

Progress Report of Mental Health and Lifestyle Survey

Reported on 20 February 2017

1. Implementation Plan of Mental Health and Lifestyle Survey for FY 2016

1.1 Purpose

Based on the results of Mental Health and Lifestyle Survey for FY 2011-2015, we will continue to use survey forms for FY 2016 to monitor residents' mental health and lifestyle changes.

For the survey respondents assessed to benefit from support, we offer over-the-phone and other support services, and cooperate with municipal health and other agencies, sharing information to the extent authorized by law and individual preference.

1.2 Survey Respondents

Residents of designated Evacuation Zones as of 2011.

207,998 people as of 11 January 2017

[Evacuation Zones]

Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate

Minami-soma, Tamura, Kawamata, and parts of Date (the area with a specific spot recommended for evacuation)

1.3 Survey Methods

We plan to mail survey forms (to be filled out by self or parent/guardian) to the survey population from early February 2017. We introduced a secure online response system accessible by personal computer, tables, or smartphone, for the convenience of respondents.

1.3-1 Classification

Category	Age Criteria	Method
0-3 years	Born between 2 April 2013 and 1 April 2016	Completed by parents
4-6 years	Born between 2 April 2010 and 1 April 2013	Completed by parents
Primary school age	Born between 2 April 2004 and 1 April 2010	Completed by parents
Middle school age	Born between 2 April 2001 and 1 April 2004	Partially self-administered
Adults	Born before 1 April 2001	Self-administered

1.3-2 Survey Items

- Mental and physical health
- Lifestyle habits (diet, sleep, smoking, exercise)
- Living conditions (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 psychologists, public health nurses and other professionals will provide phone or other forms of support to respondents assessed to require counseling or support for mental health or lifestyle problems.
- Participants who require further medical treatment will be referred to registered physicians (*see next section) at medical facilities in the Fukushima Prefecture. Those requiring continued support will be referred to the municipal government of the area from which they evacuated and the Fukushima Center for Disaster Mental Health, where their support needs will be reviewed and met.
- At the registered general practitioner's discretion, participants assessed 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 assessed 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 General Practitioners

Registered general practitioners are psychiatrists or pediatricians who provide services to participants assessed 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 135 from 85 medical institutions as of 31 December 2016.

Mental Health and Lifestyle Survey for FY 2015

Summary of Support

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 radiation 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.

Since the results of the Mental Health and Lifestyle Survey for FY 2011-2014 show that ongoing care is needed by understanding the residents' mental health and lifestyle changes, we conducted the survey for FY 2015 using survey forms. Based on responses, we offered consultations to those assessed to require counseling or support for mental health or lifestyle problems in order to improve the residents' conditions and connect them to medical institutions.

2. Survey Respondents

Respondents to the Mental Health and Lifestyle Survey for FY 2015, who are residents of nationally designated evacuation areas as of 11 March 2011 and those born on or before 1 April 2015. We have five types of surveys according to age.

Age 0-3 years: Participants born between April 2, 2012 and April 1, 2015.

Age 4-6 years: Participants born between April 2, 2009 and April 1, 2012.

Primary School: Participants born between April 2, 2003 and April 1, 2009.

Middle School: Participants born between April 2, 2000 and April 1, 2003.

Adults: Participants born on or before April 1, 2000.

In this survey, 'children' refers to the respondents of middle school age and below.

3. Methods

3.1 Individual Notices of Results

Survey questionnaires for FY 2015 were mailed to the survey population in February 2016. In September and October, the results of main items with advice were sent individually to those who responded by 31 August 2016. We introduced a phone number for people to get more detailed information with the results, and posted Frequently Asked Questions on the test results section of our Japanese website. The items provided to the participants follow:

Survey type	Items in the result
0-3 years	Height, weight, diet (1 year olds and older), exercise (2 year olds and older), bedtime
4-6 years	Height, weight, diet, exercise, bedtime, behavioral difficulties and emotional health (SDQ ¹)
Primary school age	Height, weight, diet, exercise, bedtime, behavioral difficulties and emotional health (SDQ)
Middle school age	Height, weight, diet, exercise, sleep, behavioral difficulties and emotional health (SDQ)
Adults	Obesity (BMI ²), diet, exercise, sleep, psychological distress scale (K6 ³)

1) Strength and Difficulties Questionnaire. Mental health and behavioral screening scale for children.

2) Body Mass Index (calculated based on height and weight written in the survey forms)

3) Psychological distress scale which screens for general mental illness such as depression and anxiety.

In the results for children, standard height and weight by age in months at the time when they completed the survey forms were provided for reference.

3.2 Criteria for Support

We selected individuals who required support based on the criteria below after reviewing their responses to the survey for FY 2015. A Mental Health Support Team consisting of clinical psychologists, public health nurses and others provided telephone counseling sessions or sent written support materials according to the urgency and severity.

This report provides the results of those who responded by 31 October 2016 and received support by 31 December 2016.

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

3.2-1 Telephone Counseling

Respondents who required support (A):

- Children with SDQ score ≥ 20 , adults with K6 score ≥ 15 .

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 (HT) or diabetes (DM) who have not received treatment and met the following criteria: BMI ≥ 27.5 kg/m² (HT/DM • BMI), or those who consume ≥ 42 drinks in total per week (HT/DM • Excessive drinking) (Multiply the number of days per week by the average daily drinking volume). Adults who report

consuming ≥ 42 drinks per week with a CAGE score (screening tool for alcoholism) of 4 out of 4 (high-risk drinking).

- Adults with a history of mental disorders who are not currently visiting a clinic.

3.2-2 Mail Support

Respondents who required support (A):

- Children with SDQ score ≥ 16 (criterion in initial screening¹) and adults with K6 score ≥ 10 (criterion for anxiety disorder in initial screening²), who did not meet the criteria for telephone counseling.

References

- 1) Matsuishi T, et al. (2008) Scale properties of the Japanese version of the Strengths and Difficulties Questionnaire (SDQ): a study of infant and school children in community samples. *Brain and Development*. 30: 410-415.
- 2) Distribution and related factors of mental health conditions based on the nationwide K6 questionnaire survey. FY 2006 Health Labour Sciences Research Grant (Research on Applied Use of Statistics and Information). Research on the consideration of a system that understands and analyzes statistical information regarding the health condition of citizens from a household perspective. Divided research document.

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 with a weight gain of ≥ 3 kg per year and BMI ≥ 27.5 kg/m² (excluding those who have received treatment).
- Adults who consume ≥ 42 drinks in total per week with a CAGE score of 2 or 3.
- Adults outside the above criteria, but with unsatisfactory sleep, depressed mood and/or decreased activity.
- Adults with a history of mental disorders who did not answer about their hospital visit(s).

We sent the respondents who required mail support a letter with a special phone number for support, and a return postcard asking their desire for telephone support. Also, we sent a booklet to respondents who required support (B) (based on items other than scores) to encourage lifestyle change. Telephone support was provided for those who indicated their desire for support, or those who were assessed to require support based on the reply content.

3.2-3 General Information by Mail (Sending a Booklet)

- Adults with a weight gain of ≥ 3 kg per year, BMI ≥ 25.0 and BMI < 27.5 kg/m² (Mild obesity).
- Adults who meet neither of the above criteria, but with a CAGE score ≥ 2 .

We sent a booklet to the respondents who met the above criteria (excluding respondents designated for telephone counseling and mail support).

3.3 Categories of Interventions and Those Results

In the telephone counseling sessions, we asked the respondents about their health and problems they were facing.

We categorized what transpired in the counseling sessions, e.g., listened carefully, recommended seeing a doctor, advised lifestyle changes, offered psychoeducation, provided information (such as social resources), etc.

The results of the telephone counseling were categorized into four groups as shown below: Follow-up 1, 2, 3, and declined support.

As for continued support, there are four categories as shown below: Follow-up support, referred to outside institutions, mail support, and directed to other departments.

3.3-1 Categories of Results

Follow-up 1: Participants confirmed to be improving or self-managing their problems.

Follow-up 2: Participants not fully recovering from health problems, emotional aftermath of the disaster, 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.

3.3-2 Continued Support

Follow-up support: Participants requiring continued telephone counseling.

Referred to outside institutions: Participants required to be referred to municipal government or the Fukushima Center for Disaster Mental Health.

Mail support: Participants were sent referral, list of registered general practitioners, information of institutions outside the prefecture for support, and letters providing information for registered doctors.

Directed to other departments: Participants needing services related to the Basic Survey and/or Thyroid Ultrasound Examination of FMU's Radiation Medical Science Center.

4. Results

4.1 Send Results to Respondents

The number of respondents of FY 2015 Mental Health and Lifestyle Survey was 50,456, of whom 6,446 were children, and 44,010 were adults. Among them, notices of results were sent to 6,406 children (939 of 0-3 years, 1,338 of 4-6 years, 2,746 of primary school students, and 1,383 of middle school students) and 43,941 adults. The total number was 50,347.

4.2 Number of Respondents Requiring Support and Receiving Support

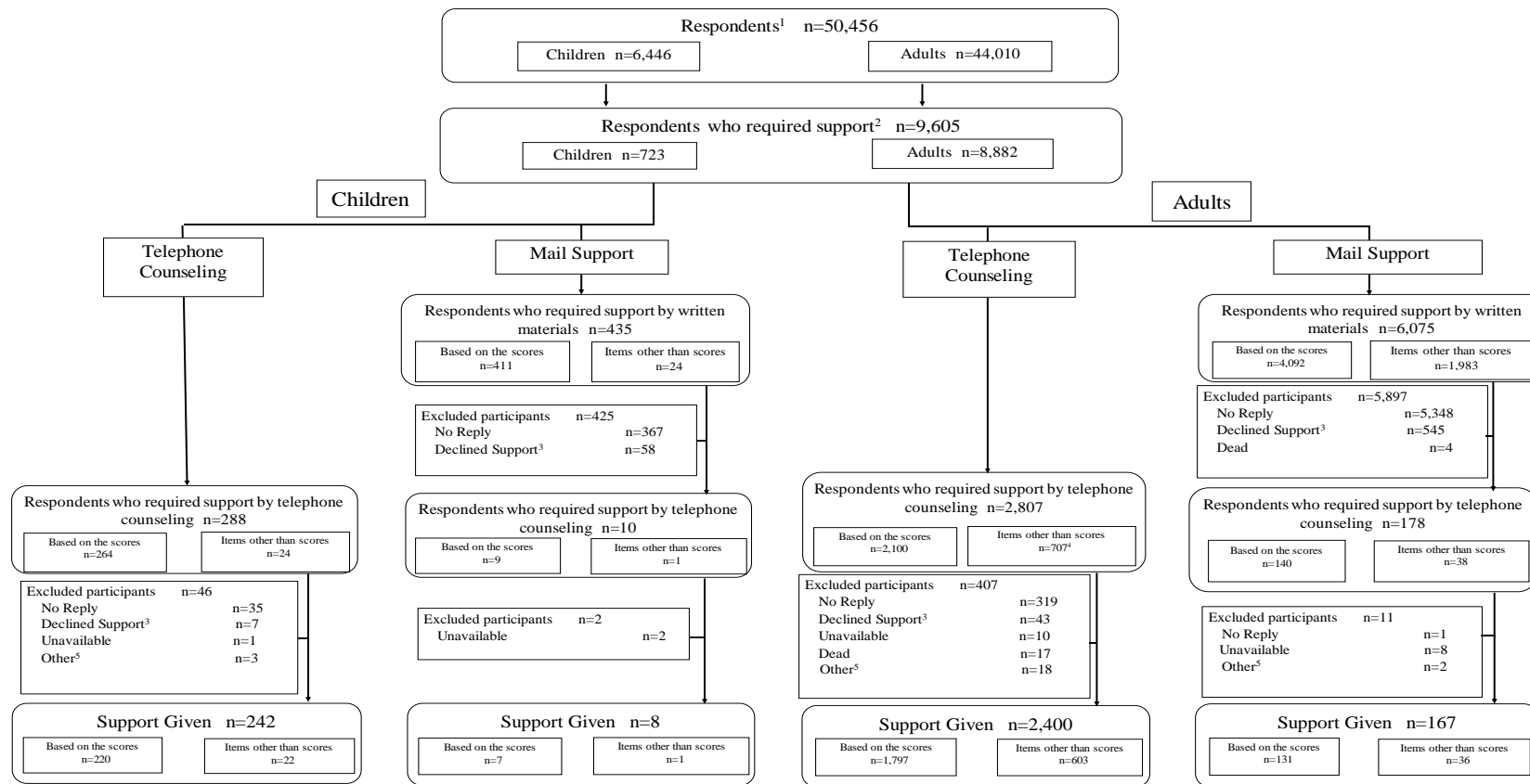
A total of 723 children required support; 288 of them needed telephone counseling and 435 required mail support. Of the 435 participants, 10 were assessed to require telephone counseling based on the responses to the written materials.

A total of 8,882 adults required support; 2,807 of them needed telephone counseling and 6,075 required mail support. After receiving the mail support, 178 were assessed to require telephone counseling. The number of those with mild obesity as the sending criteria for a booklet was 503 and 1,478 adults met the criteria of CAGE scores. The total number was 1,981.

To those who were identified as requiring support but could not be reached for telephone support and those who only met the sending criteria for a booklet(except for those who died), 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 receiving support. It excludes participants who only met the sending criteria for a booklet .

The percentages in the result table are rounded and may not total to 100%.



- 1) Those who responded by 31 October 2016.
- 2) Those who received support by 31 December 2016.
- 3) Those who indicated no desire for support in the return postcard.
- 4) The number includes 295 participants who required support by telephone counseling regarding lifestyle habits.
- 5) Such as those who preferred telephone support out of hours.

Figure 1: Number of participants requiring support and receiving support

4.3 Telephone Support for Children

Since SDQ is for children aged 4 years and older, children aged 0-3 years old were assessed on the basis of the free-answer question. Since few participants who had been sent written materials received telephone counseling (0 of age 0-3 years, 1 of age 4-6 years, 6 of primary school age, 3 of middle school age), the following results combine participants requiring telephone counseling with the number of those assessed to require telephone support based on the written materials.

4.3-1 Status of Respondents Requiring Support

A total of 298 children required support; 288 of them needed telephone counseling and 10 were assessed to require telephone support on the basis of the written support materials. Of these 298 children, 173 (58.1%) were male, 125 (41.9%) were female, 211 (70.8%) lived within Fukushima Prefecture, and 87 (29.2%) lived outside Fukushima. Telephone support was successfully provided to 250 (83.9%) of the total. Respondents living within Fukushima were 173 (69.2%), and 77 (30.8%) were living outside Fukushima (Table 1).

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

Participants requiring support	Total 298	0-3 years 3	4-6 years 46	Primary school age 167	Middle school age 82
Male	173 (58.1%)	1 (33.3%)	27 (58.7%)	106 (63.5%)	39 (47.6%)
Female	125 (41.9%)	2 (66.7%)	19 (41.3%)	61 (36.5%)	43 (52.4%)
Within Fukushima	211 (70.8%)	3 (100.0%)	32 (69.6%)	117 (70.1%)	59 (72.0%)
Outside Fukushima	87 (29.2%)	0 (0.0%)	14 (30.4%)	50 (29.9%)	23 (28.0%)
Participants receiving support	250	2	33	145	70
Within Fukushima	173 (69.2%)	2 (100.0%)	23 (69.7%)	101 (69.7%)	47 (67.1%)
Outside Fukushima	77 (30.8%)	0 (0.0%)	10 (30.3%)	44 (30.3%)	23 (32.9%)

Areas at the time of sending survey questionnaires in FY 2015.

4.3-2 Problems Participants Face

After the telephone counseling, we summarized the content. Frequently mentioned problems children were facing were related to school, physical health problems and sleep problems. The frequently mentioned problems parents or guardians were facing were physical health problems, family problems, anxiety about the future and school-related issues.

Furthermore, we used question items made with the help of physicians specialized in child and adolescent psychiatry to more comprehensively understand the situation the participants were facing in the counseling sessions. The most frequently discussed issues of children by participants who received telephone counseling were the following: rebellious behavior, 22 (29.7%); irritability, 21 (30.0%); and guardian's anxiety about child rearing, 61 (39.4%). When asked about their hospital visits, 22 (15.2%) of the respondents said they saw psychosomatic medicine specialists, 19 (13.1%) saw other professionals, and 104 (71.7%) did not visit any clinics (Table 2).

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

Participants receiving support	Total 250	0-3 years 2	4-6 years 33	Primary school age 145	Middle school age 70
Have sleeping problems					
Yes	21 (10.9%)	0 (0.0%)	0 (0.0%)	10 (8.8%)	11 (22.4%)
No	172 (89.1%)	2 (100.0%)	28 (100.0%)	104 (91.2%)	38 (77.6%)
Unclear	57 -	0 -	5 -	31 -	21 -
Have appetite problems					
Yes	10 (5.4%)	1 (50.0%)	0 (0.0%)	5 (4.6%)	4 (8.9%)
No	174 (94.6%)	1 (50.0%)	28 (100.0%)	104 (95.4%)	41 (91.1%)
Unclear	66 -	0 -	5 -	36 -	25 -
Have friendship problems					
Yes	25 (21.7%)	0 (0.0%)	0 (0.0%)	13 (18.6%)	12 (42.9%)
No	90 (78.3%)	1 (100.0%)	16 (100.0%)	57 (81.4%)	16 (57.1%)
Unclear	135 -	1 -	17 -	75 -	42 -
Feel energetic					
Yes	82 (75.2%)	0 (0.0%)	11 (78.6%)	56 (77.8%)	15 (68.2%)
No	27 (24.8%)	1 (100.0%)	3 (21.4%)	16 (22.2%)	7 (31.8%)
Unclear	141 -	1 -	19 -	73 -	48 -
Somatization					
Yes	19 (19.6%)	0 (0.0%)	1 (7.1%)	12 (19.7%)	6 (28.6%)
No	78 (80.4%)	1 (100.0%)	13 (92.9%)	49 (80.3%)	15 (71.4%)
Unclear	153 -	1 -	19 -	84 -	49 -
Rebellious					
Yes	22 (29.7%)	0 (0.0%)	0 (0.0%)	13 (27.1%)	9 (52.9%)
No	52 (70.3%)	1 (100.0%)	8 (100.0%)	35 (72.9%)	8 (47.1%)
Unclear	176 -	1 -	25 -	97 -	53 -
Irritable					
Yes	21 (30.0%)	0 (0.0%)	2 (18.2%)	11 (25.6%)	8 (53.3%)
No	49 (70.0%)	1 (100.0%)	9 (81.8%)	32 (74.4%)	7 (46.7%)
Unclear	180 -	1 -	22 -	102 -	55 -

Table 2: (Cont.) State of health of participants who received telephone counseling

Participants receiving support	Total 250	0-3 years 2	4-6 years 33	Primary school age 145	Middle school age 70
Emotionally dependent					
Yes	13 (22.8%)	1 (100.0%)	2 (22.2%)	8 (21.1%)	2 (22.2%)
No	44 (77.2%)	0 (0.0%)	7 (77.8%)	30 (78.9%)	7 (77.8%)
Unclear	193 -	1 -	24 -	107 -	61 -
Bored					
Yes	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (12.5%)
No	45 (97.8%)	1 (100.0%)	8 (100.0%)	29 (100.0%)	7 (87.5%)
Unclear	204 -	1 -	25 -	116 -	62 -
Have developmental problems					
Yes	42 (33.6%)	0 (0.0%)	3 (21.4%)	30 (35.3%)	9 (37.5%)
No	83 (66.4%)	2 (100.0%)	11 (78.6%)	55 (64.7%)	15 (62.5%)
Unclear	125 -	0 -	19 -	60 -	46 -
Emotional or behavioral problems					
Yes	28 (29.2%)	0 (0.0%)	4 (26.7%)	16 (27.1%)	8 (40.0%)
No	68 (70.8%)	2 (100.0%)	11 (73.3%)	43 (72.9%)	12 (60.0%)
Unclear	154 -	0 -	18 -	86 -	50 -
Mental disorder					
Yes	4 (3.5%)	0 (0.0%)	0 (0.0%)	1 (1.4%)	3 (12.5%)
No	109 (96.5%)	2 (100.0%)	14 (100.0%)	72 (98.6%)	21 (87.5%)
Unclear	137 -	0 -	19 -	72 -	46 -
Traumatic stress reaction after the disaster					
Yes	2 (2.7%)	0 (0.0%)	1 (7.1%)	0 (0.0%)	1 (6.7%)
No	73 (97.3%)	2 (100.0%)	13 (92.9%)	44 (100.0%)	14 (93.3%)
Unclear	175 -	0 -	19 -	101 -	55 -
School adjustment					
Well-adjusted	176 (83.0%)	2 (100.0%)	28 (93.3%)	108 (88.5%)	38 (65.5%)
Fail to adjust	36 (17.0%)	0 (0.0%)	2 (6.7%)	14 (11.5%)	20 (34.5%)
Unclear	38 -	0 -	3 -	23 -	12 -
Home or living environment problems					
Yes	21 (17.1%)	0 (0.0%)	3 (20.0%)	13 (17.1%)	5 (16.1%)
No	102 (82.9%)	1 (100.0%)	12 (80.0%)	63 (82.9%)	26 (83.9%)
Unclear	127 -	1 -	18 -	69 -	39 -
Guardian's anxiety about child rearing					
Yes	61 (39.4%)	1 (50.0%)	5 (22.7%)	38 (41.3%)	17 (43.6%)
No	94 (60.6%)	1 (50.0%)	17 (77.3%)	54 (58.7%)	22 (56.4%)
Unclear	95 -	0 -	11 -	53 -	31 -
Guardian's physical health					
Good	146 (86.9%)	1 (50.0%)	23 (95.8%)	90 (89.1%)	32 (78.0%)
Bad	22 (13.1%)	1 (50.0%)	1 (4.2%)	11 (10.9%)	9 (22.0%)
Unclear	82 -	0 -	9 -	44 -	29 -
Guardian's mental health					
Good	139 (86.3%)	1 (50.0%)	21 (91.3%)	86 (88.7%)	31 (79.5%)
Bad	22 (13.7%)	1 (50.0%)	2 (8.7%)	11 (11.3%)	8 (20.5%)
Unclear	89 -	0 -	10 -	48 -	31 -
Treatments					
Psychiatry or psychosomatic medicine	22 (15.2%)	0 (0.0%)	0 (0.0%)	10 (11.9%)	12 (28.6%)
Other	19 (13.1%)	1 (50.0%)	2 (11.8%)	14 (16.7%)	2 (4.8%)
No	104 (71.7%)	1 (50.0%)	15 (88.2%)	60 (71.4%)	28 (66.7%)
Unclear	105 -	0 -	16 -	61 -	28 -
Utilization of professional support					
Yes	46 (34.8%)	0 (0.0%)	3 (20.0%)	28 (35.9%)	15 (40.5%)
No	86 (65.2%)	2 (100.0%)	12 (80.0%)	50 (64.1%)	22 (59.5%)
Unclear	118 -	0 -	18 -	67 -	33 -

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

Proportions do not include the number of 'Unclear'.

4.3-3 Categories of Interventions and Those Results

The results of the telephone counseling 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,’ which were divided into the problems faced by the children and the problems faced by the guardians. Numbers in the breakdown refer to the total number and the proportion in the brackets show the ratio of total number to the number of ‘Follow-up 2.’ Also, we categorized how we conducted the counseling sessions.

After the telephone support, 204 (81.6%) were categorized as ‘Follow-up 1,’ 34 (13.6%) were categorized as ‘Follow-up 2,’ 6 (2.4%) were categorized as ‘Follow-up 3,’ and 6 (2.4%) declined support (Table 3). Among the participants who were categorized as “Follow-up 2,” 15 children (44.1%) had school maladaptation problems and 9 guardians (26.5%) had mental health problems (Table 4).

Table 3: Results of telephone counseling

Participants receiving support	Total 250	0-3 years 2	4-6 years 33	Primary school age 145	Middle school age 70
Follow-up 1	204 (81.6%)	2 (100.0%)	31 (93.9%)	120 (82.8%)	51 (72.9%)
Follow-up 2	34 (13.6%)	0 (0.0%)	1 (3.0%)	19 (13.1%)	14 (20.0%)
Follow-up 3	6 (2.4%)	0 (0.0%)	0 (0.0%)	3 (2.1%)	3 (4.3%)
Declined support	6 (2.4%)	0 (0.0%)	1 (3.0%)	3 (2.1%)	2 (2.9%)

Table 4: Breakdown of the reasons for ‘Follow-up 2’

Number of 'Follow-up 2'	Total 34	0-3 years 0	4-6 years 1	Primary school age 19	Middle school age 14
(Children)					
Physical problems	2 (5.9%)	0 (0.0%)	0 (0.0%)	2 (10.5%)	0 (0.0%)
Mental problems	8 (23.5%)	0 (0.0%)	0 (0.0%)	4 (21.1%)	4 (28.6%)
School maladaptation	15 (44.1%)	0 (0.0%)	0 (0.0%)	7 (36.8%)	8 (57.1%)
Other	4 (11.8%)	0 (0.0%)	1 (100.0%)	2 (10.5%)	1 (7.1%)
(Guardian)					
Physical problems	8 (23.5%)	0 (0.0%)	1 (100.0%)	3 (15.8%)	4 (28.6%)
Mental problems	9 (26.5%)	0 (0.0%)	1 (100.0%)	5 (26.3%)	3 (21.4%)
Child rearing problems	3 (8.8%)	0 (0.0%)	0 (0.0%)	2 (10.5%)	1 (7.1%)
Isolation	1 (2.9%)	0 (0.0%)	0 (0.0%)	1 (5.3%)	0 (0.0%)
Other	1 (2.9%)	0 (0.0%)	0 (0.0%)	1 (5.3%)	0 (0.0%)

The breakdown provides the total number.

We provided various types of support: listened carefully to the participants, 227 (90.8%); recommended seeing a doctor, 7 (2.8%); advised lifestyle changes, 1 (0.4%); offered psychoeducation, 23 (9.2%); provided information by phone, 4 (1.6%); and other (checked residents' condition), 24 (9.6%). (Table 5.)

Table 5: Content of the support

Participants receiving support	Total 250	0-3 years 2	4-6 years 33	Primary school age 145	Middle school age 70
Listened carefully	227 (90.8%)	2 (100.0%)	30 (90.9%)	131 (90.3%)	64 (91.4%)
Recommended seeing a doctor	7 (2.8%)	0 (0.0%)	1 (3.0%)	4 (2.8%)	2 (2.9%)
Advised lifestyle changes	1 (0.4%)	0 (0.0%)	0 (0.0%)	1 (0.7%)	0 (0.0%)
Offered psychoeducation	23 (9.2%)	0 (0.0%)	4 (12.1%)	13 (9.0%)	6 (8.6%)
Provided information by phone	4 (1.6%)	0 (0.0%)	1 (3.0%)	1 (0.7%)	2 (2.9%)
Other (checked residents' condition)	24 (9.6%)	0 (0.0%)	3 (9.1%)	14 (9.7%)	7 (10.0%)

The breakdown provides the total number.

Among those who needed continued support services, 2 were categorized as 'Follow-up support,' and no one for the other 3 continued supports (Table 6).

Table 6: Continued support

Participants receiving support	Total 250	0-3 years 2	4-6 years 33	Primary school age 145	Middle school age 70
Follow-up support	2 (0.8%)	0 (0.0%)	0 (0.0%)	2 (1.4%)	0 (0.0%)
Referred to outside institutions	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mail support	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Directed to other departments	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

4.4 Telephone Support for Adults

4.4-1 Status of Respondents Requiring Support

(Telephone Counseling)

A total of 2,807 adults required telephone counseling sessions; 2,100 were identified on the basis of the scores, and 707 were assessed on the basis of items other than scores. Among the participants, 2,400 (85.5%) received telephone support.

Among those who required telephone support on the basis of the scores, 882 (42.0%) were male and 1,218 (58.0%) were female. Among those who required support on the basis of items other than scores, 390 (55.2%) were male and 317 (44.8%) were female (Table 7).

Among those who required telephone support, 2,228 (79.4%) lived within Fukushima Prefecture and 579 (20.6%) lived outside Fukushima. Among the participants who received telephone support, 1,922 (80.1%) lived within Fukushima Prefecture and 478 (19.9%) lived outside Fukushima (Table 8).

Table 7: Participants requiring telephone counseling (By sex and age group)

Age group	Based on the scores				Based on the items other than scores			
	Total	Male	Female		Total	Male	Female	
15-19	48	17 (35.4%)	31 (64.6%)		13	5 (38.5%)	8 (61.5%)	
20-29	120	42 (35.0%)	78 (65.0%)		34	17 (50.0%)	17 (50.0%)	
30-39	209	95 (45.5%)	114 (54.5%)		82	50 (61.0%)	32 (39.0%)	
40-49	240	110 (45.8%)	130 (54.2%)		110	73 (66.4%)	37 (33.6%)	
50-59	288	134 (46.5%)	154 (53.5%)		128	76 (59.4%)	52 (40.6%)	
60-69	388	190 (49.0%)	198 (51.0%)		187	103 (55.1%)	84 (44.9%)	
70-79	456	182 (39.9%)	274 (60.1%)		115	55 (47.8%)	60 (52.2%)	
80-	351	112 (31.9%)	239 (68.1%)		38	11 (28.9%)	27 (71.1%)	
Total	2,100	882 (42.0%)	1,218 (58.0%)		707	390 (55.2%)	317 (44.8%)	

Ages are as of 1 April 2015.

Table 8: Participants requiring telephone counseling (By area)

Participants requiring support	Total	Based on the scores		Items other than scores	
	2,807	2,100		707	
Within Fukushima	2,228 (79.4%)	1,649 (78.5%)	579 (81.9%)		
Outside Fukushima	579 (20.6%)	451 (21.5%)	128 (18.1%)		
Participants receiving support	2,400	1,797		603	
Within Fukushima	1,922 (80.1%)	1,431 (79.6%)	491 (81.4%)		
Outside Fukushima	478 (19.9%)	366 (20.4%)	112 (18.6%)		

Areas at the time of sending survey questionnaires in FY 2015.

(Mail Support)

Among the participants requiring mail support, a total of 178 required telephone counseling sessions (140 of them were identified on the basis of the scores, and 38 were assessed on the items other than scores). We provided support to 167 (93.8%) residents.

Out of the participants identified on the basis of the scores, 71 (50.7%) were male and 69 (49.3%) were female. Among the participants who were assessed on the items other than scores, 17 (44.7%) were male and 21 (55.3%) were female (Table 9).

Among those who required telephone support, 153 (86.0%) lived within Fukushima Prefecture and 25 (14.0%) lived outside Fukushima. The telephone counseling sessions were provided to 144 (86.2%) participants who lived within Fukushima Prefecture and 23 (13.8%) who lived outside Fukushima (Table 10).

Table 9: Participants required telephone counseling among those who required mail support (By sex and age group)

Age group	Based on the scores			Based on the items other than scores		
	Total	Male	Female	Total	Male	Female
15-19	1	0 (0.0%)	1 (100%)	1	0 (0.0%)	1 (100%)
20-29	5	1 (20.0%)	4 (80.0%)	4	1 (25.0%)	3 (75.0%)
30-39	13	4 (30.8%)	9 (69.2%)	1	0 (0.0%)	1 (100%)
40-49	6	2 (33.3%)	4 (66.7%)	0	0 (0.0%)	0 (0.0%)
50-59	14	10 (71.4%)	4 (28.6%)	6	2 (33.3%)	4 (66.7%)
60-69	27	14 (51.9%)	13 (48.1%)	7	4 (57.1%)	3 (42.9%)
70-79	46	32 (69.6%)	14 (30.4%)	11	6 (54.5%)	5 (45.5%)
80-	28	8 (28.6%)	20 (71.4%)	8	4 (50.0%)	4 (50.0%)
Total	140	71 (50.7%)	69 (49.3%)	38	17 (44.7%)	21 (55.3%)

Ages are as of 1 April 2015.

Table 10: Participants required telephone counseling among those who required mail support (By area)

Participants requiring support	Support given	Based on the scores	Items other than scores
	178	140	38
Within Fukushima	153 (86.0%)	116 (82.9%)	37 (97.4%)
Outside Fukushima	25 (14.0%)	24 (17.1%)	1 (2.6%)
Participants receiving support	167	131	36
Within Fukushima	144 (86.2%)	109 (83.2%)	35 (97.2%)
Outside Fukushima	23 (13.8%)	22 (16.8%)	1 (2.8%)

Areas at the time of sending survey questionnaires in FY 2015.

4.4-2 Problems Participants Face

(Telephone Counseling)

After the telephone counseling, we summarized the content. Frequently mentioned problems were physical health problems, sleep problems and depression.

We asked participants using checklists about their health conditions, sleep, and hospital visit(s). Table 11 provides the state of health of participants.

When asked about the state of health, 1,020 (47.3%) answered 'Good,' and 1,138 (52.7%) answered 'Bad.' Comparing health conditions with a year ago, 192 (9.5%) saw improvement, 1,496 (73.7%) saw no changes, 219 (10.8%) became worse, and 122 (6.0%) have not had problems so far.

Asked about their sleep, 941 (46.5%) answered 'Good,' and 1,083 (53.5%) answered 'Bad.' Comparing the sleep habit with a year ago, 171 (9.0%) saw improvement, 1,606 (84.3%) saw no changes, 53 (2.8%) became worse, and 74 (3.9 %) have not had problems so far.

As for clinics, 400 (18.8%) were treated by psychiatrists or psychosomatic medicine specialists, 1,244 (58.4%) were treated by other specialists, and 485 (22.8%) did not see a doctor.

Table 11: State of health of participants who received telephone counseling

Participants receiving support	Total 2,400		Based on the scores 1,797		Items other than scores 603	
Physical condition						
Good	1,020	(47.3%)	655	(40.8%)	365	(65.9%)
Bad	1,138	(52.7%)	949	(59.2%)	189	(34.1%)
Unclear	242	—	193	—	49	—
Changes in physical condition						
Improved	192	(9.5%)	115	(7.7%)	77	(14.3%)
No change	1,496	(73.7%)	1,084	(72.7%)	412	(76.7%)
Worsened	219	(10.8%)	182	(12.2%)	37	(6.9%)
Have not had problems	122	(6.0%)	111	(7.4%)	11	(2.0%)
Unclear	371	—	305	—	66	—
Sleeping habit						
Good	941	(46.5%)	611	(40.9%)	330	(62.3%)
Bad	1,083	(53.5%)	883	(59.1%)	200	(37.7%)
Unclear	376	—	303	—	73	—
Changes in sleep						
Improved	171	(9.0%)	118	(8.5%)	53	(10.3%)
No change	1,606	(84.3%)	1,167	(84.1%)	439	(84.9%)
Worsened	53	(2.8%)	42	(3.0%)	11	(2.1%)
Have not had problems	74	(3.9%)	60	(4.3%)	14	(2.7%)
Unclear	496	—	410	—	86	—
Treatments						
Psychiatry or psychosomatic medicine	400	(18.8%)	358	(22.6%)	42	(7.7%)
Other	1,244	(58.4%)	962	(60.7%)	282	(51.8%)
No	485	(22.8%)	265	(16.7%)	220	(40.4%)
Unclear	271	—	212	—	59	—
Utilization of professional support						
Yes	580	(35.6%)	464	(40.1%)	116	(24.6%)
No	1,048	(64.4%)	693	(59.9%)	355	(75.4%)
Unclear	772	—	640	—	132	—
Depression						
Yes	987	(49.2%)	861	(57.5%)	126	(24.9%)
No	1,018	(50.8%)	637	(42.5%)	381	(75.1%)
Unclear	395	—	299	—	96	—
Anxiety over the disaster/psychological trauma						
Yes	106	(6.6%)	93	(8.1%)	13	(2.9%)
No	1,490	(93.4%)	1,051	(91.9%)	439	(97.1%)
Unclear	804	—	653	—	151	—

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

Proportions do not include the number of 'Unclear.'

(Mail Support)

We provided telephone counseling to those who indicated their desire for telephone support by return postcard, and to those who were assessed by the Mental Health Support Team that they required support based on the content of the reply.

After the telephone counseling, we summarized the content. Frequently mentioned problems were physical health problems, sleep problems and exercise issues.

We asked participants using checklists about their health condition, sleep, and hospital visit(s). Table 12 provides the state of health of participants.

When asked about the state of health, 93 (59.2%) answered ‘Good,’ and 64 (40.8%) answered ‘Bad.’ Comparing health conditions with a year ago, 10 (6.5%) saw improvement, 127 (81.9%) saw no changes, 12 (7.7%) became worse, and 6 (3.9%) have not had problems so far.

Asked about their sleep, 83 (58.9%) answered ‘Good,’ and 58 (41.1%) answered ‘Bad.’ Comparing the sleep habit with a year ago, 9 (6.5%) saw improvement, 118 (84.9%) saw no changes, 6 (4.3%) became worse, 6 (4.3 %) have not had problems so far.

As for clinics, 24 (15.1%) were treated by psychiatrists or psychosomatic medicine specialists, 108 (67.9%) were treated by other specialists, and 27 (17.0%) did not see a doctor.

Table 12: State of health of participants who received telephone counseling among those who required mail support

Participants receiving support	Total 167	Based on the scores 131	Items other than scores 36
Physical condition			
Good	93 (59.2%)	67 (54.5%)	26 (76.5%)
Bad	64 (40.8%)	56 (45.5%)	8 (23.5%)
Unclear	10 —	8 —	2 —
Changes in physical condition			
Improved	10 (6.5%)	7 (5.8%)	3 (8.8%)
No change	127 (81.9%)	102 (84.3%)	25 (73.5%)
Worsened	12 (7.7%)	8 (6.6%)	4 (11.8%)
Have not had problems	6 (3.9%)	4 (3.3%)	2 (5.9%)
Unclear	12 —	10 —	2 —
Sleeping habit			
Good	83 (58.9%)	62 (57.4%)	21 (63.6%)
Bad	58 (41.1%)	46 (42.6%)	12 (36.4%)
Unclear	26 —	23 —	3 —
Changes in sleep			
Improved	9 (6.5%)	6 (5.6%)	3 (9.4%)
No change	118 (84.9%)	94 (87.9%)	24 (75.0%)
Worsened	6 (4.3%)	3 (2.8%)	3 (9.4%)
Have not had problems	6 (4.3%)	4 (3.7%)	2 (6.3%)
Unclear	28 —	24 —	4 —
Treatments			
Psychiatry or psychosomatic medicine	24 (15.1%)	23 (18.5%)	1 (2.9%)
Other	108 (67.9%)	85 (68.5%)	23 (65.7%)
No	27 (17.0%)	16 (12.9%)	11 (31.4%)
Unclear	8 —	7 —	1 —
Utilization of professional support			
Yes	55 (40.4%)	44 (42.7%)	11 (33.3%)
No	81 (59.6%)	59 (57.3%)	22 (66.7%)
Unclear	31 —	28 —	3 —
Depression			
Yes	39 (25.7%)	33 (27.5%)	6 (18.8%)
No	113 (74.3%)	87 (72.5%)	26 (81.3%)
Unclear	15 —	11 —	4 —
Anxiety over the disaster/psychological trauma			
Yes	6 (4.1%)	5 (4.4%)	1 (3.1%)
No	140 (95.9%)	109 (95.6%)	31 (96.9%)
Unclear	21 —	17 —	4 —

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

Proportions do not include the number of 'Unclear.'

4.4-3 Categories of Interventions and Those Results

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 refer to the total number and the proportion in the brackets show the ratio of total number to the number of ‘Follow-up 2.’ Also, we categorized how we conducted the counseling sessions.

(Telephone Counseling)

After the telephone counseling, 1,983 (82.6%) were designated as ‘Follow-up 1,’ 300 (12.5%) as ‘Follow-up 2,’ 69 (2.9%) as ‘Follow-up 3,’ and 48 (2.0%) as ‘Declined Support’ (Table 13). The reasons for ‘Follow-up 2’ were categorized into the following: 162 (54.0%) for physical health problems, 179 (59.7%) for mental health problems, 31 (10.3%) for social maladaptation, 35 (11.7%) for isolation and 32 (10.7%) for other (Table 14).

Table 13: Results of telephone counseling

Participants receiving support	Total 2,400	Based on the scores 1,797	Items other than scores 603
Follow-up 1	1,983 (82.6%)	1,457 (81.1%)	526 (87.2%)
Follow-up 2	300 (12.5%)	246 (13.7%)	54 (9.0%)
Follow-up 3	69 (2.9%)	54 (3.0%)	15 (2.5%)
Declined support	48 (2.0%)	40 (2.2%)	8 (1.3%)

Table 14: Breakdown of the reasons for ‘Follow-up 2’

Number of ‘Follow-up 2’	Total 300	Based on the scores 246	Items other than scores 54
Physical problems	162 (54.0%)	131 (53.3%)	31 (57.4%)
Mental problems	179 (59.7%)	152 (61.8%)	27 (50.0%)
Social maladaptation	31 (10.3%)	29 (11.8%)	2 (3.7%)
Isolation	35 (11.7%)	27 (11.0%)	8 (14.8%)
Other (checked residents' condition)	32 (10.7%)	19 (7.7%)	13 (24.1%)

The breakdown provides the total number.

We provided various types of support: listened carefully to the participants, 2,054 (85.6%); recommended seeing a doctor, 326 (13.6%); advised lifestyle changes, 433 (18.0%); offered psychoeducation, 249 (10.4%); provided information by phone, 46 (1.9%); and other (checked residents' condition), 308 (12.8%). (Table 15.)

Table 15: Content of the support

Participants receiving support	Total 2,400	Based on the scores 1,797	Items other than scores 603
Listened carefully	2,054 (85.6%)	1,530 (85.1%)	524 (86.9%)
Recommended seeing a doctor	326 (13.6%)	152 (8.5%)	174 (28.9%)
Advised lifestyle changes	433 (18.0%)	154 (8.6%)	279 (46.3%)
Offered psychoeducation	249 (10.4%)	211 (11.7%)	38 (6.3%)
Provided information by phone	46 (1.9%)	18 (1.0%)	28 (4.6%)
Other (checked residents' condition)	308 (12.8%)	248 (13.8%)	60 (10.0%)

The breakdown provides the total number.

Among those who needed continued support services, 224 were designated as ‘Follow-up support,’ 17 were referred to outside institutions, 10 were sent written materials, and 2 were directed to other departments (Table 16).

Table 16: Continued support

Participants receiving support	Total 2,400	Based on the scores 1,797	Items other than scores 603
Follow-up support	224 (9.3%)	71 (4.0%)	153 (25.4%)
Referred to outside institutions	17 (0.7%)	10 (0.6%)	7 (1.2%)
Mail support	10 (0.4%)	8 (0.4%)	2 (0.3%)
Directed to other departments	2 (0.1%)	2 (0.1%)	0 (0.0%)

(Mail Support)

After the telephone counseling, 155 (92.8%) were designated as ‘Follow-up 1,’ 11 (6.6%) as ‘Follow-up 2,’ 1 (0.6%) as ‘Follow-up 3,’ and 0 (0.0%) as ‘Declined Support’ (Table 17). The reasons for ‘Follow-up 2’ were categorized into the following: 7 (63.6%) for physical health problems, 4 (36.4%) for mental health problems, 2 (18.2%) for social maladaptation, 1 (9.1%) for isolation and 3 (27.3%) for other (Table 18).

Table 17: Results of the telephone counseling among those who required mail support

Participants receiving support	Total 167	Based on the scores 131	Items other than scores 36
Follow-up 1	155 (92.8%)	120 (91.6%)	35 (97.2%)
Follow-up 2	11 (6.6%)	10 (7.6%)	1 (2.8%)
Follow-up 3	1 (0.6%)	1 (0.8%)	0 (0.0%)
Declined support	0 (0.0%)	0 (0.0%)	0 (0.0%)

Table 18: Breakdown of the reasons for ‘Follow-up 2’

Number of 'Follow-up 2'	Total		Based on the scores		Items other than scores	
	11		10		1	
Physical problems	7	(63.6%)	7	(70.0%)	0	(0.0%)
Mental problems	4	(36.4%)	4	(40.0%)	0	(0.0%)
Social maladaptation	2	(18.2%)	2	(20.0%)	0	(0.0%)
Isolation	1	(9.1%)	1	(10.0%)	0	(0.0%)
Other (checked residents' condition)	3	(27.3%)	2	(20.0%)	1	(100.0%)

The breakdown provides the total number.

We provided various types of support: listened carefully to the participants, 159 (95.2%); recommended seeing a doctor, 26 (15.6%); advised lifestyle changes, 44 (26.3%); offered psychoeducation, 16 (9.6%); provided information by phone, 2 (1.2%); and other (checked residents' condition), 7 (4.2%). (Table 19.)

Table 19: Content of the support

Participants receiving support	Total		Based on the scores		Items other than scores	
	167		131		36	
Listened carefully	159	(95.2%)	123	(93.9%)	36	(100.0%)
Recommended seeing a doctor	26	(15.6%)	16	(12.2%)	10	(27.8%)
Advised lifestyle changes	44	(26.3%)	30	(22.9%)	14	(38.9%)
Offered psychoeducation	16	(9.6%)	16	(12.2%)	0	(0.0%)
Provided information by phone	2	(1.2%)	1	(0.8%)	1	(2.8%)
Other (checked residents' condition)	7	(4.2%)	6	(4.6%)	1	(2.8%)

The breakdown provides the total number.

Among those who needed continued support services, 7 were designated as ‘Follow-up support,’ 1 was referred to outside institutions, and no one for the other 2 continued supports (Table 20).

Table 20: Continued support

Participants receiving support	Total		Based on the scores		Items other than scores	
	167		131		36	
Follow-up support	7	(4.2%)	4	(3.1%)	3	(8.3%)
Referred to outside institutions	1	(0.6%)	1	(0.8%)	0	(0.0%)
Mail support	0	(0.0%)	0	(0.0%)	0	(0.0%)
Directed to other departments	0	(0.0%)	0	(0.0%)	0	(0.0%)

4.5 Telephone Support Based on Items Other than Scores (Lifestyle Habits)

In the telephone counseling sessions for those who require support regarding lifestyle habits, we asked their health, changes in lifestyle, hospital visits, and health awareness and recommended seeing a doctor. Also, we offered information about the health effects of obesity and excessive alcohol consumption and encouraged lifestyle changes. Since the individuals need long-term support to maintain a behavior change, we continued to support them to check that they followed the advice.

4.5-1 Criteria for Support

1. Of the respondents with a previous history of hypertension (HT) or diabetes (DM) and have not received treatment, those who met the following criteria:
 - a. Those with a BMI ≥ 27.5 kg/m² (HT/DM • BMI)
 - b. Those who consume ≥ 42 drinks in total per week (HT/DM • Excessive drinking)
 - c. Those who meet both of the above criteria (HT/DM • BMI • Excessive drinking)
2. Those who consume average ≥ 6 drinks per day (≥ 42 drinks per week) with CAGE scores of 4 (high-risk drinking).

4.5-2 Status of Respondents Requiring Support

A total of 295 individuals required support. The number of participants who were assessed on the basis of 'HT/DM • BMI' was 170, 'HT/DM • Excessive drinking' was 59, 'HT/DM • BMI • Excessive drinking' was 16, and 'high-risk drinking' was 50. Among those who required support, 224 (75.9%) were male and 71 (24.1%) were female. The age group of 60-69 years had the largest number of respondents requiring support: 85 (28.8%). The second largest age group was 40-49 years, 73 (24.7%), followed by the age group of 50-59 years, 62 (21.0%). Among those who required support, 247 (83.7%) lived within Fukushima Prefecture and 48 (16.3%) lived outside Fukushima (Table 21).

Table 21: Participants required telephone support based on items other than scores
(By sex, age group and area)

Participants requiring support	Total 295	HT/DM • BMI 170	HT/DM • Excessive drinking 59	HT/DM • BMI • Excessive drinking 16	High-risk drinking 50
Sex					
Male	224 (75.9%)	110 (64.7%)	55 (93.2%)	15 (93.8%)	44 (88.0%)
Female	71 (24.1%)	60 (35.3%)	4 (6.8%)	1 (6.3%)	6 (12.0%)
Age group					
15-19	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
20-29	13 (4.4%)	10 (5.9%)	0 (0.0%)	1 (6.3%)	2 (4.0%)
30-39	39 (13.2%)	23 (13.5%)	4 (6.8%)	3 (18.8%)	9 (18.0%)
40-49	73 (24.7%)	46 (27.1%)	13 (22.0%)	4 (25.0%)	10 (20.0%)
50-59	62 (21.0%)	33 (19.4%)	15 (25.4%)	5 (31.3%)	9 (18.0%)
60-69	85 (28.8%)	43 (25.3%)	23 (39.0%)	2 (12.5%)	17 (34.0%)
70-79	17 (5.8%)	10 (5.9%)	3 (5.1%)	1 (6.3%)	3 (6.0%)
80-	6 (2.0%)	5 (2.9%)	1 (1.7%)	0 (0.0%)	0 (0.0%)
Area of residence					
Within Fukushima	247 (83.7%)	140 (82.4%)	48 (81.4%)	16 (100.0%)	43 (86.0%)
Outside Fukushima	48 (16.3%)	30 (17.6%)	11 (18.6%)	0 (0.0%)	7 (14.0%)

Age groups are calculated on the basis of 1 April 2015.

Areas are at the time of sending survey questionnaires in FY 2015.

4.5-3 Results of Telephone Counseling

Telephone support was provided to 251 individuals in total: 146 with ‘HT/DM • BMI’, 53 with ‘HT/DM • Excessive drinking,’ 14 with ‘HT/DM • BMI • Excessive drinking,’ and 38 with ‘high-risk drinking.’

In the telephone counseling sessions, we asked how aware they are of the importance of exercising and diet, or risks from alcohol and smoking. Table 22 shows the results.

Table 22: Awareness of one’s own lifestyle

Participants receiving support	HT/DM • BMI	HT/DM • Excessive drinking	HT/DM • BMI • Excessive drinking	High-risk drinking
Total 251	146	53	14	38
Exercise	84 (57.5%)	20 (37.7%)	7 (50.0%)	12 (31.6%)
Dietary habits	91 (62.3%)	21 (39.6%)	7 (50.0%)	17 (44.7%)
Drinking, smoking	57 (39.0%)	30 (56.6%)	10 (71.4%)	29 (76.3%)

Multiple answers allowed.

After the first telephone support, we found out that 122 (48.6%) had been to clinics. The number of those who require continued support, such as advice on lifestyle habits, was 129 (51.4%) in total: 68 with ‘HT/DM • BMI,’ 26 with ‘HT/DM • Excessive drinking,’ 10 with ‘HT/DM • BMI • Excessive drinking,’ and 25 with ‘high-risk drinking.’ (Table 23.)

Table 23: Results of the first telephone counseling

	Total	HT/DM•BMI	HT/DM • Excessive drinking	HT/DM • BMI • Excessive drinking	High-risk drinking
Participants receiving support	251	146	53	14	38
No follow-up support	122 (48.6%)	78 (53.4%)	27 (50.9%)	4 (28.6%)	13 (34.2%)
Follow-up support	129 (51.4%)	68 (46.6%)	26 (49.1%)	10 (71.4%)	25 (65.8%)

Among the 129 individuals requiring follow-up support, we have provided follow-up support for 111 (86.0%) in total: 54 with ‘HT/DM • BMI,’ 24 with ‘HT/DM • Excessive drinking,’ 8 with ‘HT/DM•BMI•Excessive drinking,’ and 25 with ‘high-risk drinking.’ The number of those who were confirmed to have sought professional help or made lifestyle changes was 99 (89.2%) in total: 51 with ‘HT/DM • BMI,’ 21 with ‘HT/DM • Excessive drinking,’ 8 with ‘HT/DM • BMI • Excessive drinking,’ and 19 with ‘high-risk drinking.’ 62 (62.6%) who saw improvement have sought professional help and made lifestyle changes. (See Table 24.)

Table 24: Results of follow-up support

Participants requiring follow-up support	Total	HT/DM•BMI	HT/DM • Excessive drinking	HT/DM • BMI • Excessive drinking	High-risk drinking
	129	68	26	10	25
Participants receiving follow-up support	111 (86.0%)	54 (79.4%)	24 (92.3%)	8 (80.0%)	25 (100.0%)
Did not improve	12 (10.8%)	3 (5.6%)	2 (12.5%)	0 (0.0%)	6 (24.0%)
Improved	99 (89.2%)	51 (94.4%)	22 (87.5%)	8 (100.0%)	19 (76.0%)
Breakdown*					
a. Visited doctors	68 (68.7%)	32 (62.7%)	16 (76.2%)	5 (62.5%)	15 (78.9%)
b. Improved lifestyle	93 (93.9%)	49 (96.1%)	19 (90.5%)	6 (75.0%)	19 (100.0%)
a & b	62 (62.6%)	30 (58.8%)	14 (66.7%)	3 (37.5%)	15 (78.9%)

Multiple data allowed for improved content.

5. Conclusion

The number of respondents of the FY 2015 Mental Health and Lifestyle Survey was 50,456. Of these, individual notices of results were sent to 50,347 participants who responded by 31 August 2016.

The number of those who required support based on scores was 723 children and 8,882 adults. Based only on sending a booklet, the number was 1,981. Among the children, 288 required telephone counseling sessions and 435 required mail support. Based on the content of the written materials, 10 participants were assessed to require telephone support. Among the adults, 2,807 required telephone counseling sessions and 6,075 required mail support. Based on the content of the written materials, 178 participants were assessed to require telephone support. We sent a booklet to participants who required mail support on the basis of items other than scores to encourage lifestyle change. To those who were identified as requiring support but could not be reached for telephone support (except for the participants who only met the criteria for sending a booklet and for those who died), information was provided by sending a booklet made by FMU's Radiation Medical Science Center: *Mental Health and Lifestyle Support*.

After the telephone counseling sessions for children, 204 (81.6%) were categorized as 'Follow-up 1,' and 34 (13.6%) were categorized as 'Follow-up 2.' Frequently discussed issues of children were concerns related to school, physical health problems, and sleep problems. Among parent's or guardian's problems, frequently mentioned issues were the following: physical health problems, family problems, anxiety about the future and school-related issues.

Among the adults requiring telephone support, 1,983 (82.6%) were categorized as 'Follow-up 1' and 300 (12.5%) were categorized as 'Follow-up 2.' Among the respondents who required mail support, 155 (92.8%) were categorized as 'Follow-up 1' and 11 (6.6%) were categorized as 'Follow-up 2.' Frequently discussed issues were physical problems and sleep problems, followed by depression among the respondents who required telephone support, and exercise among those who required mail support.

The number of respondents who required telephone counseling based on lifestyle habits was 295, 251 (85.1%) of whom received support. Of these, 111 (86.0%) received continued telephone support. Ninety-nine (89.2%) of them were confirmed to be making lifestyle changes.