of them needed telephone counseling and 752 were determined to require support with written materials. Of the 752 participants, 37 were determined to require telephone counseling based on the responses to the written materials.

A total of 11,507 adults required support; 3,843 of them needed telephone counseling and 7,664 were determined to require support with written materials. After receiving the support with written materials, 616 were determined to require telephone counseling. The number of those who only met the criteria of CAGE test scores was 2,010.

To those who were identified as requiring support but could not be reached for telephone support (except for the deceased), and to those who only met the criteria of CAGE test scores, information was provided by sending booklet made by Radiation Medical Science Center of FMU: *Mental Health and Lifestyle Support*.

Figure 1 shows the numbers of respondents requiring support and the support provided. It excludes participants who only met the criteria of CAGE test scores.

The percentages are rounded and may not total to 100%.



* Those who responded by 31 October 2014.
 ** Those who were determined to require support by 31 December 2014.
 *** Those who declined support by replying to the written support materials.
 (Excluding the participants who indicated no desire for support in the return postcard.)
 **** Those who received telephone counseling but not enough support during a given time.

Figure 1: Number of participants required support and the number of support provided

3.2 Children

Since SDQ is for children aged 4 years and older, children aged 0-3 years old were determined on the basis of the free-answer question. Since few participants who had been sent written materials received telephone counseling (2 of age 0-3 years, 8 of age 4-6 years, 17 of primary school age, 5 of middle school age), the following results combine participants requiring telephone counseling with the number of those determined to require phone support based on the written materials.

3.2-1 Status of Respondents Requiring Support

A total of 541 children required support; 504 of them needed telephone counseling and 37 were determined to require telephone support on the basis of the written support materials. Of these 541 children, 321 (59.3%) were male and 220 (40.7%) were female. Phone support was successfully provided to 473 (87.4%) of the total. Respondents living within Fukushima Prefecture were 330 (69.8%) and 143 (30.2%) were living outside Fukushima (Table 1).

Table 1: Status of children requiring support (By sex and area)

Participants requiring support	Total 541	0-3 years 10	4-6 years 124	Primary school age 265	Middle school age 142
Male	321 (59.3%)	3 (30.0%)	79 (63.7%)	165 (62.3%)	74 (52.1%)
Female	220 (40.7%)	7 (70.0%)	45 (36.3%)	100 (37.7%)	68 (47.9%)
Support Given	473	9	110	232	122
Within Fukushima	330 (69.8%)	6 (66.7%)	76 (69.1%)	158 (68.1%)	90 (73.8%)
Outside Fukushima	143 (30.2%)	3 (33.3%)	34 (30.9%)	74 (31.9%)	32 (26.2%)

The numbers shown of those given support only include participants who were provided telephone counseling.

3.2-2 Participants' State of Health

In order to more comprehensively understand the situation the participants are facing, we added new question items with the help of physicians specialized in child and adolescent psychiatry. Table 2 shows the frequency of the questions and answers talked about with participants (or guardians) during the telephone support.

Table 2-1: State of health of participants who received telephone counseling

Number of Support Given	Total	0-3 years	4-6 years	Primary school age	Middle school age
	473	9	110	232	122
Have sleeping problems					
Yes	53 (12.9%)	0 (0.0%)	8 (7.8%)	28 (14.0%)	17 (16.7%)
No	358 (87.1%)	7 (100.0%)	94 (92.2%)	172 (86.0%)	85 (83.3%)
Unclear	62 -	2 -	8 -	32 -	20 -
Have an appetite					
Yes	367 (91.3%)	6 (85.7%)	93 (93.9%)	180 (91.4%)	88 (88.9%)
No	35 (8.7%)	1 (14.3%)	6 (6.1%)	17 (8.6%)	11 (11.1%)
Unclear	71 -	2 -	11 -	35 -	23 -
Have friendship problems					
Yes	124 (32.6%)	1 (25.0%)	19 (22.1%)	67 (34.9%)	37 (37.8%)
No	256 (67.4%)	3 (75.0%)	67 (77.9%)	125 (65.1%)	61 (62.2%)
Unclear	93 -	5 -	24 -	40 -	24 -
Full of energy					
Yes	367 (93.1%)	5 (83.3%)	93 (100.0%)	183 (93.8%)	86 (86.0%)
No	27 (6.9%)	1 (16.7%)	0 (0.0%)	12 (6.2%)	14 (14.0%)
Unclear	79 -	3 -	17 -	37 -	22 -
Somatoform Disorders					
Yes	46 (12.4%)	1 (16.7%)	10 (11.2%)	21 (11.5%)	14 (14.9%)
No	326 (87.6%)	5 (83.3%)	79 (88.8%)	162 (88.5%)	80 (85.1%)
Unclear	101 -	3 -	21 -	49 -	28 -
Rebellious					
Yes	104 (31.4%)	1 (33.3%)	24 (29.6%)	49 (30.1%)	30 (35.7%)
No	227 (68.6%)	2 (66.7%)	57 (70.4%)	114 (69.9%)	54 (64.3%)
Unclear	142 -	6 -	29 -	69 -	38 -
Irritable					
Yes	116 (34.4%)	0 (0.0%)	27 (32.5%)	56 (33.3%)	33 (39.8%)
No	221 (65.6%)	3 (100.0%)	56 (67.5%)	112 (66.7%)	50 (60.2%)
Unclear	136 -	6 -	27 -	64 -	39 -
Emotionally dependent					
Yes	109 (38.0%)	2 (100.0%)	22 (29.7%)	62 (42.8%)	23 (34.8%)
No	178 (62.0%)	0 (0.0%)	52 (70.3%)	83 (57.2%)	43 (65.2%)
Unclear	186 -	7 -	36 -	87 -	56 -
Bored					
Yes	3 (1.2%)	0 (0.0%)	0 (0.0%)	2 (1.7%)	1 (1.7%)
No	245 (98.8%)	3 (100.0%)	66 (100.0%)	119 (98.3%)	57 (98.3%)
Unclear	225 -	6 -	44 -	111 -	64 -

The participants who did not mention the issue go to 'Unclear' category.

Proportions do not include the number of 'Unclear'.

Table 2-2: State of health of participants who received telephone counseling

Number of Support Given	Total 473	0-3 years 9	4-6 years 110	Primary school age 232	Middle school age 122
Have developmental problems					
Yes	64 (20.8%)	1 (16.7%)	15 (75.0%)	30 (16.3%)	18 (18.6%)
No	243 (79.2%)	5 (83.3%)	5 (25.0%)	154 (83.7%)	79 (81.4%)
Unclear	166 -	3 -	90 -	48 -	25 -
Have emotional or behavioral problems					
Yes	92 (24.4%)	0 (0.0%)	12 (13.3%)	55 (29.6%)	25 (26.0%)
No	285 (75.6%)	5 (100.0%)	78 (86.7%)	131 (70.4%)	71 (74.0%)
Unclear	96 -	4 -	20 -	46 -	26 -
Mental disorder					
Yes	12 (3.2%)	0 (0.0%)	0 (0.0%)	7 (3.8%)	5 (5.1%)
No	363 (96.8%)	5 (100.0%)	88 (100.0%)	177 (96.2%)	93 (94.9%)
Unclear	98 -	4 -	22 -	48 -	24 -
Traumatic stress reaction					
Yes	45 (12.7%)	0 (0.0%)	7 (8.3%)	29 (16.5%)	9 (9.9%)
No	309 (87.3%)	3 (100.0%)	77 (91.7%)	147 (83.5%)	82 (90.1%)
Unclear	119 -	6 -	26 -	56 -	31 -
School adjustment					
Well-adjusted	369 (90.7%)	1 (100.0%)	88 (96.7%)	190 (91.8%)	90 (83.3%)
Fail to adjust	38 (9.3%)	0 (0.0%)	3 (3.3%)	17 (8.2%)	18 (16.7%)
Unclear	66 -	8 -	19 -	25 -	14 -
Household or environmental problem					
Yes	38 (10.1%)	0 (0.0%)	3 (3.4%)	23 (12.4%)	12 (12.2%)
No	340 (89.9%)	5 (100.0%)	86 (96.6%)	163 (87.6%)	86 (87.8%)
Unclear	95 -	4 -	21 -	46 -	24 -
Guardian's anxiety about child rearing					
Yes	125 (30.3%)	4 (57.1%)	20 (20.8%)	67 (32.5%)	34 (32.7%)
No	288 (69.7%)	3 (42.9%)	76 (79.2%)	139 (67.5%)	70 (67.3%)
Unclear	60 -	2 -	14 -	26 -	18 -
Guardian's physical problems					
Yes	43 (10.3%)	0 (0.0%)	10 (10.4%)	20 (9.7%)	13 (12.1%)
No	373 (89.7%)	7 (100.0%)	86 (89.6%)	186 (90.3%)	94 (87.9%)
Unclear	57 -	2 -	14 -	26 -	15 -
Guardian's mental problems					
Yes	71 (17.2%)	0 (0.0%)	13 (13.1%)	39 (19.0%)	19 (18.4%)
No	342 (82.8%)	6 (100.0%)	86 (86.9%)	166 (81.0%)	84 (81.6%)
Unclear	60 -	3 -	11 -	27 -	19 -
Treatments					
Psychiatry or psychosomatic medicine	37 (10.2%)	1 (12.5%)	5 (5.7%)	16 (9.1%)	15 (16.1%)
Other	41 (11.3%)	2 (25.0%)	11 (12.6%)	20 (11.4%)	8 (8.6%)
No	286 (78.6%)	5 (62.5%)	71 (81.6%)	140 (79.5%)	70 (75.3%)
Unclear	109 -	1 -	23 -	56 -	29 -
Contacting institutions for counseling					
Yes	57 (17.8%)	4 (50.0%)	10 (12.7%)	27 (17.1%)	16 (21.3%)
No	263 (82.2%)	4 (50.0%)	69 (87.3%)	131 (82.9%)	59 (78.7%)
Unclear	153 -	1 -	31 -	74 -	47 -

The participants who did not mention the issue go to 'Unclear' category.

Proportions do not include the number of 'Unclear'.

Among the participants who received the telephone support, the most frequently discussed issues were the following: 124 participants had friendship problems (32.6%), 104 talked about rebellious behaviors (31.4%), 116 discussed becoming irritable (34.4%), 109 talked about being emotionally dependent (38.0%), and 125 guardians had anxiety about child rearing (30.3%).

As of treatments, 37 visited psychiatrists or psychosomatic medicine services (10.2%), 41 visited other departments or clinics (11.3%), and 286 did not visit any clinics (78.6%).

3.2-3 Results of Telephone Counseling and Continued Support

The results of the support were categorized into 'Follow-up 1,' 'Follow-up 2,' 'Follow-up 3,' and 'Declined Support' as was the case in the previous surveys (Table 3). The breakdown below shows the criteria of 'Follow-up 2,' which were divided into the problems faced by the children and the problems faced by the guardians (Table 4). Numbers in the breakdown (Table 4) refer to the total number and the proportion in the brackets show the ratio of total number to the number of 'Follow-up 2.'

After the telephone support, 355 (75.1%) were categorized as 'Follow-up 1,' 102 (21.6%) were categorized as 'Follow-up 2,' 9 (1.9%) were categorized as 'Follow-up 3,' and 7 (1.5%) declined support (Table 3). Among the participants who were categorized as 'Follow-up 2,' 34 children (33.3%) had school adjustment problems, and 28 children (27.5%) and 39 guardians (38.2%) had mental problems.

Table 3: Results of support given (Children)

Number of support given	Total 473	0-3 years 9	4-6 years 110	Primary school age 232	Middle school age 122
Follow-up 1	355 (75.1%)	8 (88.9%)	86 (78.2%)	173 (74.6%)	88 (72.1%)
Follow-up 2	102 (21.6%)	1 (11.1%)	19 (17.3%)	51 (22.0%)	31 (25.4%)
Follow-up 3	9 (1.9%)	0 (0.0%)	3 (2.7%)	5 (2.2%)	1 (0.8%)
Declined support	7 (1.5%)	0 (0.0%)	2 (1.8%)	3 (1.3%)	2 (1.6%)

Table 4: Breakdown of 'Follow-up 2'

	Total	0-3 years	4-6 years	Primary school age	Middle school age
Number of 'Follow-up 2'	102	1	19	51	31
(Children)					
Physical Problems	9 (8.8%)	0 (0.0%)	2 (10.5%)	3 (5.9%)	4 (12.9%)
Mental Problems	28 (27.5%)	0 (0.0%)	0 (0.0%)	15 (29.4%)	13 (41.9%)
Emotional aftermath	14 (13.7%)	0 (0.0%)	6 (31.6%)	6 (11.8%)	2 (6.5%)
Adjustment disorder	34 (33.3%)	0 (0.0%)	13 (68.4%)	8 (15.7%)	13 (41.9%)
Other	20 (19.6%)	1 (100.0%)	5 (26.3%)	8 (15.7%)	6 (19.4%)
(Guardian)					
Physical Problems	14 (13.7%)	0 (0.0%)	2 (10.5%)	7 (13.7%)	5 (16.1%)
Mental Problems	39 (38.2%)	0 (0.0%)	9 (47.4%)	20 (39.2%)	10 (32.3%)
Child Rearing Problems	18 (17.6%)	0 (0.0%)	4 (21.1%)	7 (13.7%)	7 (22.6%)
Isolation	5 (4.9%)	0 (0.0%)	1 (5.3%)	2 (3.9%)	2 (6.5%)
Other	8 (7.8%)	1 (100.0%)	1 (5.3%)	6 (11.8%)	0 (0.0%)

As a continued support, 28 were categorized as 'Follow-up,' 4 were connected to municipal governments, 5 were sent list of registered doctors within Fukushima Prefecture, 1 was categorized as 'Sharing information,' 9 were provided information, and 1 was handled by other departments (Table 5).

Table 5: Continued support for children

Number of support given	Total	0-3 years	4-6 years	Primary school age	Middle school age
	473	9	110	232	122
Follow-up	28 (5.9%)	1 (11.1%)	5 (4.5%)	11 (4.7%)	11 (9.0%)
Municipal government	4 (0.8%)	0 (0.0%)	2 (1.8%)	1 (0.4%)	1 (0.8%)
Referral	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sent list of registered doctors within Fukushima Prefecture	5 (1.1%)	0 (0.0%)	0 (0.0%)	4 (1.7%)	1 (0.8%)
Sent list of medical institutions outside the prefecture	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sharing information	1 (0.2%)	0 (0.0%)	0 (0.0%)	1 (0.4%)	0 (0.0%)
Provided information	9 (1.9%)	0 (0.0%)	2 (1.8%)	4 (1.7%)	3 (2.5%)
Handled by other departments	1 (0.2%)	0 (0.0%)	1 (0.9%)	0 (0.0%)	0 (0.0%)

3.2-4 Problems Faced by Participants (children)

Since the Mental Health and Lifestyle Survey in FY 2011, we have used analytic induction to understand the problems discussed by participants on the phone. The problems fall into four broad categories: child's reaction, parent/guardian and family problems, school and neighborhood relationships, and environment. Child's reaction and parent/guardian and family problems divide into subcategories. Figure 2 is the conceptual diagram of those problems.

The content of the respondents' problems mentioned for the FY 2013 survey were categorized, as was the case in FY 2012, based on the categories from the survey for FY 2011.

Frequently mentioned problems in the FY 2013 survey were impact on school and irritability and violence (from the category 'child's reaction'), and parent/guardian's problems from the category 'parent/guardian and family problems.'

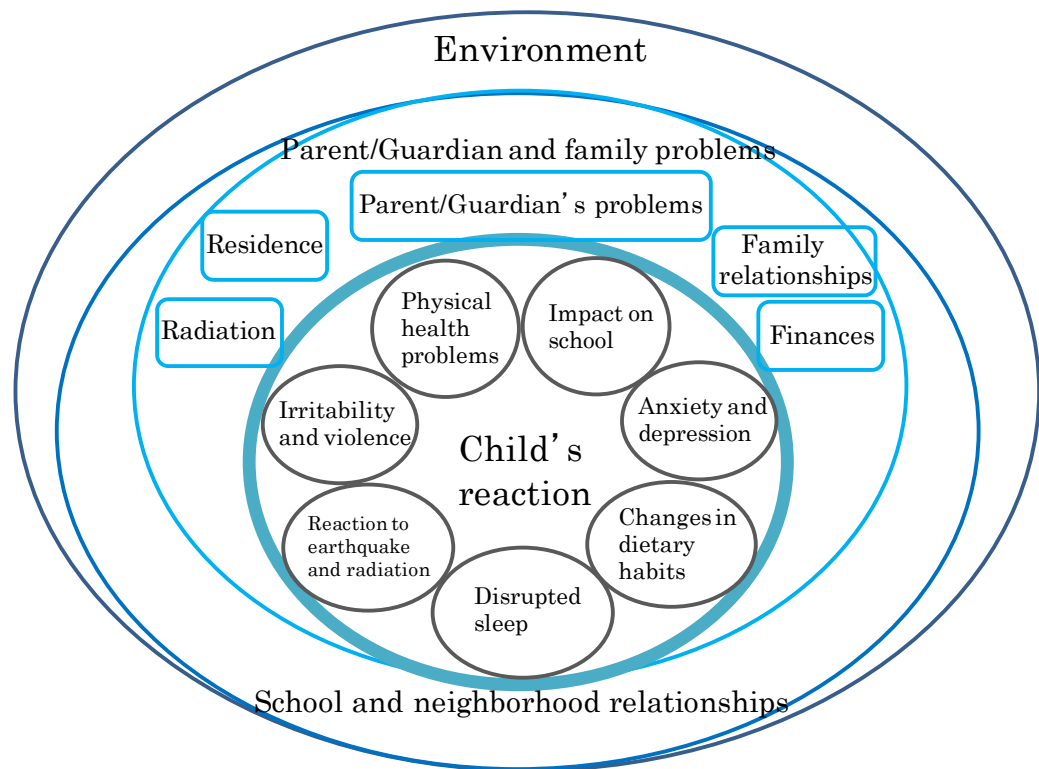


Figure 2: Conceptual diagram of problems faced by participants (children)

3.3 Adults

3.3-1 Status of Respondents Requiring Support

(Telephone Counseling)

A total of 3,843 adults required telephone counseling. Among the 3,020 participants identified on the basis of the scores, 1,150 (38.1%) were male and 1,870 (61.9%) were female. 823 participants were determined on the basis of items other than scores. Of these, 392 (47.6%) were male and 431 (52.4%) were female (Table 6). Telephone support was provided to 3,321 (86.4%). Among the participants, 2,622 (79.0%) lived within Fukushima Prefecture and 699 (21.0%) lived outside Fukushima (Table 7).

Table 6: Participants requiring telephone counseling (By sex and age group)

Age group	Based on the scores			Based on the items other than scales		
	Total	Male	Female	Total	Male	Female
15-19	55	21 (38.2%)	34 (61.8%)	13	5 (38.5%)	8 (61.5%)
20-29	124	40 (32.3%)	84 (67.7%)	45	16 (35.6%)	29 (64.4%)
30-39	295	116 (39.3%)	179 (60.7%)	90	35 (38.9%)	55 (61.1%)
40-49	303	132 (43.6%)	171 (56.4%)	114	63 (55.3%)	51 (44.7%)
50-59	416	170 (40.9%)	246 (59.1%)	161	101 (62.7%)	60 (37.3%)
60-69	657	274 (41.7%)	383 (58.3%)	217	98 (45.2%)	119 (54.8%)
70-79	691	254 (36.8%)	437 (63.2%)	123	55 (44.7%)	68 (55.3%)
80-	479	143 (29.9%)	336 (70.1%)	60	19 (31.7%)	41 (68.3%)
Total	3,020	1,150 (38.1%)	1,870 (61.9%)	823	392 (47.6%)	431 (52.4%)

Ages are at the time of 1 April 2013.

Table 7: Participants requiring telephone counseling (By area)

Area of residence	Support given	Based on the scores	Items other than scales
		3,321	2,608
Within Fukushima	2,622 (79.0%)	2,049 (78.6%)	573 (80.4%)
Outside Fukushima	699 (21.0%)	559 (21.4%)	140 (19.6%)

The numbers shown of those given support only include participants who were provided telephone counseling.

(Written Materials)

Among the participants requiring written support materials, a total of 616 required telephone counseling. Out of the 479 participants identified on the basis of the scores, 210 (43.8%) were male and 269 (56.2%) were female. 137 participants were determined on the items other than scales. Of these, 76 (55.5%) were male and 61 (44.5%) were female (Table 8). The telephone counseling was provided to 592 (96.1%). Of these, 483 (81.6%) lived within Fukushima Prefecture and 109 (18.4%) lived outside Fukushima (Table 9).

Table 8: Participants required telephone counseling among those who required support by written materials (By sex and age group)

Age group	Based on the scores			Based on the items other than scales		
	Total	Male	Female	Total	Male	Female
15-19	1	0 (0.0%)	1 (100.0%)	2	2 (100.0%)	0 (0.0%)
20-29	6	2 (33.3%)	4 (66.7%)	3	1 (33.3%)	2 (66.7%)
30-39	16	6 (37.5%)	10 (62.5%)	4	3 (75.0%)	1 (25.0%)
40-49	19	8 (42.1%)	11 (57.9%)	12	3 (25.0%)	9 (75.0%)
50-59	45	17 (37.8%)	28 (62.2%)	15	10 (66.7%)	5 (33.3%)
60-69	79	39 (49.4%)	40 (50.6%)	49	28 (57.1%)	21 (42.9%)
70-79	195	82 (42.1%)	113 (57.9%)	28	15 (53.6%)	13 (46.4%)
80-	118	56 (47.5%)	62 (52.5%)	24	14 (58.3%)	10 (41.7%)
Total	479	210 (43.8%)	269 (56.2%)	137	76 (55.5%)	61 (44.5%)

Ages are at the time of 1 April 2013.

Table 9: Participants required telephone counseling among those who required support by written materials (By area)

Area of residence	Support given	Based on the scores	Items other than scales
	592	464	128
Within Fukushima	483 (81.6%)	380 (81.9%)	103 (80.5%)
Outside Fukushima	109 (18.4%)	84 (18.1%)	25 (19.5%)

The numbers shown of those given support only include participants who were provided telephone counseling.

3.2-2 Participants' State of Health

(Telephone Counseling)

We asked participants about their physical condition, sleep, and the medical institutions where they are treated.

Table 10: State of health of participants who received telephone counseling

Number of support given	Total 3,321	Based on the scores 2,608	Items other than scales 713
Physical condition			
Improved	417 (13.4%)	280 (11.5%)	137 (20.1%)
No change	2,080 (66.6%)	1,642 (67.3%)	438 (64.2%)
Worse	502 (16.1%)	450 (18.4%)	52 (7.6%)
Have not had problems	123 (3.9%)	68 (2.8%)	55 (8.1%)
Unclear	199 —	168 —	31 —
Sleep disorders			
Improved	339 (11.2%)	245 (10.4%)	94 (13.9%)
No change	2,279 (75.0%)	1,791 (75.8%)	488 (72.3%)
Worse	243 (8.0%)	217 (9.2%)	26 (3.9%)
Have not had problems	178 (5.9%)	111 (4.7%)	67 (9.9%)
Unclear	282 —	244 —	38 —
Treatments			
Psychiatry or psychosomatic medicine	468 (15.4%)	426 (17.9%)	42 (6.3%)
Other	1,959 (64.3%)	1,587 (66.8%)	372 (55.4%)
None	621 (20.4%)	364 (15.3%)	257 (38.3%)
Unclear	273 —	231 —	42 —
Contacting institutions for counseling			
Yes	459 (28.6%)	296 (25.7%)	163 (36.0%)
No	1,145 (71.4%)	855 (74.3%)	290 (64.0%)
Unclear	1,717 —	1,457 —	260 —
Depression			
Yes	1,245 (44.2%)	1,104 (50.3%)	141 (22.7%)
No	1,570 (55.8%)	1,091 (49.7%)	479 (77.3%)
Unclear	506 —	413 —	93 —
Reaction to earthquake			
Severe	147 (7.0%)	140 (7.8%)	7 (2.2%)
Mild	277 (13.2%)	248 (13.8%)	29 (9.3%)
None	1,679 (79.8%)	1,403 (78.3%)	276 (88.5%)
Unclear	1,218 —	817 —	401 —

The participants who did not mention the issue go to 'Uncertain' category. Proportion does not include the number of 'Unclear'.

Comparing physical conditions with a year ago, 417 (13.4%) saw improvement, 2,080 (66.6%) saw no changes, 502 (16.1%) became worse, and 123 (3.9%) have not had problems so far.

Asked about their sleep compared to a year ago, 339 (11.2%) saw improvement, 2,279 (75.0%) saw no changes, 243 (8.0%) became worse, 178 (5.9 %) have not had problems so far.

As for clinics, 468 (15.4%) were treated by psychiatrists or psychosomatic medicine specialists, 1,959 (64.3%) were treated by other specialists, and 621 (20.4%) did not see a doctor.

(Written Materials)

We provided telephone counseling to those who indicated their desire for telephone support by return postcard, and to those who were determined by the Mental Health Support Team that they required support based on the content of the reply. We asked participants over the phone about their physical condition, sleep, and what medical institutions they visited for consultation.

Table 11: State of health of participants who received telephone counseling among those who required support by written materials

Number of support given	Total 592	Based on the scores 464	Items other than scales 128
Physical condition			
Improved	47 (8.7%)	35 (8.3%)	12 (9.9%)
No change	368 (67.8%)	295 (69.9%)	73 (60.3%)
Worse	97 (17.9%)	80 (19.0%)	17 (14.0%)
Have not had problems	31 (5.7%)	12 (2.8%)	19 (15.7%)
Unclear	49 —	42 —	7 —
Sleep disorders			
Improved	27 (5.2%)	18 (4.4%)	9 (7.8%)
No change	400 (76.8%)	326 (80.3%)	74 (64.3%)
Worse	25 (4.8%)	19 (4.7%)	6 (5.2%)
Have not had problems	69 (13.2%)	43 (10.6%)	26 (22.6%)
Unclear	71 —	58 —	13 —
Treatments			
Psychiatry or psychosomatic medicine	42 (7.5%)	39 (8.9%)	3 (2.4%)
Other	438 (78.1%)	365 (83.3%)	73 (59.3%)
None	81 (14.4%)	34 (7.8%)	47 (38.2%)
Unclear	31 —	26 —	5 —
Contacting institutions for counseling			
Yes	89 (41.4%)	50 (33.3%)	39 (60.0%)
No	126 (58.6%)	100 (66.7%)	26 (40.0%)
Unclear	377 —	314 —	63 —
Depression			
Yes	139 (28.8%)	117 (31.3%)	22 (20.4%)
No	343 (71.2%)	257 (68.7%)	86 (79.6%)
Unclear	110 —	90 —	20 —
Reaction to earthquake			
Severe	12 (3.6%)	12 (3.8%)	0 (0.0%)
Mild	21 (6.3%)	17 (5.4%)	4 (25.0%)
None	300 (90.1%)	288 (90.9%)	12 (75.0%)
Unclear	259 —	147 —	112 —

The participants who did not mention the issue go to 'Uncertain' category. Proportion does not include the number of 'Unclear'.

Comparing the physical condition with a year ago, 47 (8.7%) saw improvement, 368 (67.8%) saw no changes, 97 (17.9%) became worse, 31 (5.7%) have not had problems so far.

Asked about their sleep compared to a year ago, 27 (5.2%) saw improvement, 400 (76.8%) saw no changes, 25 (4.8%) became worse, 69 (13.2%) have not had problems so far.

As for clinics, 42 (7.5%) were treated by psychiatrists or psychosomatic medicine specialists, 438 (78.1%) were treated by other specialists, and 81 (14.4%) did not see a doctor.

3.3-3 Results of Telephone Counseling and the Continued Support

The results of the support were categorized into ‘Follow-up 1,’ ‘Follow-up 2,’ ‘Follow-up 3,’ and ‘Declined Support’ as was the case in the previous surveys. The breakdown below shows the criteria of ‘Follow-up 2.’ Numbers in the breakdown (Table 13 and 16) refer to the total number and the proportion in the brackets show the ratio of total number to the number of ‘Follow-up 2.’

(Respondents Required Telephone Counseling)

After the telephone counseling, 2,573 (77.5%) were designated as ‘Follow-up 1,’ 599 (18.0%) as ‘Follow-up 2,’ 114 (3.4%) as ‘Follow-up 3,’ and 35 (1.1%) as ‘Declined Support’ (Table 12). The reasons for ‘Follow-up 2’ were categorized into the following: 308 (51.4%) for physical health problems, 412 (68.8%) for mental health problems, 64 (10.7%) for emotional aftermath, 63 (10.5%) for adjustment problems, 69 (11.5%) for isolation (Table 13).

Table 12: Results of telephone counseling

Number of support given	Total 3,321	Based on the scores 2,608	Items other than scales 713
Follow-up 1	2,573 (77.5%)	1,982 (76.0%)	591 (82.9%)
Follow-up 2	599 (18.0%)	501 (19.2%)	98 (13.7%)
Follow-up 3	114 (3.4%)	94 (3.6%)	20 (2.8%)
Declined support	35 (1.1%)	31 (1.2%)	4 (0.6%)

Table 13: Breakdown of the reasons for ‘Follow-up 2’

Number of ‘Follow-up 2’	Total 599	Based on the scores 501	Items other than scales 98
Physical problems	308 (51.4%)	261 (52.1%)	47 (48.0%)
Mental problems	412 (68.8%)	347 (69.3%)	65 (66.3%)
Emotional aftermath	64 (10.7%)	57 (11.4%)	7 (7.1%)
Adjustment disorder	63 (10.5%)	59 (11.8%)	4 (4.1%)
Isolation	69 (11.5%)	62 (12.4%)	7 (7.1%)

For continued support, 214 were designated as ‘Follow-up,’ 65 were connected to the municipal government, 8 were sent a referral, 34 were sent list of registered doctors within Fukushima Prefecture, 5 were sent list of medical institutions outside Fukushima, 4 were designated as ‘Sharing information,’ 34 were provided information, and 6 were handled by other departments (Table 14).

Table 14: Continued support

Number of support given	Total 3,321	Based on the scores 2,608	Items other than scales 713
Follow-up	214 (6.4%)	121 (4.6%)	93 (13.0%)
Municipal government	65 (2.0%)	56 (2.1%)	9 (1.3%)
Referral	8 (0.2%)	7 (0.3%)	1 (0.1%)
Sent list of registered doctors within Fukushima Prefecture	34 (1.0%)	29 (1.1%)	5 (0.7%)
Sent list of medical institutions outside the prefecture	5 (0.2%)	2 (0.1%)	3 (0.4%)
Sharing information	4 (0.1%)	3 (0.1%)	1 (0.1%)
Provided information	34 (1.0%)	28 (1.1%)	6 (0.8%)
Handled by other departments	6 (0.2%)	5 (0.2%)	1 (0.1%)

(Respondents Requiring Written Support Materials)

After the telephone counseling, 506 (85.5%) were designated as 'Follow-up 1,' 78 (13.2%) as 'Follow-up 2,' 6 (1.0%) as 'Follow-up 3,' and 2 (0.3%) as 'Declined Support' (Table 15). The reasons for 'Follow-up 2' were categorized into the following: 48 (61.5%) for physical health problems, 42 (53.8%) for mental health problems, 4 (5.1%) for emotional aftermath, 4 (5.1%) for adjustment problems, 3 (3.8%) for isolation (Table 16).

Table 15: Results of the telephone counseling among those who required support by written materials

Number of support given	Total 592	Based on the scores 464	Items other than scales 128
Follow-up 1	506 (85.5%)	395 (85.1%)	111 (86.7%)
Follow-up 2	78 (13.2%)	62 (13.4%)	16 (12.5%)
Follow-up 3	6 (1.0%)	6 (1.3%)	0 (0.0%)
Declined support	2 (0.3%)	1 (0.2%)	1 (0.8%)

Table 16: Breakdown of the reasons for 'Follow-up 2'

	Total	Based on the scores	Items other than scales
Number of 'Follow-up 2'	78	62	16
Physical problems	48 (61.5%)	36 (58.1%)	12 (75.0%)
Mental problems	42 (53.8%)	36 (58.1%)	6 (37.5%)
Emotional aftermath	4 (5.1%)	4 (6.5%)	0 (0.0%)
Adjustment disorder	4 (5.1%)	3 (4.8%)	1 (6.3%)
Isolation	3 (3.8%)	3 (4.8%)	0 (0.0%)

For continued support, 25 were designated as 'Follow-up,' 4 were connected to the municipal government, 8 were sent list of registered doctors within Fukushima Prefecture, 4 were provided information, and 4 were handled by other departments (Table 17).

Table 17: Continued support

Number of support given	Total	Based on the scores	Items other than scales
	592	464	128
Follow-up	25 (4.2%)	16 (3.4%)	9 (7.0%)
Municipal government	4 (0.7%)	2 (0.4%)	2 (1.6%)
Referral	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sent list of registered doctors within Fukushima Prefecture	8 (1.4%)	7 (1.5%)	1 (0.8%)
Sent list of medical institutions outside the prefecture	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sharing information	0 (0.0%)	0 (0.0%)	0 (0.0%)
Provided information	4 (0.7%)	4 (0.9%)	0 (0.0%)
Handled by other departments	4 (0.7%)	3 (0.6%)	1 (0.8%)

3.3-4 Problems Faced by Participants (adults)

Since the Mental Health and Lifestyle Survey in FY 2011, we have used analytic induction to understand the problems faced by participants. The problems fall into four broad categories: personal problems, household problems, problems with social life, and environment and culture. Personal problems, household problems, and problems with social life divide into subcategories. Figure 3 is the conceptual diagram of those problems.

The content of the respondents' problems mentioned in the FY 2013 survey were categorized, as was the case in FY 2012, based on the categories from the survey for FY 2011.

Frequently mentioned problems in the FY 2013 survey were physical problems, disrupted sleep, depression, anxiety about the future (from the category 'Personal reaction'), and changes in living environment, family relationships, changes in daily life and habits (from the category 'Household problems'), and dissatisfaction with government policies or problems with disaster claims from the category 'Problems with social life'.

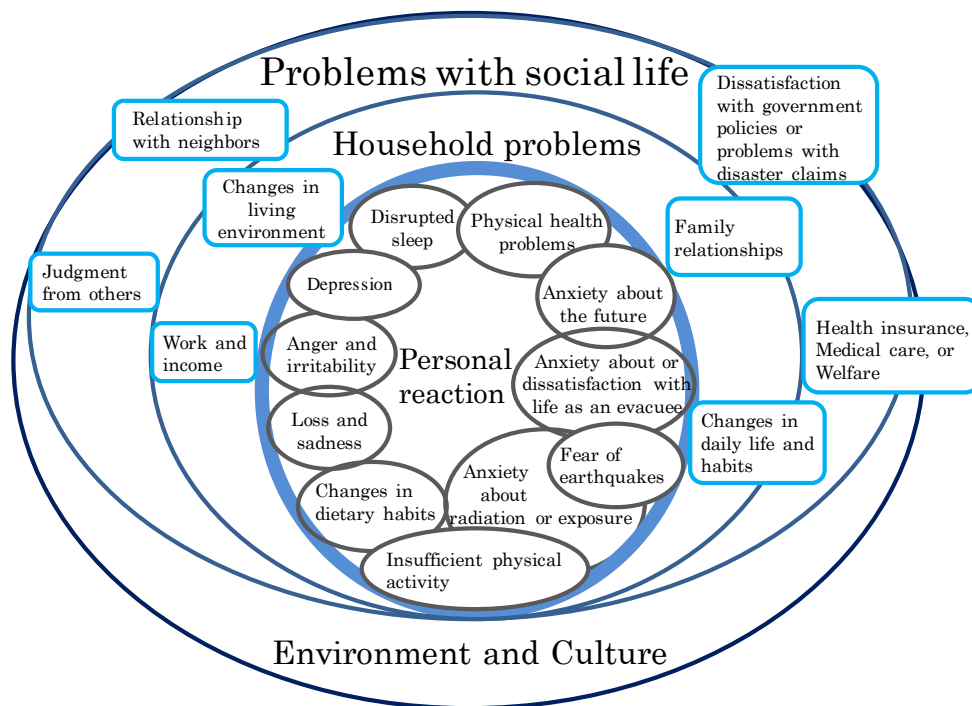


Figure 3: Conceptual diagram of problems faced by participants (adults)

4. Conclusion

The number of those who required support was 1,256 children and 11,507 adults for the Mental Health and Lifestyle Survey for FY 2013. Based only on the CAGE test scores, the number was 2,010. Among the children, 504 required telephone counseling and 752 required written support materials. The number of participants determined to require telephone support based on the content of written materials was 37. The number of adults who required telephone counseling was 3,843 and 7,664 required written materials. The number of those determined to require telephone support based on the content of written materials was 616. If those identified as requiring support could not be reached for telephone counseling (except for the deceased), information was provided by sending booklet made by Radiation Medical Science Center of FMU: *Mental Health and Lifestyle Support*. It was also distributed to those who only met the criteria of CAGE test scores.

After the telephone counseling for children, 355 (75.1%) were categorized as 'Follow-up 1*,' and 102 (21.6%) were categorized as 'Follow-up 2**.' Frequently discussed issues were impact on school, and irritability and violence form the category 'Child's reaction,' and parent or guardian's problem from the category 'Parent/Guardian and family problems.'

Among the adults, 2,573 (77.5%) were categorized as 'Follow-up 1' and 599 (18.0%) were categorized as 'Follow-up 2.' Among the respondents who required written materials, 506 (85.5%) were categorized as 'Follow-up 1' and 78 (13.2%) were categorized as 'Follow-up 2.' Frequently discussed issues were physical problems, disrupted sleep, depression, and anxiety about the future from the category 'Personal reaction,' changes in living environment, family relationships, and changes in daily life and habits from the category 'Household problems,' and dissatisfaction with government policies or problems of disaster claims from the category 'Problems with social life.'

* Participants confirmed to be improving or self-managing their problems.

** Participants not recovering from health problems, the emotional aftermath, adjustment disorder etc.