Report of Third-Round Thyroid Ultrasound Examinations
(Second Full-Scale Thyroid Screening Program)

Reported on 5 September 2018

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, we are now engaged in the second Full-scale Thyroid Screening Program (third-round examination). The first round was Preliminary Baseline Screening for initial assessment of thyroid glands, and the second round was the first Full-scale Thyroid Screening Program to assess any changes.

1.2 Group

In addition to the participants of Preliminary Baseline Screening (Fukushima residents born between 2 April 1992 and 1 April 2011), the Full-scale Thyroid Screening (from the second-round examination) also includes those who were born between 2 April 2011 and 1 April 2012.

1.3 Implementation Period

The Second Full-scale Screening Program started 1 May 2016 and will cover examinees up to age 20 on a municipality-by-municipality schedule to FY 2017. Thereafter, we will revise the schedule to screen examinees every five years – at ages 25, 30, 35, etc. – to make it easier for examinees to remember when they are due for examination. In transition, examinations will be scheduled to avoid intervals greater than 5 years between examinations.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with institutions inside and outside Fukushima (the number of contracts is as of 30 June 2018).

1.4-1 Primary examination

Inside Fukushima Prefecture	69 medical institutions
Outside Fukushima Prefecture	114 medical institutions

1.4-2 Confirmatory examination

Inside Fukushima Prefecture	5 medical institutions including FMU
Outside Fukushima Prefecture	36 medical institutions

1.5 Method

1.5-1 Primary Examination

We use ultrasonography for examination of the thyroid gland.

Assessments are made by specialists on the basis of the following criteria:

-Diagnostic Criteria (A)

Those with A1 and A2 test results are recommended for watchful waiting until they undergo the primary examination, starting from April 2018.

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic Criteria (B)

Those with B test results are advised to take the confirmatory examination.

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

Some A2 test results may be re-classified as B results when clinically indicated.

-Diagnostic Criteria (C)

Those with C test results are advised to take the confirmatory examination.

C: Immediate need for confirmatory examination.

1.5-2 Confirmatory Examination

We conduct ultrasonography, blood test, urine test, and Fine-Needle Aspiration Cytology (FNAC) if needed for those with B or C test results. Priority is given to those in urgent clinical need.

We recommend medical follow-up for those requiring it due to confirmatory test results.

1.5-3 Flow chart

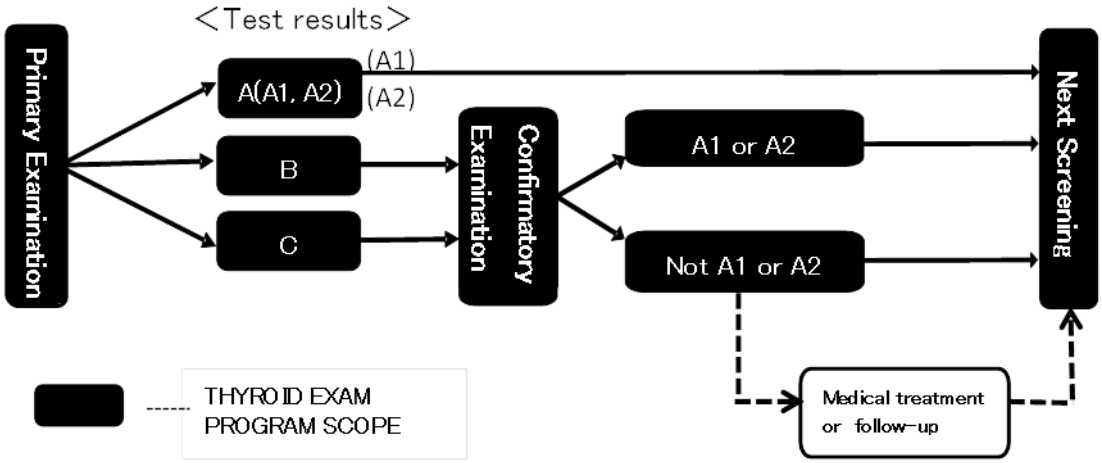


Fig.1 Flow chart

1.6 Target Municipalities

25 target municipalities for FY 2016

34 target municipalities for FY 2017

Fig.2 Target Municipalities

2. Results as of 30 June 2018

2.1 Results of Primary Examination

2.1-1 Progress Report

The Primary Examination started 1 May 2016 targeted at 336,669 people in 59 municipalities (25 municipalities in FY2016 and 34 municipalities in FY2017) and so far carried out for 217,506 people (64.6%). (Examination status for each municipality and that of prefectures other than Fukushima are as in Appendix 1 and Appendix 2)

Results have been confirmed for 217,472 participants (100.0%) and results notifications have been dispatched accordingly. (The result for each municipality is as Appendix 3)

Thusfar, 215,990 (99.3%) were classified as A (A1 or A2), 1,482 (0.7%) were B, and none was C.

Table 1. Screening test coverage — as of 30 June 2018

	Survey population	Participants		Test results				
		Proportion (%)	Screened outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory test	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2016	191,875	126,166 (65.8)	8,867	126,154 (100.0)	43,929 (34.8)	81,430 (64.5)	795 (0.6)	0 (0.0)
FY 2017	144,794	91,340 (63.1)	3,563	91,318 (100.0)	32,291 (35.4)	58,340 (63.9)	687 (0.8)	0 (0.0)
Total	336,669	217,506 (64.6)	12,430	217,472 (100.0)	76,220 (35.0)	139,770 (64.3)	1,482 (0.7)	0 (0.0)

Table 2. Number and proportion with nodules/cysts — as of 30 June 2018

	Number of confirmed screening results	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2016	126,154	795 (0.6)	426 (0.3)	0 (0.0)	81,809 (64.8)
FY 2017	91,318	684 (0.7)	395 (0.4)	3 (0.0)	58,638 (64.2)
Total	217,472	1,479 (0.7)	821 (0.4)	3 (0.0)	140,447 (64.6)

●Ratios are rounded to the 1st decimal place. This also applies to other tables and annexes.

●The examination participants in FY2016 and FY 2017 are those examined during 2-year intervals until they are older than 20 years old, whereas those who receive examination at 5-year intervals (birth year FY1992, 1993) are excluded.

●The results of examinations with 5-year intervals will be shown separately. Target people born in 1992 (22,000) will be examined in FY 2017, target people born in 1993 (22,000) in FY2018.

2.1-2 Participation rates by age group

Participation rate of age group 18 or older (age as of 1 April 2016) in target municipalities for FY 2016 was 16.7%.

Participation rate of age group 18 or older (age as of 1 April 2017) in target municipalities for FY 2017 was 16.1%.

Table 3. Participation rates in target municipalities by age group

As of 30 June 2018

		Total	Age group (years)			
FY 2016 target municipalities	Age group (years)		4-7	8-12	13-17	18-23
	Survey population (a)	191,875	36,619	51,003	56,840	47,413
	Participants (b)	126,166	26,424	45,553	46,267	7,922
	Proportion (%) (b/a)	65.8	72.2	89.3	81.4	16.7
FY 2017 target municipalities	Age group (years)		5-7	8-12	13-17	18-24
	Survey population (a)	144,794	19,316	37,166	41,995	46,317
	Participants (b)	91,340	14,957	33,948	34,966	7,469
	Proportion (%) (b/a)	63.1	77.4	91.3	83.3	16.1
Total	Survey population (a)	336,669	55,935	88,169	98,835	93,730
	Participants (b)	217,506	41,381	79,501	81,233	15,391
	Proportion (%) (b/a)	64.6	74.0	90.2	82.2	16.4

●Age groups were formed with the age as of 1 April of each Fiscal Year.

2.1-3 Comparison of Full-scale Thyroid Screenings

Comparison of Third- and Second- Round Examination results of those who participated in both is as shown in table 4.

Among 201,288 participants who were diagnosed as A1 or A2 in the Second-Round Examination, 200,596 (99.7%) had A1 or A2 results, and 692 (0.3%) were diagnosed as B in the Third-Round Examination Program.

Among 1,136 participants who were diagnosed as B in the Second-Round Examination, 438 (38.6%) had A1 or A2 results, and 698 (61.4%) were diagnosed as B in the Third-Round Examination Program.

Table 4. Comparison of Full-scale Thyroid Screenings

As of 30 June 2018

			Results of the Second-round Examination*1 (%) a	Results of the Third-Round Examination *2			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the Second-round Examination	A	A1	79,653 (100.0)	57,548 (72.2)	21,970 (27.6)	135 (0.2)	0 (0.0)
		A2	121,635 (100.0)	12,141 (10.0)	108,937 (89.6)	557 (0.5)	0 (0.0)
	B		1,136 (100.0)	62 (5.5)	376 (33.1)	698 (61.4)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		15,048 (100.0)	6,469 (43.0)	8,487 (56.4)	92 (0.6)	0 (0.0)
Total			217,472 (100.0)	76,220 (35.0)	139,770 (64.3)	1,482 (0.7)	0 (0.0)

*1 Upper figures show the results of Second-Round Examination of those who confirmed of Third-Round results.

It is not the breakdown of total of Second-Round results (270,529).

*2 Upper figures are the breakdowns of Third-Round Examination against Second-Round results. Lower figures are the ratios(%).

2.2 Results of Confirmatory Examination

2.2-1 Progress Report

Confirmatory Examinations have been conducted since October 2016 and so far 913 of 1,482 people (61.6%) have received the examination. Of those, 826 (90.5%) have completed. (Examination status of each region is as in Appendix 5)

Of the foregoing 826 participants, 86 (7 of A1 and 79 of A2 results, 10.4%) were confirmed to meet A1 or A2 diagnostic criteria by the Primary Examination standards (including those with other thyroid conditions). Remaining 740 (89.6%) people were confirmed to be outside of A1/A2 criteria.

Table 5. Confirmatory testing coverage and results

As of 30 June 2018

	Number of those requiring confirmatory test	Participants	Confirmed test results				
		Proportion (%)	Confirmatory test coverage (%)	A1	A2	Follow-up advised	
							Cytology
	a	b (b/a)	c (c/b)	d (d/c)	e (e/c)	f (f/c)	g (g/f)
FY 2016	795	579 (72.8)	547 (94.5)	5 (0.9)	52 (9.5)	490 (89.6)	31 (6.3)
FY 2017	687	334 (48.6)	279 (83.5)	2 (0.7)	27 (9.7)	250 (89.6)	14 (5.6)
Total	1,482	913 (61.6)	826 (90.5)	7 (0.8)	79 (9.6)	740 (89.6)	45 (6.1)

2.2-2 Results of Fine Needle Aspiration Biopsy and Cytology (FNAC)

Among those who underwent FNAC, 15 had nodules classified as suspicious or malignant.

8 of them were male, and 7 were female. Age at the time of the confirmatory testing ranged from 12 to 23 years (mean age: 17.1±2.8 years). The minimum and maximum tumor diameters were 5.6 and 33.0 mm. Mean tumor diameter was 14.4 ± 7.7 mm.

Results from the full-scale examination (the second-round examination) of the 15 people showed that 8 were A (2 were A1 and 6 were A2), 4 were B and three have not yet had the examination.

Table 6. Results of FNAC

Target municipalities in FY 2016

Suspicious or malignant	11*)
Male to female ratio	6:5

Target municipalities in FY 2017

Suspicious or malignant	4 *)
Male to female ratio	2:2

Total

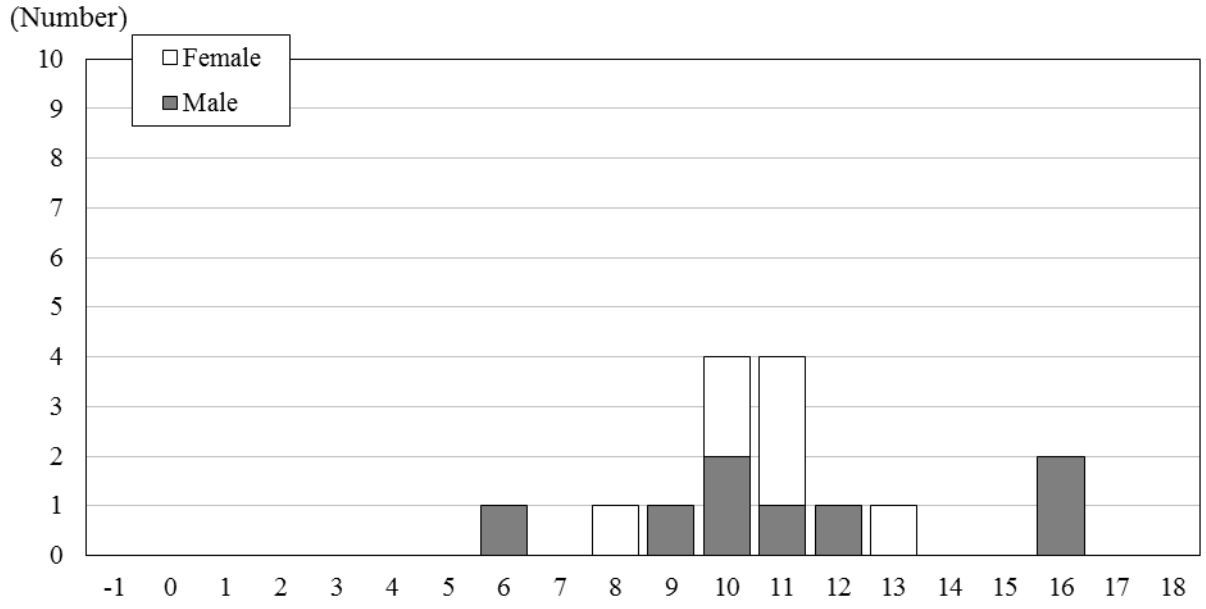
Suspicious or malignant	15 *)
Male to female ratio	8:7
Mean age (SD, min-max)	17.1 (2.8, 12-23), 10.9 (2.6, 6-16) at the time of the disaster
Mean tumor size	14.4 mm (7.7 mm, 5.6-33.0 mm)

*) Surgical cases are as shown in Appendix 6.

2.2-3 Age distribution of malignant or suspicious cases by FNAC

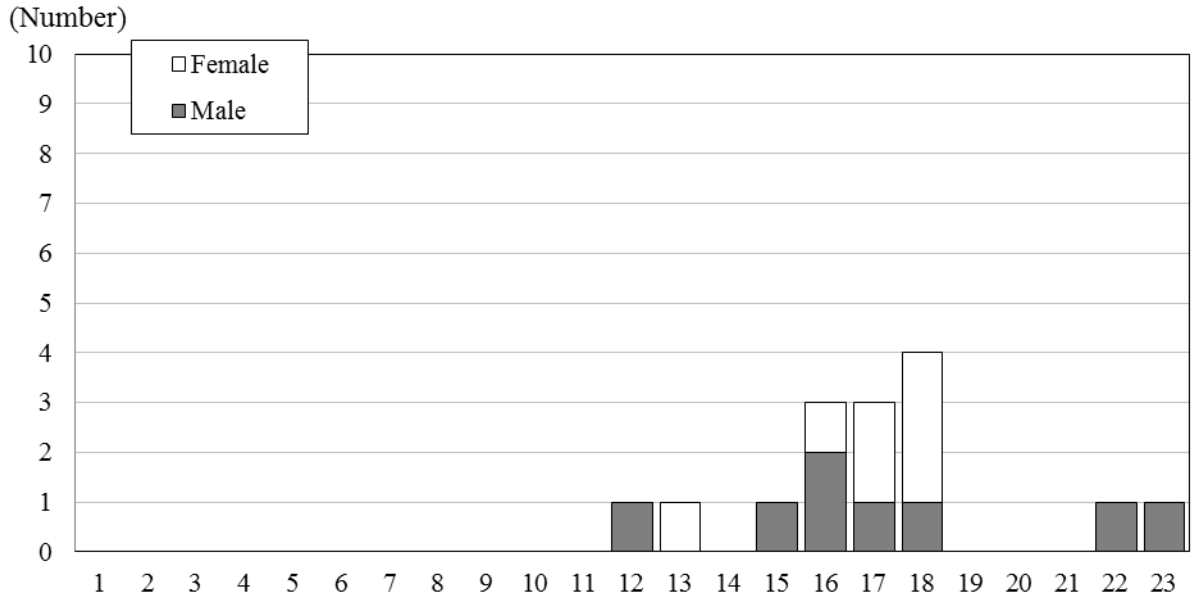
Age distributions of 15 people classified as malignant or suspicious with their age as of 11 March 2011 is as Table 3, with their age as of confirmatory examination is as Table 4.

Fig.3 Age as of 11 March 2011



The horizontal axis begins at -1 to include residents of Fukushima Prefecture born between 2 April 2011 and 1 April 2012.

Fig. 4 Age as of the date of confirmatory examination



2.2-4 The results of Basic Survey of those who classified as malignant or suspicious cases by FNAC

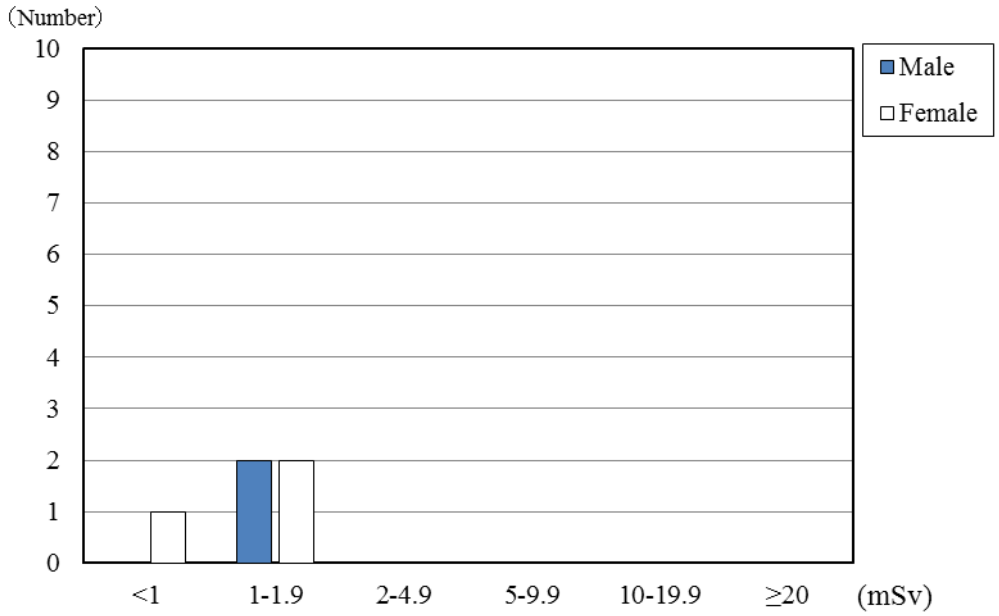
5 (33.3%) of the 15 people participated in the Basic Survey (radiation dose estimates), and 5 received the results. The highest effective dose documented was 1.5 mSv.

Table 7. A breakdown of dose estimates for participants of the Basic Survey As of 30 June 2018

Effective dose (mSv)	Age at the time of the disaster									
	0-5		6-10		11-15		16-18		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<1	0	0	0	0	0	1	0	0	0	1
1-1.9	0	0	1	1	1	1	0	0	2	2
2-4.9	0	0	0	0	0	0	0	0	0	0
5-9.9	0	0	0	0	0	0	0	0	0	0
10-19.9	0	0	0	0	0	0	0	0	0	0
≥20	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	2	0	0	2	3

●Estimates are based on effective external radiation doses.

Fig. 5 Effective dose of the respondents



2.2-5 Blood and urinary iodine test results as of 30 June 2018

Table 8. Blood test results Mean±SD (Abnormal value)

	FT4 1) (ng/dL)	FT3 2) (pg/mL)	TSH 3) (μIU/mL)	Tg 4) (ng/mL)	TgAb 5) (IU/mL)	TPOAb 6) (IU/mL)
Reference Range	0.95-1.74 7)	2.13-4.07 7)	0.340-3.880 7)	≤33.7	<28.0	<16.0
15 suspicious or malignant	1.2 ± 0.1 (0.0%)	3.5 ± 0.7 (20.0%)	1.7 ± 1.1 (20.0%)	31.5 ± 43.2 (33.3%)	− (20.0%)	− (13.3%)
Other 786	1.2 ± 0.2 (5.3%)	3.6 ± 0.5 (6.2%)	1.2 ± 0.8 (9.3%)	25.2 ± 61.3 (13.9%)	− (8.3%)	− (14.4%)

Table 9. Urinary iodine (μg/day) (μg/day)

	Minimum	25th percentile	Median	75th percentile	Maximum
15 suspicious or malignant	69	141	215	254	424
Other 787	26	110	177	318	8910

1) FT4: Free Thyroxine; thyroid hormone binding 4 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
2) FT3: Free Triiodothyronine; thyroid hormone binding 3 iodines; higher among patients with thyrotoxicosis (such as Graves' disease) and lower with hypothyroidism (such as Hashimoto's thyroiditis).
3) TSH: Thyroid Stimulating Hormone; higher among patients with Hashimoto's disease and lower with Graves' disease.
4) Tg: Thyroglobulin; higher when thyroid tissue is destroyed or when neoplastic tissue produces thyroglobulin.
5) TgAb: Anti-Thyroglobulin Antibody; higher among patients with Hashimoto's disease and Graves' disease.
6) TPOAb: Anti-Thyroid Peroxidase Antibody; higher among patients with Hashimoto's disease or Graves' disease.
7) Reference interval varies according to age.

2.2-6 Confirmatory test results by area as of 30 June 2018

The proportion of malignancy or suspicious of malignancy was 0.01% in 13 municipalities in the nationally designated evacuation zones, Nakadori and Aizu, 0.00% in Hamadori.

Table 10 Confirmatory test results by area

	Number of those screened	Participants who required confirmatory test	Proportion who required confirmatory test (%)*	Number who underwent confirmatory test	Suspicious or malignant cases	Proportion of suspicious or malignant cases (%)
13 municipalities 1)	27,037	211	0.8	151	4	0.01
Nakadori 2)	121,705	750	0.6	530	8	0.01
Hamadori 3)	41,204	320	0.8	132	1	0.00
Aizu 4)	27,560	201	0.7	100	2	0.01
Total	217,506	1,482	0.7	913	15	0.01

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate

2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono

3) Iwaki, Soma, Shinchi

4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

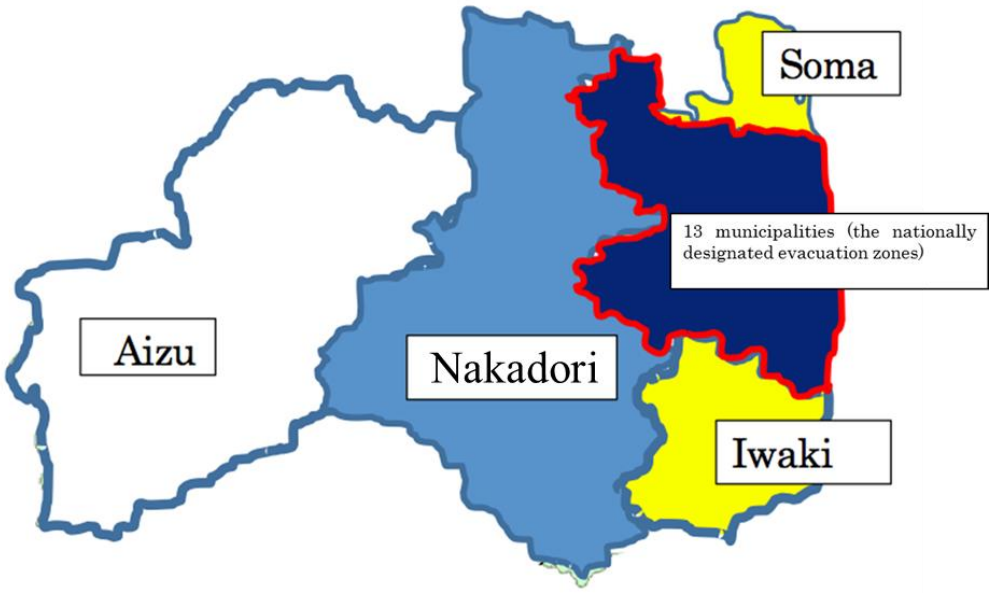


Fig.6 Regional division

2.3 Mental Health Care

2.3-1 Support for participants of primary examination

Since July 2015, we offer person-to-person explanations to participants at public venues where primary examinations take place. After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths at the venue. As of 30 June 2018, 27,582 (84.8%) of 32,535 participants visited the consultation booths. In case the booths cannot be set up at school, alternatives such as briefing sessions at schools and telephonic supports are offered.

※ The number of those who used the consultation booths includes participants receiving the second round.

2.3-2 Support for participants of confirmatory examination

We have set up a support team for participants of the confirmatory examination within Fukushima Medical University to address their anxiety and concerns, as well as online support for Q&A and counseling.

Since the start of full-scale thyroid screening, 1,149 participants (403 males and 746 females) have received support as of 30 June 2018. The number of supports provided was 2,353 in total. Of these, 1,316 (55.9%) received support at their first examination and 979 (41.6%) at subsequent examination (includes 132 (5.6%) at FNAC) – and 58 (2.5%) at informed consent.

In cooperation with teams of medical staff at hospitals, we offer similar services to those who moved on to the health insurance medical care.

※ The number of those who used the consultation booths at Confirmatory Examination includes participants receiving the examination second time.

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality

As of 30 June 2018

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima*1		4-9	10-14	15-19	≥20		
	a	b		b/a					c*3	c/b
Screening coverage by municipality in FY 2016										
Kawamata	2,142	1,405	34	65.6	408	544	409	44	39	2.8
					29.0	38.7	29.1	3.1		
Namie	3,315	1,950	506	58.8	581	664	576	129	552	28.3
					29.8	34.1	29.5	6.6		
Iitate	987	603	23	61.1	174	261	151	17	31	5.1
					28.9	43.3	25.0	2.8		
Minami-soma	11,540	7,059	1,233	61.2	2,208	2,726	1,839	286	1,268	18.0
					31.3	38.6	26.1	4.1		
Date	10,210	7,079	242	69.3	2,028	2,674	2,095	282	237	3.3
					28.6	37.8	29.6	4.0		
Tamura	6,344	4,053	98	63.9	1,269	1,594	1,105	85	98	2.4
					31.3	39.3	27.3	2.1		
Hirono	975	541	64	55.5	163	185	154	39	59	10.9
					30.1	34.2	28.5	7.2		
Naraha	1,281	769	99	60.0	214	270	222	63	95	12.4
					27.8	35.1	28.9	8.2		
Tomioka	2,751	1,474	298	53.6	392	509	451	122	308	20.9
					26.6	34.5	30.6	8.3		
Kawauchi	297	171	15	57.6	47	72	49	3	15	8.8
					27.5	42.1	28.7	1.8		
Okuma	2,259	1,341	270	59.4	418	496	349	78	287	21.4
					31.2	37.0	26.0	5.8		
Futaba	1,133	463	117	40.9	139	184	117	23	119	25.7
					30.0	39.7	25.3	5.0		
Katsurao	211	129	4	61.1	36	50	32	11	6	4.7
					27.9	38.8	24.8	8.5		
Fukushima	49,340	34,035	2,089	69.0	10,279	12,202	10,178	1,376	2,238	6.6
					30.2	35.9	29.9	4.0		
Nihonmatsu	9,308	6,340	229	68.1	1,955	2,456	1,747	182	233	3.7
					30.8	38.7	27.6	2.9		
Motomiya	5,615	3,897	124	69.4	1,316	1,445	1,030	106	119	3.1
					33.8	37.1	26.4	2.7		
Otama	1,468	1,051	34	71.6	358	405	256	32	35	3.3
					34.1	38.5	24.4	3.0		
Koriyama	59,468	38,047	2,839	64.0	11,581	14,398	10,611	1,457	2,906	7.6
					30.4	37.8	27.9	3.8		
Kori	1,854	1,351	38	72.9	424	501	370	56	33	2.4
					31.4	37.1	27.4	4.1		
Kunimi	1,405	1,015	29	72.2	275	385	304	51	24	2.4
					27.1	37.9	30.0	5.0		
Tenei	966	634	24	65.6	191	258	164	21	20	3.2
					30.1	40.7	25.9	3.3		
Shirakawa	11,352	7,637	290	67.3	2,261	2,853	2,251	272	318	4.2
					29.6	37.4	29.5	3.6		
Nishigo	3,722	2,558	110	68.7	787	951	705	115	115	4.5
					30.8	37.2	27.6	4.5		
Izumizaki	1,163	798	12	68.6	239	310	222	27	18	2.3
					29.9	38.8	27.8	3.4		
Miharu	2,769	1,766	46	63.8	454	628	596	88	39	2.2
					25.7	35.6	33.7	5.0		
Subtotal	191,875	126,166	8,867	65.8	38,197	47,021	35,983	4,965	9,212	7.3
					30.3	37.3	28.5	3.9		

*1) The number of participants examined at facilities outside Fukushima or by teams dispatched from FMU (as of 31 May 2018)

*2) The upper layer shows number of participants, lower shows proportion of each group

*3) Number of participants who are registered as residents outside of Fukushima.

●Age groups were formed based on the age at the full-scale screening (third-round examination). This applies to other tables as well.

As of 30 June 2018

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group				Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima*1		4-9	10-14	15-19	≥20		
	a	b		b/a					c*3	c/b
Screening coverage by municipality in FY 2017										
Iwaki	56,811	36,540	1,994	64.3	8,793	13,724	11,601	2,422	1,757	4.8
					24.1	37.6	31.7	6.6		
Sukagawa	14,113	9,229	272	65.4	2,570	3,476	2,699	484	254	2.8
					27.8	37.7	29.2	5.2		
Soma	6,252	3,816	255	61.0	1,137	1,410	1,110	159	271	7.1
					29.8	36.9	29.1	4.2		
Kagamiishi	2,417	1,585	44	65.6	436	614	470	65	41	2.6
					27.5	38.7	29.7	4.1		
Shinchi	1,320	848	34	64.2	212	333	263	40	40	4.7
					25.0	39.3	31.0	4.7		
Nakajima	972	644	6	66.3	177	240	202	25	7	1.1
					27.5	37.3	31.4	3.9		
Yabuki	3,041	1,959	42	64.4	632	736	519	72	42	2.1
					32.3	37.6	26.5	3.7		
Ishikawa	2,530	1,606	36	63.5	485	591	470	60	42	2.6
					30.2	36.8	29.3	3.7		
Yamatsuri	930	578	16	62.2	187	219	148	24	13	2.2
					32.4	37.9	25.6	4.2		
Asakawa	1,210	819	27	67.7	214	316	251	38	26	3.2
					26.1	38.6	30.6	4.6		
Hirata	1,101	691	8	62.8	208	268	196	19	8	1.2
					30.1	38.8	28.4	2.7		
Tanagura	2,749	1,748	40	63.6	536	677	479	56	42	2.4
					30.7	38.7	27.4	3.2		
Hanawa	1,492	889	27	59.6	260	348	242	39	24	2.7
					29.2	39.1	27.2	4.4		
Samegawa	617	381	12	61.8	120	154	96	11	16	4.2
					31.5	40.4	25.2	2.9		
Ono	1,716	1,028	20	59.9	318	423	254	33	14	1.4
					30.9	41.1	24.7	3.2		
Tamakawa	1,210	797	10	65.9	222	333	220	22	8	1.0
					27.9	41.8	27.6	2.8		
Furudono	946	622	16	65.8	197	232	158	35	13	2.1
					31.7	37.3	25.4	5.6		
Hinoemata	94	47	5	50.0	14	13	17	3	4	8.5
					29.8	27.7	36.2	6.4		
Minami-aizu	2,512	1,471	25	58.6	437	559	428	47	14	1.0
					29.7	38.0	29.1	3.2		
Kaneyama	177	89	1	50.3	19	42	25	3	1	1.1
					21.3	47.2	28.1	3.4		
Showa	127	73	2	57.5	26	26	20	1	3	4.1
					35.6	35.6	27.4	1.4		
Mishima	174	107	1	61.5	24	44	37	2	1	0.9
					22.4	41.1	34.6	1.9		
Shimogo	873	527	8	60.4	160	200	148	19	7	1.3
					30.4	38.0	28.1	3.6		
Kitakata	8,079	4,916	100	60.8	1,336	1,903	1,518	159	87	1.8
					27.2	38.7	30.9	3.2		
Nishiaizu	885	476	9	53.8	135	175	145	21	10	2.1
					28.4	36.8	30.5	4.4		
Tadami	642	391	7	60.9	119	147	112	13	4	1.0
					30.4	37.6	28.6	3.3		
Inawashiro	2,383	1,502	39	63.0	456	560	420	66	38	2.5
					30.4	37.3	28.0	4.4		
Bandai	555	355	9	64.0	105	143	98	9	9	2.5
					29.6	40.3	27.6	2.5		
Kitashiobara	502	318	7	63.3	98	129	79	12	8	2.5
					30.8	40.6	24.8	3.8		
Aizumisato	3,311	2,059	41	62.2	568	832	563	96	32	1.6
					27.6	40.4	27.3	4.7		
Aizubange	2,790	1,733	48	62.1	489	679	490	75	34	2.0
					28.2	39.2	28.3	4.3		
Yanaizu	538	342	4	63.6	103	129	96	14	3	0.9
					30.1	37.7	28.1	4.1		
Aizuwakamatsu	21,119	12,743	394	60.3	3,585	4,811	3,915	432	351	2.8
					28.1	37.8	30.7	3.4		
Yugawa	606	411	4	67.8	121	159	115	16	3	0.7
					29.4	38.7	28.0	3.9		
Subtotal	144,794	91,340	3,563	63.1	24,499	34,645	27,604	4,592	3,227	3.5
					26.8	37.9	30.2	5.0		
Total	336,669	217,506	12,430	64.6	62,696	81,666	63,587	9,557	12,439	5.7
					28.8	37.5	29.2	4.4		

Appendix 2

Thyroid ultrasound examination (TUE) coverage by prefecture

As of 31 May 2018

Prefecture	Number of test venues	Participants *
Hokkaido	7	**354**
Aomori	1	**143**
Iwate	3	**306**
Miyagi	2	**2,541**
Akita	1	**183**
Yamagata	3	**594**
Ibaraki	4	**765**
Tochigi	7	**750**
Gunma	2	**233**
Saitama	3	**581**
Chiba	4	**544**
Tokyo	14	**2,109**
Kanagawa	5	**1,027**
Niigata	2	**585**
Toyama	2	**23**
Ishikawa	1	**43**

Prefecture	Number of test venues	Participants *
Fukui	1	**23**
Yamanashi	2	**105**
Nagano	2	**139**
Gifu	1	**42**
Shizuoka	2	**112**
Aichi	4	**222**
Mie	1	**25**
Shiga	1	**22**
Kyoto	3	**99**
Osaka	7	**232**
Hyogo	2	**138**
Nara	2	**30**
Wakayama	1	**6**
Tottori	1	**10**
Shimane	1	**15**
Okayama	3	**60**

Prefecture	Number of test venues	Participants *
Hiroshima	2	**33**
Yamaguchi	1	**22**
Tokushima	1	**9**
Kagawa	1	**17**
Ehime	1	**12**
Kochi	1	**14**
Fukuoka	3	**83**
Saga	1	**5**
Nagasaki	2	**27**
Kumamoto	1	**31**
Oita	1	**14**
Miyazaki	1	**29**
Kagoshima	1	**19**
Okinawa	1	**54**
Total	113	**12,430**

●The number of participants includes those who received examination at facilities outside Fukushima or by teams dispatched by Fukushima Medical University.

●The number of dispatches of FMU teams for examinations outside Fukushima was 1, to Kanagawa.

Appendix 3

Results of primary examination by municipality

As of 30 June 2018

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
			Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2016										
Kawamata	1,405	1,405	488	908	9	0	9	7	0	913
		100.0	34.7	64.6	0.6	0.0	0.6	0.5	0.0	65.0
Namie	1,950	1,949	651	1,282	16	0	16	8	0	1,285
		99.9	33.4	65.8	0.8	0.0	0.8	0.4	0.0	65.9
Iitate	603	603	202	397	4	0	4	2	0	397
		100.0	33.5	65.8	0.7	0.0	0.7	0.3	0.0	65.8
Minami-soma	7,059	7,057	2,563	4,442	52	0	52	31	0	4,465
		100.0	36.3	62.9	0.7	0.0	0.7	0.4	0.0	63.3
Date	7,079	7,079	2,455	4,574	50	0	50	23	0	4,598
		100.0	34.7	64.6	0.7	0.0	0.7	0.3	0.0	65.0
Tamura	4,053	4,053	1,490	2,517	46	0	46	22	0	2,542
		100.0	36.8	62.1	1.1	0.0	1.1	0.5	0.0	62.7
Hirono	541	541	193	344	4	0	4	3	0	343
		100.0	35.7	63.6	0.7	0.0	0.7	0.6	0.0	63.4
Naraha	769	769	293	473	3	0	3	2	0	474
		100.0	38.1	61.5	0.4	0.0	0.4	0.3	0.0	61.6
Tomioka	1,474	1,473	508	952	13	0	13	3	0	959
		99.9	34.5	64.6	0.9	0.0	0.9	0.2	0.0	65.1
Kawauchi	171	171	41	129	1	0	1	0	0	130
		100.0	24.0	75.4	0.6	0.0	0.6	0.0	0.0	76.0
Okuma	1,341	1,341	460	870	11	0	11	6	0	872
		100.0	34.3	64.9	0.8	0.0	0.8	0.4	0.0	65.0
Futaba	463	463	172	289	2	0	2	0	0	290
		100.0	37.1	62.4	0.4	0.0	0.4	0.0	0.0	62.6
Katsurao	129	129	50	79	0	0	0	1	0	79
		100.0	38.8	61.2	0.0	0.0	0.0	0.8	0.0	61.2
Fukushima	34,035	34,034	11,956	21,887	191	0	191	104	0	21,983
		100.0	35.1	64.3	0.6	0.0	0.6	0.3	0.0	64.6
Nihonmatsu	6,340	6,340	2,263	4,032	45	0	45	22	0	4,056
		100.0	35.7	63.6	0.7	0.0	0.7	0.3	0.0	64.0
Motomiya	3,897	3,896	1,356	2,523	17	0	17	8	0	2,534
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	65.0
Otama	1,051	1,051	374	671	6	0	6	3	0	675
		100.0	35.6	63.8	0.6	0.0	0.6	0.3	0.0	64.2
Koriyama	38,047	38,042	13,050	24,758	234	0	234	130	0	24,865
		100.0	34.3	65.1	0.6	0.0	0.6	0.3	0.0	65.4
Kori	1,351	1,351	491	850	10	0	10	4	0	857
		100.0	36.3	62.9	0.7	0.0	0.7	0.3	0.0	63.4
Kunimi	1,015	1,015	336	671	8	0	8	2	0	676
		100.0	33.1	66.1	0.8	0.0	0.8	0.2	0.0	66.6
Tenei	634	634	213	414	7	0	7	1	0	419
		100.0	33.6	65.3	1.1	0.0	1.1	0.2	0.0	66.1
Shirakawa	7,637	7,636	2,661	4,935	40	0	40	23	0	4,958
		100.0	34.8	64.6	0.5	0.0	0.5	0.3	0.0	64.9
Nishigo	2,558	2,558	828	1,717	13	0	13	8	0	1,722
		100.0	32.4	67.1	0.5	0.0	0.5	0.3	0.0	67.3
Izumizaki	798	798	271	525	2	0	2	5	0	525
		100.0	34.0	65.8	0.3	0.0	0.3	0.6	0.0	65.8
Miharu	1,766	1,766	564	1,191	11	0	11	8	0	1,192
		100.0	31.9	67.4	0.6	0.0	0.6	0.5	0.0	67.5
Subtotal	126,166	126,154	43,929	81,430	795	0	795	426	0	81,809
		100.0	34.8	64.5	0.6	0.0	0.6	0.3	0.0	64.8

As of 30 June 2018

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
			Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2017										
Iwaki	36,540	36,522	12,614	23,628	280	0	278	143	2	23,744
		100.0	34.5	64.7	0.8	0.0	0.8	0.4	0.0	65.0
Sukagawa	9,229	9,229	3,226	5,921	82	0	82	45	0	5,962
		100.0	35.0	64.2	0.9	0.0	0.9	0.5	0.0	64.6
Soma	3,816	3,815	1,533	2,249	33	0	33	20	0	2,267
		100.0	40.2	59.0	0.9	0.0	0.9	0.5	0.0	59.4
Kagamiishi	1,585	1,585	524	1,049	12	0	12	7	0	1,055
		100.0	33.1	66.2	0.8	0.0	0.8	0.4	0.0	66.6
Shinchi	848	848	306	535	7	0	7	4	0	537
		100.0	36.1	63.1	0.8	0.0	0.8	0.5	0.0	63.3
Nakajima	644	644	226	415	3	0	3	4	0	414
		100.0	35.1	64.4	0.5	0.0	0.5	0.6	0.0	64.3
Yabuki	1,959	1,959	681	1,270	8	0	8	4	0	1,273
		100.0	34.8	64.8	0.4	0.0	0.4	0.2	0.0	65.0
Ishikawa	1,606	1,606	636	962	8	0	8	4	0	965
		100.0	39.6	59.9	0.5	0.0	0.5	0.2	0.0	60.1
Yamatsuri	578	577	196	378	3	0	3	1	0	380
		99.8	34.0	65.5	0.5	0.0	0.5	0.2	0.0	65.9
Asakawa	819	819	292	518	9	0	9	3	0	524
		100.0	35.7	63.2	1.1	0.0	1.1	0.4	0.0	64.0
Hirata	691	691	271	415	5	0	5	2	0	416
		100.0	39.2	60.1	0.7	0.0	0.7	0.3	0.0	60.2
Tanagura	1,748	1,748	631	1,107	10	0	10	8	0	1,114
		100.0	36.1	63.3	0.6	0.0	0.6	0.5	0.0	63.7
Hanawa	889	889	322	558	9	0	9	5	0	561
		100.0	36.2	62.8	1.0	0.0	1.0	0.6	0.0	63.1
Samegawa	381	381	139	239	3	0	3	3	0	241
		100.0	36.5	62.7	0.8	0.0	0.8	0.8	0.0	63.3
Ono	1,028	1,028	309	711	8	0	8	3	0	715
		100.0	30.1	69.2	0.8	0.0	0.8	0.3	0.0	69.6
Tamakawa	797	797	282	512	3	0	3	6	0	513
		100.0	35.4	64.2	0.4	0.0	0.4	0.8	0.0	64.4
Furudono	622	622	238	381	3	0	3	2	0	382
		100.0	38.3	61.3	0.5	0.0	0.5	0.3	0.0	61.4
Hinoemata	47	47	21	26	0	0	0	0	0	26
		100.0	44.7	55.3	0.0	0.0	0.0	0.0	0.0	55.3
Minami-aizu	1,471	1,471	551	909	11	0	11	3	0	913
		100.0	37.5	61.8	0.7	0.0	0.7	0.2	0.0	62.1
Kaneyama	89	89	31	57	1	0	1	1	0	57
		100.0	34.8	64.0	1.1	0.0	1.1	1.1	0.0	64.0
Showa	73	72	34	38	0	0	0	0	0	38
		98.6	47.2	52.8	0.0	0.0	0.0	0.0	0.0	52.8
Mishima	107	107	28	78	1	0	1	1	0	79
		100.0	26.2	72.9	0.9	0.0	0.9	0.9	0.0	73.8
Shimogo	527	527	220	302	5	0	5	1	0	306
		100.0	41.7	57.3	0.9	0.0	0.9	0.2	0.0	58.1
Kitakata	4,916	4,915	1,756	3,123	36	0	36	27	0	3,134
		100.0	35.7	63.5	0.7	0.0	0.7	0.5	0.0	63.8
Nishiaizu	476	476	178	294	4	0	4	2	0	293
		100.0	37.4	61.8	0.8	0.0	0.8	0.4	0.0	61.6
Tadami	391	391	144	245	2	0	2	1	0	247
		100.0	36.8	62.7	0.5	0.0	0.5	0.3	0.0	63.2
Inawashiro	1,502	1,502	524	963	15	0	15	7	0	974
		100.0	34.9	64.1	1.0	0.0	1.0	0.5	0.0	64.8
Bandai	355	355	131	222	2	0	2	2	0	223
		100.0	36.9	62.5	0.6	0.0	0.6	0.6	0.0	62.8
Kitashiobara	318	318	107	209	2	0	2	1	0	209
		100.0	33.6	65.7	0.6	0.0	0.6	0.3	0.0	65.7
Aizumisato	2,059	2,059	767	1,277	15	0	15	12	0	1,283
		100.0	37.3	62.0	0.7	0.0	0.7	0.6	0.0	62.3
Aizubange	1,733	1,733	584	1,135	14	0	14	17	0	1,138
		100.0	33.7	65.5	0.8	0.0	0.8	1.0	0.0	65.7
Yanaizu	342	342	123	219	0	0	0	0	0	219
		100.0	36.0	64.0	0.0	0.0	0.0	0.0	0.0	64.0
Aizuwakamatsu	12,743	12,743	4,515	8,137	91	0	90	54	1	8,177
		100.0	35.4	63.9	0.7	0.0	0.7	0.4	0.0	64.2
Yugawa	411	411	151	258	2	0	2	2	0	259
		100.0	36.7	62.8	0.5	0.0	0.5	0.5	0.0	63.0
Subtotal	91,340	91,318	32,291	58,340	687	0	684	395	3	58,638
		100.0	35.4	63.9	0.8	0.0	0.7	0.4	0.0	64.2
Total	217,506	217,472	76,220	139,770	1,482	0	1,479	821	3	140,447
		100.0	35.0	64.3	0.7	0.0	0.7	0.4	0.0	64.6

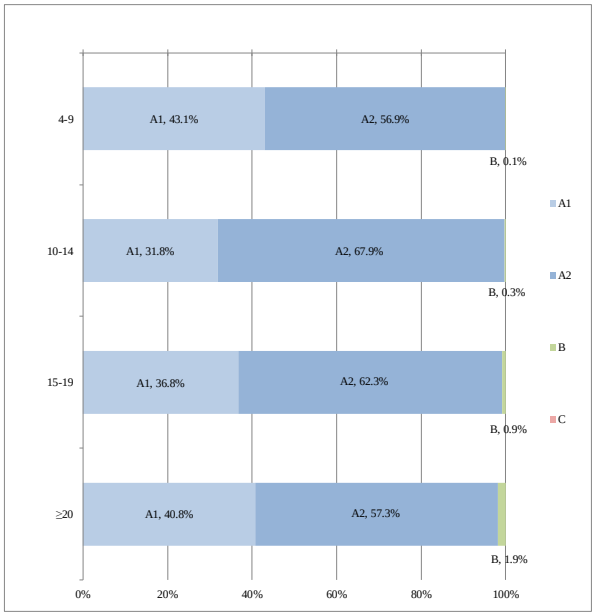
Appendix 4

1. Thyroid ultrasound examination results by age and sex

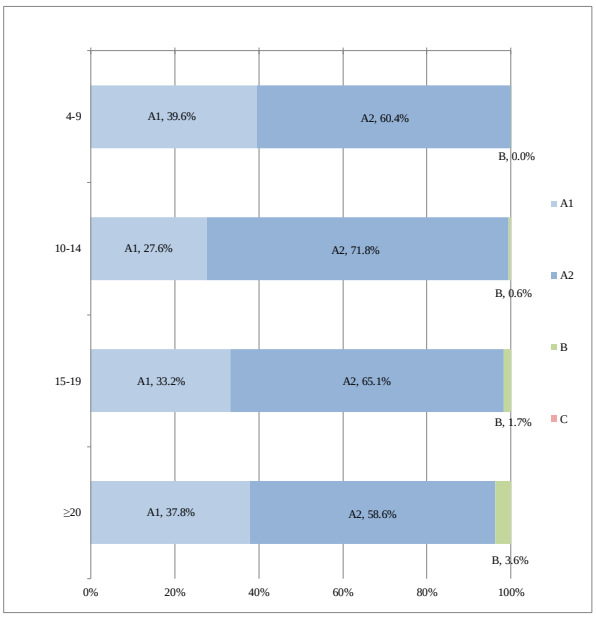
As of 30 June 2018

Ages	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
4-9	13,887	12,060	25,947	18,335	18,379	36,714	17	12	29	0	0	0	32,239	30,451	62,690
10-14	13,267	11,054	24,321	28,284	28,707	56,991	110	242	352	0	0	0	41,661	40,003	81,664
15-19	11,695	10,529	22,224	19,840	20,688	40,528	286	541	827	0	0	0	31,821	31,758	63,579
≥20	1,700	2,028	3,728	2,390	3,147	5,537	78	196	274	0	0	0	4,168	5,371	9,539
Total	40,549	35,671	76,220	68,849	70,921	139,770	491	991	1,482	0	0	0	109,889	107,583	217,472

Test results by age group (Male)



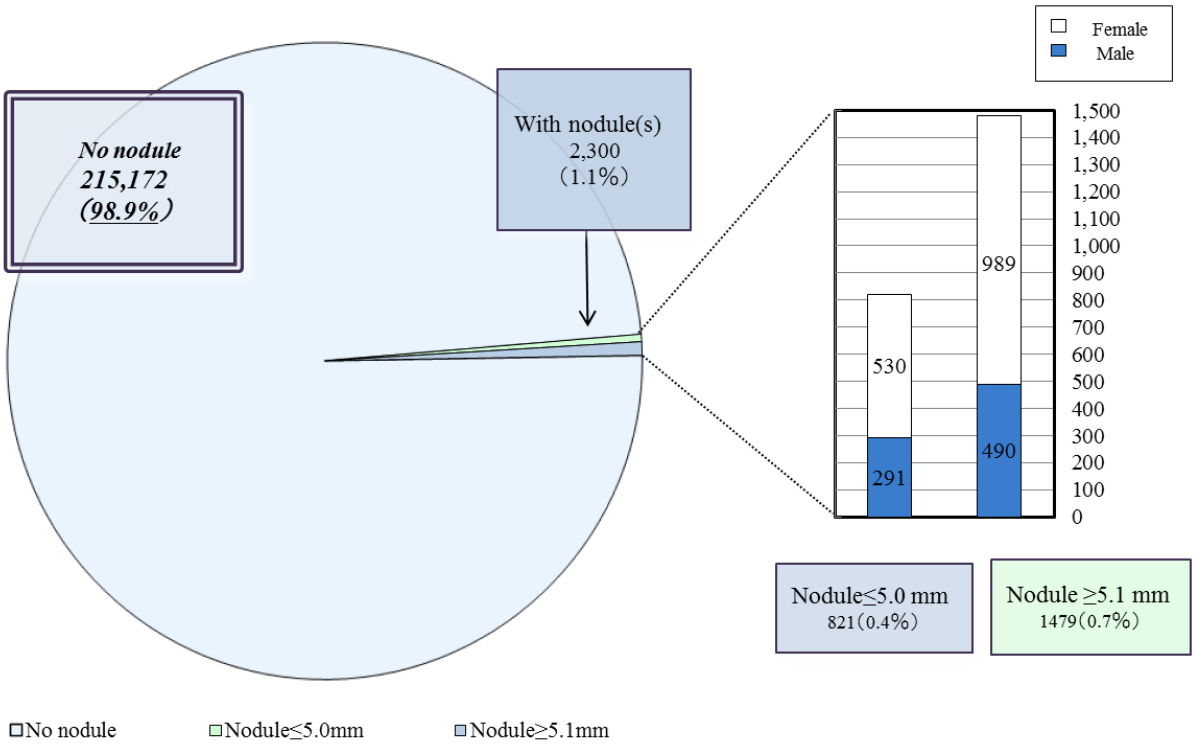
Test results by age group (Female)

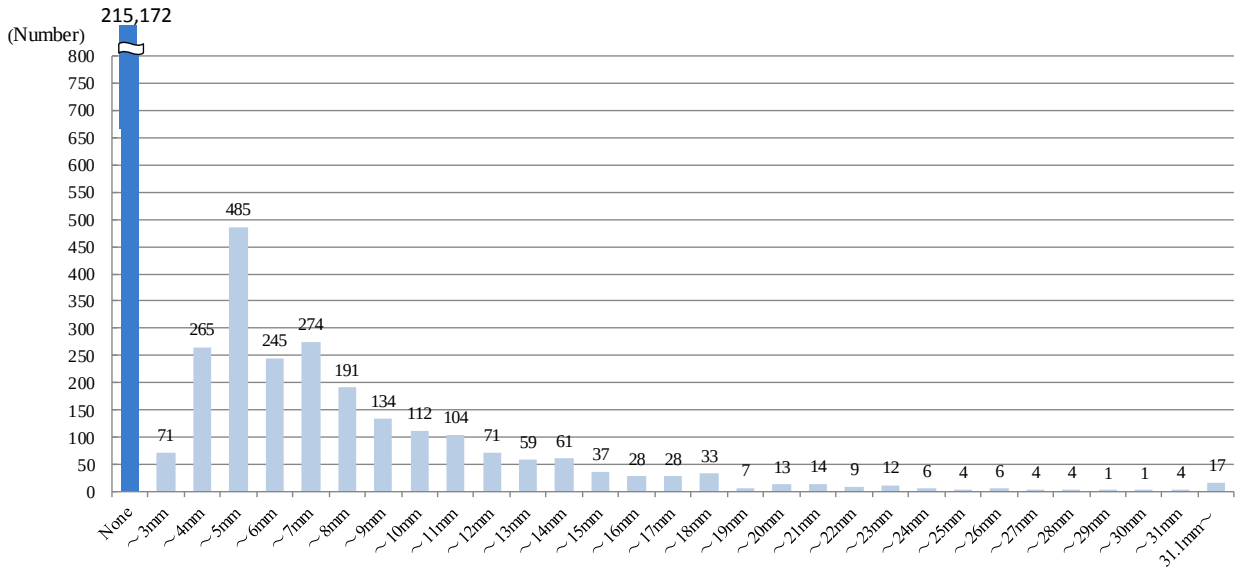


2. Nodule size

As of 30 June 2018

Nodule size	Total	Male	Female	Class	Proportion
None	215,172	109,108	106,064	A1	98.9%
≤ 3.0 mm	71	34	37	A2	0.4%
3.1-5.0 mm	750	257	493		
5.1-10.0 mm	956	325	631	B	0.7%
10.1-15.0 mm	332	110	222		
15.1-20.0 mm	109	27	82		
20.1-25.0 mm	45	17	28		
≥ 25.1 mm	37	11	26		
Total	217,472	109,889	107,583		

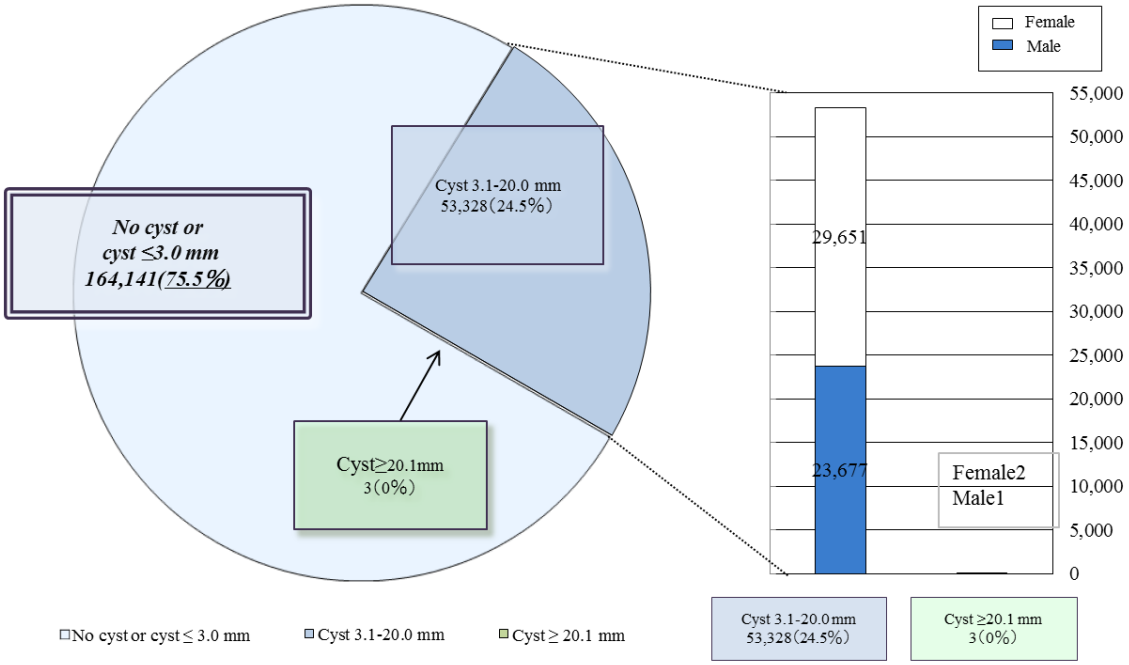


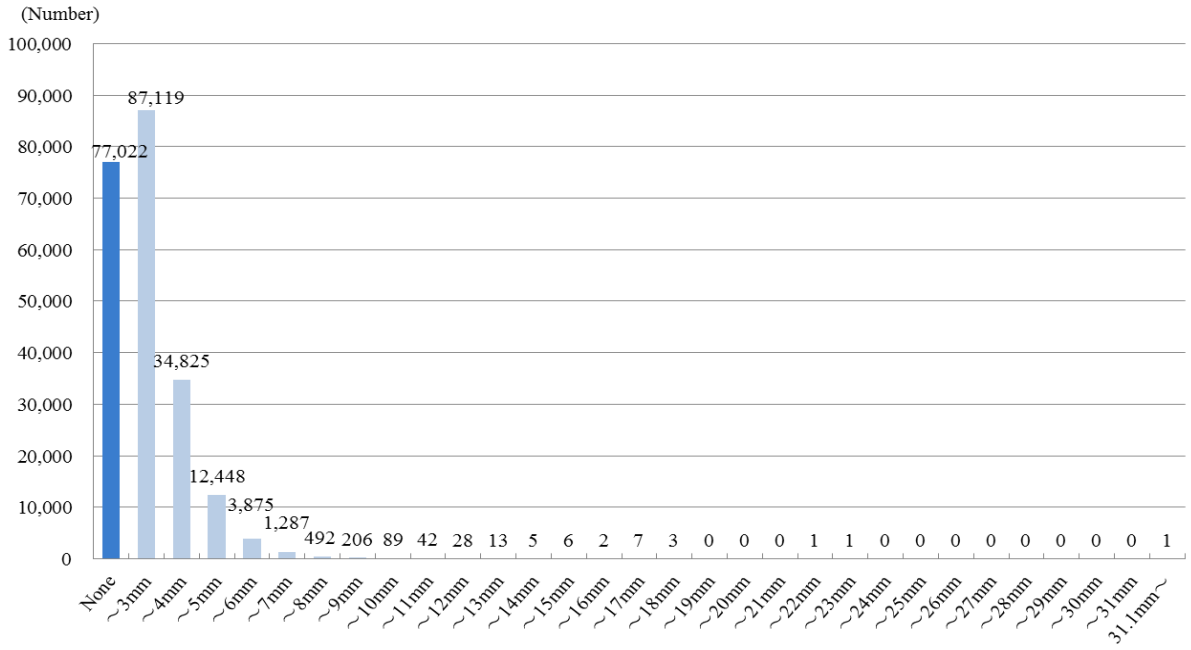


3. Cyst size

As of 30 June 2018

Cyst size	Total	Male	Female	Class	Proportion
None	77,022	40,833	36,189	A1	75.5%
≤ 3.0 mm	87,119	45,378	41,741	A2	
3.1-5.0 mm	47,273	21,563	25,710		24.5%
5.1-10.0 mm	5,949	2,084	3,865		
10.1-15.0 mm	94	25	69		
15.1-20.0 mm	12	5	7		
20.1-25.0 mm	2	0	2	B	0.001%
≥ 25.1 mm	1	1	0		
Toal	217,472	109,889	107,583		





Appendix 5

As of 30 June 2018

District	Number of those screened	Participants who required confirmatory test	Number of those who underwent confirmatory test					Number of confirmed results				
			Total	Ages 4-9	Ages 10-14	Ages 15-19	≥ 20	Total	A1	A2	Not A1 or A2	
												Aspiration biopsy cytology
	a	b Proportion (%) b/a	c Proportion (%) c/b	d Proportion (%) d/c	e Proportion (%) e/c	f Proportion (%) f/c	g Proportion (%) g/c	h Proportion (%) h/c	i Proportion (%) i/h	j Proportion (%) j/h	k Proportion (%) k/h	l Proportion (%) l/k
13 municipalities 1)	27,037	211	151	1	35	91	24	140	0	17	123	11
		0.8	71.6	0.7	23.2	60.3	15.9	92.7	0.0	12.1	87.9	8.9
Nakadori 2)	121,705	750	530	14	108	307	101	505	5	40	460	27
		0.6	70.7	2.6	20.4	57.9	19.1	95.3	1.0	7.9	91.1	5.9
Hamadori 3)	41,204	320	132	0	29	72	31	104	1	14	89	4
		0.8	41.3	0.0	22.0	54.5	23.5	78.8	1.0	13.5	85.6	4.5
Aizu 4)	27,560	201	100	4	23	51	22	77	1	8	68	3
		0.7	49.8	4.0	23.0	51.0	22.0	77.0	1.3	10.4	88.3	4.4
Total	217,506	1,482	913	19	195	521	178	826	7	79	740	45
		0.7	61.6	2.1	21.4	57.1	19.5	90.5	0.8	9.6	89.6	6.1

1) Tamura, Minami-soma, Date, Kawamata, Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate

2) Fukushima, Koriyama, Shirakawa, Sukagawa, Nihonmatsu, Motomiya, Kori, Kunimi, Otama, Kagamiishi, Tenei, Nishigo, Izumizaki, Nakajima, Yabuki, Tanagura, Yamatsuri, Hanawa, Samegawa, Ishikawa, Tamakawa, Hirata, Asakawa, Furudono, Miharu, Ono

3) Iwaki, Soma, Shinchi

4) Aizuwakamatsu, Kitakata, Shimogo, Hinoemata, Tadami, Minami-aizu, Kitashiobara, Nishiaizu, Bandai, Inawashiro, Aizubange, Yugawa, Yanaizu, Mishima, Kaneyama, Showa, Aizumisato

Appendix 6

Surgical cases for malignancy or suspicion of malignancy

1. Target municipalities in FY 2016

   Suspicious or malignant: 11 (10 surgical cases: 10 papillary thyroid carcinomas)

2. Target municipalities in FY 2017

   Suspicious or malignant: 4 (1 surgical case: 1 papillary thyroid carcinomas)

3. Total for cases FY 2016 - 2017

   Suspicious or malignant: 15 (11 surgical cases: 11 papillary thyroid carcinomas)

Report of Fourth -Round Thyroid Ultrasound Examinations
(Third Full-Scale Thyroid Screening Program)

Reported on 5 September 2018

1. Summary

1.1 Purpose

In order to monitor the long-term health of children, following the Preliminary Baseline Screening for background assessment of thyroid glands, and Full-scale Thyroid Screening (the Second and Third round examination) to continuously confirm the status of thyroid glands, now we conduct the Full-scale Thyroid Screening Program (Fourth-round examination).

1.2 Group

All the Fukushima residents approximately 18 years old or younger at the time of earthquake (born between 2 April 1992 and 1 April 2012).

1.3 Implementation Period

From April 2018 (schedule of FY 2018 and FY 2019):

1.3-1 targets 18 years old or younger

The examination will be carried out for each municipality in FY 2018 and FY 2019.

1.3-2 targets 19 years old or older

The examination will be carried out for each age (school grade).

FY 2018: those who were born in FY 1996 and FY 1998

FY 2019: those who were born in FY 1997 and FY 1999

1.3-3 targets of the examination at age 25

For those who are older than 20, examination will be carried out with 5 years interval.

FY 2018: those who were born in FY 1993

FY 2019: those who were born in FY 1994

The results of these examinations will be reported separately.

1.4 Responsible Organizations

Fukushima Prefecture commissioned Fukushima Medical University (FMU) to conduct the survey in cooperation with medical institutions inside and outside Fukushima (the number of contracts is as of 30 June 2018).

1.4-1 Primary examination

Inside Fukushima Prefecture	69 medical institutions
Outside Fukushima Prefecture	114 medical institutions

1.4-2 Confirmatory examination

Inside Fukushima Prefecture	5 medical institutions including FMU
Outside Fukushima Prefecture	36 medical institutions

1.5 Method

1.5-1 Primary Examination

We use ultrasonography for examination of the thyroid gland.

Assessments are made by specialists on the basis of the following criteria:

-Diagnostic Criteria (A)

A1: No nodules / cysts

A2: Nodules ≤5.0 mm or cysts ≤20.0 mm

-Diagnostic Criteria (B)

B: Nodules ≥5.1 mm or cysts ≥20.1 mm

Some A2 test results may be re-classified as B results when clinically indicated.

-Diagnostic Criteria (C)

C: Immediate need for confirmatory examination.

1.5-2 Confirmatory Examination

We conduct ultrasonography, blood test, urine test, and Fine-Needle Aspiration Cytology (FNAC) if needed for those with B or C test results. Priority is given to those in urgent clinical need.

We recommend medical follow-up for those requiring it due to confirmatory test results.

1.5-3 Flow chart

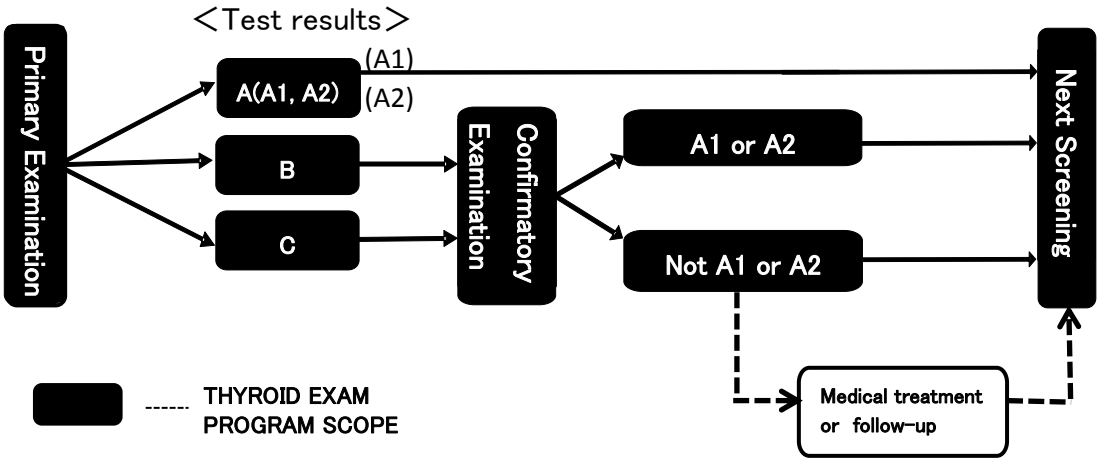


Fig.1 Flow chart

1.6 Target Municipalities

The target municipalities for FY 2018 and FY 2019 are as follows (targets 18 years old or younger):

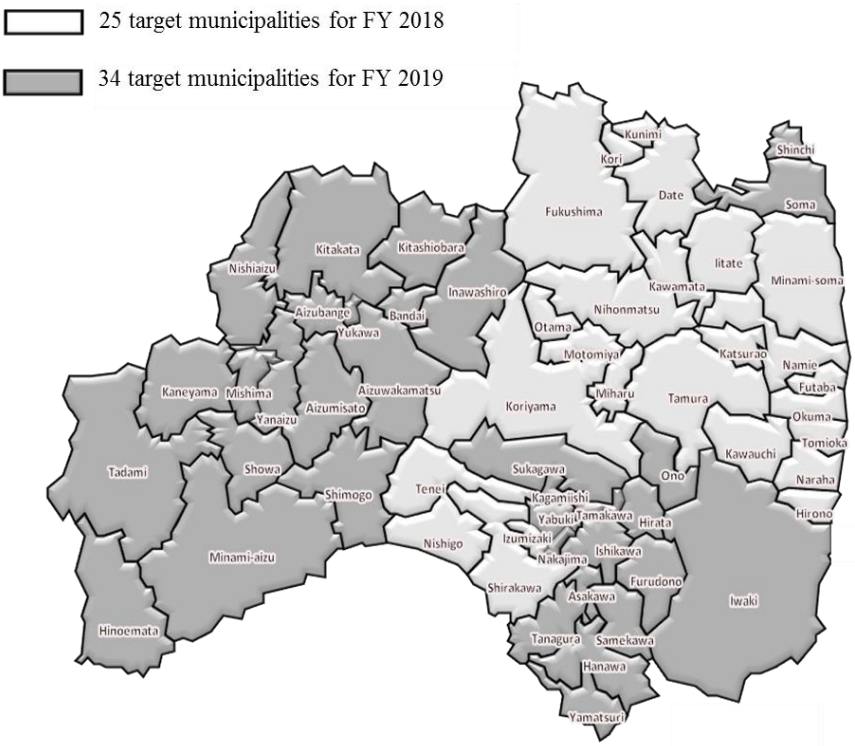


Fig.2 Target Municipalities

2. Results as of 30 June 2018

2.1 Results of Primary Examination

2.1-1 Progress Report

The examination was carried out for 16,362 (5.6%) participants by 30 June 2018 (examination status for each municipality and prefectures other than Fukushima are shown in Appendix 1 and Appendix 2).

Results have been confirmed for 953 participants (5.8%) and results notifications have been dispatched accordingly (the result for each municipality is shown as Appendix 3).

Thusfar, 945 (99.2%) were classified as A (A1 or A2), 8 (0.8%) were B, and none was C.

Table 1. Screening test coverage

as of 30 June 2018

	Survey population	Participants		Test results				
		Proportion (%)	Screened outside Fukushima	Proportion (%)	Class (%)			
					A		Requiring confirmatory test	
	a	b (b/a)		c (c/b)	A1 d (d/c)	A2 e (e/c)	B f (f/c)	C g (g/c)
FY 2018	167,756	15,834 (9.4)	444	881 (5.6)	288 (32.7)	586 (66.5)	7 (0.8)	0 (0.0)
FY 2019	126,094	528 (0.4)	30	72 (13.6)	20 (27.8)	51 (70.8)	1 (1.4)	0 (0.0)
Total	293,850	16,362 (5.6)	474	953 (5.8)	308 (32.3)	637 (66.8)	8 (0.8)	0 (0.0)

Table 2. Number and proportion with nodules/cysts

as of 30 June 2018

	Number of confirmed screening results	Number and proportion of children with nodules/cysts			
		Nodules		Cysts	
	a	≥5.1 mm b (b/a)	≤5.0 mm c (c/a)	≥20.1 mm d (d/a)	≤20.0 mm e (e/a)
FY 2018	881	7 (0.8)	11 (1.2)	0 (0.0)	586 (66.5)
FY 2019	72	1 (1.4)	0 (0.0)	0 (0.0)	52 (72.2)
Total	953	8 (0.8)	11 (1.2)	0 (0.0)	638 (66.9)

●Decimal figures are rounded at lower decimal place and this applies to other tables as well.

●Those who receive examination at 5-year intervals (birth year FY1992 to 1995) are excluded. The results of examinations with 5-year intervals will be shown separately.

●The examination for the targets born in FY 1992 (approx. 22,000) are in FY 2017, for the targets born in FY 1993 (approx. 22,000) are in FY 2018, for the targets born in FY 1994 (approx. 22,000) will be in FY 2019 and for the targets born in FY 1995 (approx. 21,000) will be in FY 2020.

2.1-2 Participation rates by age group

The participation rate for each age group as of 1 April of each year is as Table 3.

Table 3. Participation rates in target municipalities by age group

As of 30 June 2018

		Total	Age group (years)		
FY 2018 target municipalities	Age group (years)		6-11	12-17	18-24
	Survey population (a)	167,756	56,662	64,829	46,265
	Participants (b)	15,834	8,817	6,489	528
	Proportion (%) (b/a)	9.4	15.6	10.0	1.1
FY 2019 target municipalities	Age group (years)		7-11	12-17	18-24
	Survey population (a)	126,094	34,092	47,275	44,727
	Participants (b)	528	157	190	181
	Proportion (%) (b/a)	0.4	0.5	0.4	0.4
Total	Survey population (a)	293,850	90,754	112,104	90,992
	Participants (b)	16,362	8,974	6,679	709
	Proportion (%) (b/a)	5.6	9.9	6.0	0.8

●Age groups were formed with the age as of 1 April of each Fiscal Year.

2.1-3 Comparison of Full-scale Thyroid Screenings

Comparison of Fourth- and Third- Round Examination results of those who participated in both is as shown in table 4.

Among 854 participants who were classified as A1 or A2 in the Third-Round Examination, 851 (99.6%) had A1 or A2 results, and 3 (0.4%) were classified as B in the Fourth-Round Examination Program.

Among 6 participants who were classified as B in the Third-Round Examination, 3 (50.0%) had A1 or A2 results, and 3 (50.0%) were classified as B in the Fourth-Round Examination Program.

Table 4. Comparison of Full-scale Thyroid Screenings

As of 30 June 2018

			Results of the Third-round Examination*1 (%) a	Results of the Fourth-Round Examination *2			
				A		B	C
				A1 b b/a (%)	A2 c c/a (%)	d d/a (%)	e e/a (%)
Results of the Third-round Examination	A	A1	240 (100.0)	198 (82.5)	42 (17.5)	0 (0.0)	0 (0.0)
		A2	614 (100.0)	78 (12.7)	533 (86.8)	3 (0.5)	0 (0.0)
	B		6 (100.0)	0 (0.0)	3 (50.0)	3 (50.0)	0 (0.0)
	C		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	No participation		93 (100.0)	32 (34.4)	59 (63.4)	2 (2.2)	0 (0.0)
Total			953 (100.0)	308 (32.3)	637 (66.8)	8 (0.8)	0 (0.0)

*1 Upper figure shows the results of Third-Round Examination of those who confirmed of Fourth-Round results.
It is not the breakdown of total of Third-Round results (217,472).
*2 Upper figure is the breakdown of Fourth-Round Examination against Third-Round results. Lower figure is the ratio(%).

2.2 Mental Health Care

As mental care for participants, we provide the following supports.

2.2-1 Support for participants of primary examination

After the examination, medical doctors explain the results showing the ultrasound image in private consultation booths at the venue. As of 30 June 2018, 194 (100%) of 194 participants visited the consultation booths.

2.2-2 Briefing Sessions

To help participants or their parents improve their understanding of the thyroid examination, briefing sessions were carried out. Since April 2018, 137 people in 8 venues participated in the briefing sessions as of 30 June 2018.

Appendix 1

Thyroid ultrasound examination (TUE) coverage by municipality

As of 30 June 2018

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group			Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima*1		6-11	12-17	≥18		
	a	b		b/a				c*3	c/b
Screening coverage by municipality in FY 2018									
Kawamata	1,831	725	1	39.6	386 53.2	326 45.0	13 1.8	1	0.1
Namie	2,856	224	40	7.8	109 48.7	103 46.0	12 5.4	39	17.4
Iitate	852	131	2	15.4	60 45.8	69 52.7	2 1.5	2	1.5
Minami-soma	10,196	3,175	96	31.1	1,749 55.1	1,398 44.0	28 0.9	91	2.9
Date	8,780	4,084	18	46.5	2,047 50.1	1,944 47.6	93 2.3	16	0.4
Tamura	5,432	2,228	3	41.0	1,332 59.8	890 39.9	6 0.3	3	0.1
Hirono	800	219	5	27.4	120 54.8	97 44.3	2 0.9	5	2.3
Naraha	1,094	120	2	11.0	61 50.8	55 45.8	4 3.3	2	1.7
Tomioka	2,339	110	24	4.7	56 50.9	50 45.5	4 3.6	24	21.8
Kawauchi	267	65	0	24.3	34 52.3	31 47.7	0 0.0	0	0.0
Okuma	2,019	126	16	6.2	69 54.8	52 41.3	5 4.0	16	12.7
Futaba	977	53	1	5.4	31 58.5	22 41.5	0 0.0	1	1.9
Katsurao	174	30	0	17.2	15 50.0	15 50.0	0 0.0	0	0.0
Fukushima	43,223	957	186	2.2	446 46.6	281 29.4	230 24.0	178	18.6
Nihonmatsu	8,101	1,356	18	16.7	572 42.2	740 54.6	44 3.2	14	1.0
Motomiya	4,909	650	13	13.2	585 90.0	53 8.2	12 1.8	13	2.0
Otama	1,287	176	2	13.7	152 86.4	20 11.4	4 2.3	2	1.1
Koriyama	52,339	324	14	0.6	182 56.2	31 9.6	111 34.3	11	3.4
Kori	1,609	747	1	46.4	416 55.7	320 42.8	11 1.5	1	0.1
Kunimi	1,204	251	1	20.8	13 5.2	229 91.2	9 3.6	1	0.4
Tenei	839	3	0	0.4	1 33.3	1 33.3	1 33.3	0	0.0
Shirakawa	9,962	18	1	0.2	5 27.8	3 16.7	10 55.6	1	5.6
Nishigo	3,262	4	0	0.1	0 0.0	2 50.0	2 50.0	0	0.0
Izumizaki	1,024	4	0	0.4	2 50.0	0 0.0	2 50.0	0	0.0
Miharu	2,380	54	0	2.3	38 70.4	9 16.7	7 13.0	0	0.0
Subtotal	167,756	15,834	444	9.4	8,481 53.6	6,741 42.6	612 3.9	421	2.7

*1) The number of participants examined at facilities outside Fukushima or by teams dispatched from FMU (as of 31 May 2018)

*2) The upper layer shows number of participants, lower shows proportion of each group

*3) Number of participants who are registered as residents outside of Fukushima.

●Age groups were formed based on the age at the full-scale screening (fourth-round examination). This applies to other tables hereafter.

As of 30 June 2018

	Survey population	Participants		Proportion (%)	Number and proportion*2 of participants by age group			Participants living outside Fukushima	Proportion (%)
			Screened outside Fukushima*1		6-11	12-17	≥18		
	a	b		b/a				c*3	c/b
Screening coverage by municipality in FY 2019									
Iwaki	49,577	235	16	0.5	57 24.3	97 41.3	81 34.5	10	4.3
Sukagawa	12,371	41	2	0.3	17 41.5	5 12.2	19 46.3	0	0.0
Soma	5,506	94	2	1.7	38 40.4	49 52.1	7 7.4	1	1.1
Kagamiishi	2,132	4	1	0.2	0 0.0	0 0.0	4 100.0	1	25.0
Shinchi	1,159	16	0	1.4	8 50.0	8 50.0	0 0.0	0	0.0
Nakajima	846	4	1	0.5	2 50.0	1 25.0	1 25.0	1	25.0
Yabuki	2,671	6	0	0.2	4 66.7	1 16.7	1 16.7	0	0.0
Ishikawa	2,181	9	0	0.4	2 22.2	0 0.0	7 77.8	0	0.0
Yamatsuri	816	1	1	0.1	0 0.0	0 0.0	1 100.0	1	100.0
Asakawa	1,064	2	0	0.2	0 0.0	1 50.0	1 50.0	0	0.0
Hirata	968	8	0	0.8	4 50.0	2 25.0	2 25.0	0	0.0
Tanagura	2,398	6	1	0.3	2 33.3	3 50.0	1 16.7	1	16.7
Hanawa	1,297	2	0	0.2	0 0.0	2 100.0	0 0.0	0	0.0
Samegawa	519	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Ono	1,488	22	0	1.5	10 45.5	7 31.8	5 22.7	0	0.0
Tamakawa	1,049	5	0	0.5	3 60.0	1 20.0	1 20.0	0	0.0
Furudono	817	8	2	1.0	2 25.0	1 12.5	5 62.5	1	12.5
Hinoemata	87	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Minami-aizu	2,128	6	1	0.3	2 33.3	3 50.0	1 16.7	0	0.0
Kaneyama	147	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Showa	115	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Mishima	148	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Shimogo	746	2	1	0.3	0 0.0	1 50.0	1 50.0	1	50.0
Kitakata	6,946	10	1	0.1	5 50.0	4 40.0	1 10.0	1	10.0
Nishiaizu	761	1	0	0.1	0 0.0	1 100.0	0 0.0	0	0.0
Tadami	555	3	0	0.5	2 66.7	1 33.3	0 0.0	0	0.0
Inawashiro	2,067	7	0	0.3	3 42.9	2 28.6	2 28.6	0	0.0
Bandai	477	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Kitashiobara	444	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Aizumisato	2,822	1	0	0.0	0 0.0	1 100.0	0 0.0	0	0.0
Aizubange	2,399	6	0	0.3	2 33.3	3 50.0	1 16.7	0	0.0
Yanaizu	463	0	0	0.0	0 0.0	0 0.0	0 0.0	0	0.0
Aizuwakamatsu	18,411	28	1	0.2	8 28.6	14 50.0	6 21.4	1	3.6
Yugawa	519	1	0	0.2	0 0.0	1 100.0	0 0.0	0	0.0
Subtotal	126,094	528	30	0.4	171 32.4	209 39.6	148 28.0	19	3.6
Total	293,850	16,362	474	5.6	8,652 52.9	6,950 42.5	760 4.6	440	2.7

Appendix 2

Thyroid ultrasound examination (TUE) coverage outside Fukushima by prefecture

As of 31 May 2018

Prefecture	Number of test venues	Participants *
Hokkaido	7	**12**
Aomori	1	**6**
Iwate	3	**18**
Miyagi	2	**87**
Akita	1	**0**
Yamagata	3	**35**
Ibaraki	4	**37**
Tochigi	7	**36**
Gunma	2	**14**
Saitama	3	**27**
Chiba	4	**17**
Tokyo	14	**69**
Kanagawa	5	**33**
Niigata	2	**38**
Toyama	2	**0**
Ishikawa	1	**0**

Prefecture	Number of test venues	Participants *
Fukui	1	**0**
Yamanashi	2	**11**
Nagano	2	**3**
Gifu	1	**0**
Shizuoka	2	**2**
Aichi	4	**6**
Mie	1	**0**
Shiga	1	**0**
Kyoto	3	**6**
Osaka	7	**10**
Hyogo	2	**5**
Nara	2	**0**
Wakayama	1	**0**
Tottori	1	**0**
Shimane	1	**0**
Okayama	3	**0**

Prefecture	Number of test venues	Participants *
Hiroshima	2	**0**
Yamaguchi	1	**0**
Tokushima	1	**0**
Kagawa	1	**0**
Ehime	1	**0**
Kochi	1	**1**
Fukuoka	3	**0**
Saga	1	**0**
Nagasaki	2	**1**
Kumamoto	1	**0**
Oita	1	**0**
Miyazaki	1	**0**
Kagoshima	1	**0**
Okinawa	1	**0**

Total	113	**474**

●The number of participants represents those who received examination at facilities outside Fukushima

Appendix 3

Results of primary examination by municipality

As of 30 June 2018

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
			Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2018										
Kawamata	725	5	4	1	0	0	0	0	0	1
		0.7	80.0	20.0	0.0	0.0	0.0	0.0	0.0	20.0
Namie	224	23	8	15	0	0	0	0	0	15
		10.3	34.8	65.2	0.0	0.0	0.0	0.0	0.0	65.2
Iitate	131	1	0	1	0	0	0	0	0	1
		0.8	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Minami-soma	3,175	221	68	152	1	0	1	2	0	151
		7.0	30.8	68.8	0.5	0.0	0.5	0.9	0.0	68.3
Date	4,084	155	51	103	1	0	1	2	0	103
		3.8	32.9	66.5	0.6	0.0	0.6	1.3	0.0	66.5
Tamura	2,228	119	45	74	0	0	0	2	0	74
		5.3	37.8	62.2	0.0	0.0	0.0	1.7	0.0	62.2
Hirono	219	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Naraha	120	4	1	3	0	0	0	0	0	3
		3.3	25.0	75.0	0.0	0.0	0.0	0.0	0.0	75.0
Tomioka	110	29	13	16	0	0	0	0	0	16
		26.4	44.8	55.2	0.0	0.0	0.0	0.0	0.0	55.2
Kawauchi	65	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Okuma	126	33	12	21	0	0	0	0	0	21
		26.2	36.4	63.6	0.0	0.0	0.0	0.0	0.0	63.6
Futaba	53	24	9	15	0	0	0	0	0	15
		45.3	37.5	62.5	0.0	0.0	0.0	0.0	0.0	62.5
Katsurao	30	12	5	6	1	0	1	0	0	6
		40.0	41.7	50.0	8.3	0.0	8.3	0.0	0.0	50.0
Fukushima	957	135	43	89	3	0	3	3	0	89
		14.1	31.9	65.9	2.2	0.0	2.2	2.2	0.0	65.9
Nihonmatsu	1,356	17	4	13	0	0	0	1	0	13
		1.3	23.5	76.5	0.0	0.0	0.0	5.9	0.0	76.5
Motomiya	650	6	1	5	0	0	0	0	0	5
		0.9	16.7	83.3	0.0	0.0	0.0	0.0	0.0	83.3
Otama	176	4	0	4	0	0	0	0	0	4
		2.3	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Koriyama	324	70	18	51	1	0	1	1	0	52
		21.6	25.7	72.9	1.4	0.0	1.4	1.4	0.0	74.3
Kori	747	2	1	1	0	0	0	0	0	1
		0.3	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Kunimi	251	4	1	3	0	0	0	0	0	3
		1.6	25.0	75.0	0.0	0.0	0.0	0.0	0.0	75.0
Tenei	3	1	1	0	0	0	0	0	0	0
		33.3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shirakawa	18	9	2	7	0	0	0	0	0	7
		50.0	22.2	77.8	0.0	0.0	0.0	0.0	0.0	77.8
Nishigo	4	1	0	1	0	0	0	0	0	1
		25.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Izumizaki	4	2	1	1	0	0	0	0	0	1
		50.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Miharu	54	4	0	4	0	0	0	0	0	4
		7.4	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Subtotal	15,834	881	288	586	7	0	7	11	0	586
		5.6	32.7	66.5	0.8	0.0	0.8	1.2	0.0	66.5

As of 30 June 2018

	Participants	Confirmed results b	Number by test results				Nodules		Cysts	
			Proportion (%)							
			A		B	C	Proportion (%)		Proportion (%)	
	a	Proportion (%) b/a (%)	A1	A2			≥5.1 mm	≤5.0 mm	≥20.1 mm	≤20.0 mm
Screening coverage by municipality in FY 2019										
Iwaki	235	38	9	29	0	0	0	0	0	29
		16.2	23.7	76.3	0.0	0.0	0.0	0.0	0.0	76.3
Sukagawa	41	11	3	8	0	0	0	0	0	8
		26.8	27.3	72.7	0.0	0.0	0.0	0.0	0.0	72.7
Soma	94	2	0	1	1	0	1	0	0	2
		2.1	0.0	50.0	50.0	0.0	50.0	0.0	0.0	100.0
Kagamiishi	4	1	0	1	0	0	0	0	0	1
		25.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Shinchi	16	3	0	3	0	0	0	0	0	3
		18.8	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Nakajima	4	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yabuki	6	1	0	1	0	0	0	0	0	1
		16.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Ishikawa	9	3	1	2	0	0	0	0	0	2
		33.3	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Yamatsuri	1	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asakawa	2	1	1	0	0	0	0	0	0	0
		50.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hirata	8	1	0	1	0	0	0	0	0	1
		12.5	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Tanagura	6	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hanawa	2	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Samegawa	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ono	22	3	1	2	0	0	0	0	0	2
		13.6	33.3	66.7	0.0	0.0	0.0	0.0	0.0	66.7
Tamakawa	5	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Furudono	8	2	1	1	0	0	0	0	0	1
		25.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Hinoemata	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minami-aizu	6	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kaneyama	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Showa	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mishima	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shimogo	2	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitakata	10	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nishiaizu	1	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tadami	3	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inawashiro	7	2	1	1	0	0	0	0	0	1
		28.6	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Bandai	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitashiobara	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aizumisato	1	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aizubange	6	1	0	1	0	0	0	0	0	1
		16.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Yanaizu	0	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aizuwakamatsu	28	3	3	0	0	0	0	0	0	0
		10.7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yugawa	1	0	0	0	0	0	0	0	0	0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	528	72	20	51	1	0	1	0	0	52
		13.6	27.8	70.8	1.4	0.0	1.4	0.0	0.0	72.2
Total	16,362	953	308	637	8	0	8	11	0	638
		5.8	32.3	66.8	0.8	0.0	0.8	1.2	0.0	66.9

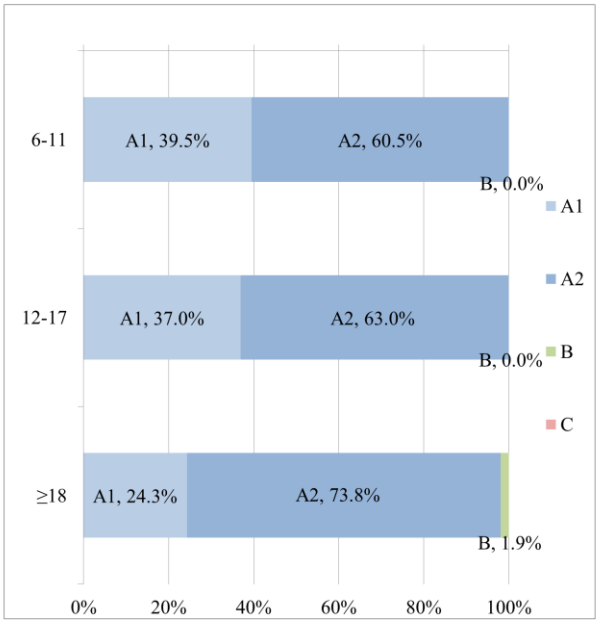
Appendix 4

1. Thyroid ultrasound examination results by age and sex

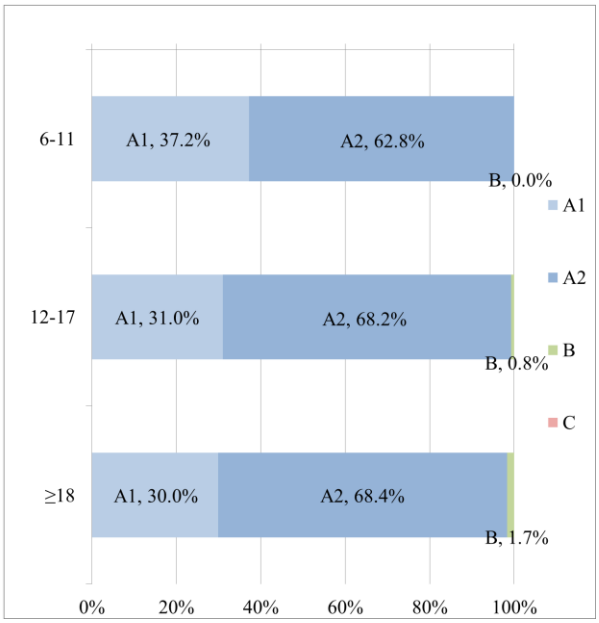
As of 30 June 2018

Ages	A						B			C			Total		
	A1			A2											
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
6-11	17	16	33	26	27	53	0	0	0	0	0	0	43	43	86
12-17	98	80	178	167	176	343	0	2	2	0	0	0	265	258	523
≥18	26	71	97	79	162	241	2	4	6	0	0	0	107	237	344
Total	141	167	308	272	365	637	2	6	8	0	0	0	415	538	953

Test results by age group (Male)



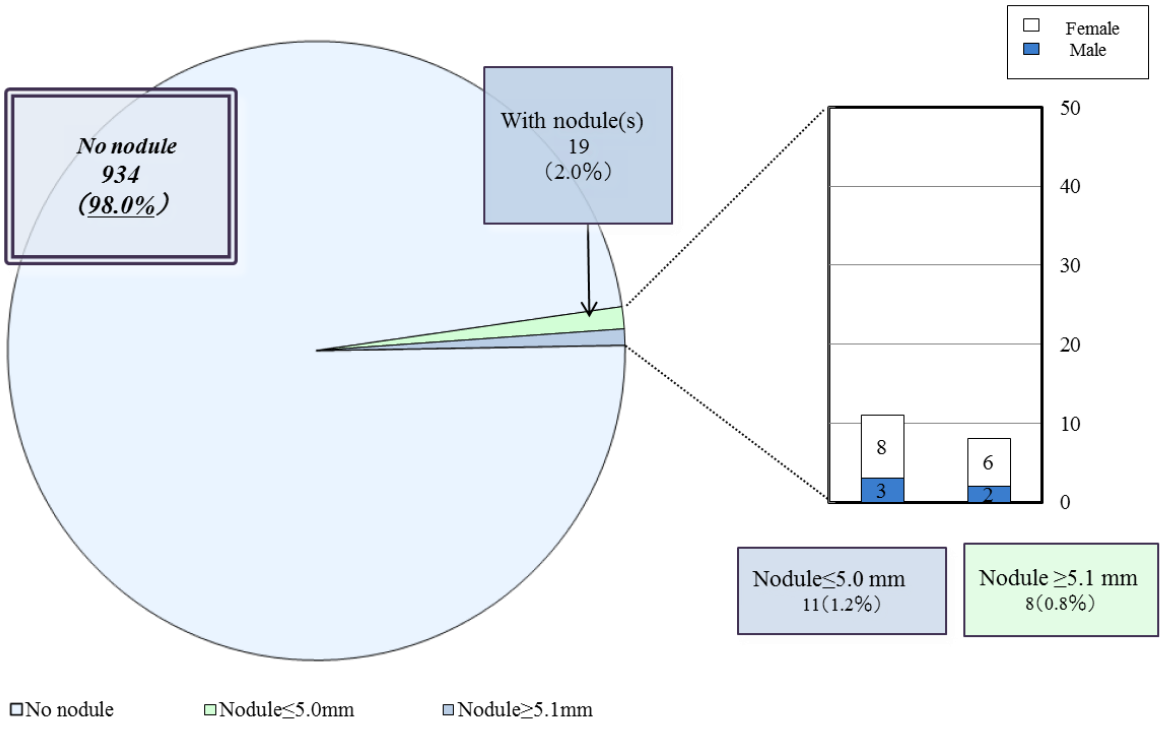
Test results by age group (Female)

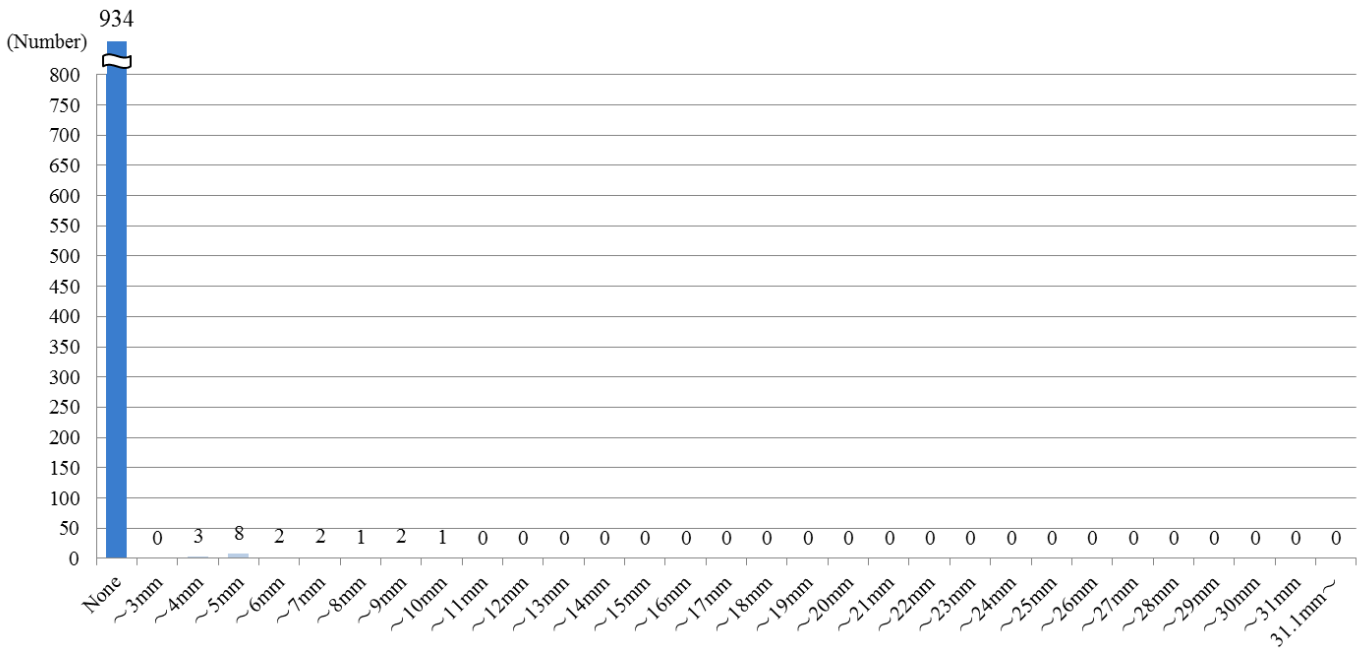


2. Nodule size

As of 30 June 2018

Nodule size	Total	Male	Female	Class	Proportion
None	934	410	524	A1	98.0%
≤ 3.0 mm	0	0	0	A2	1.2%
3.1-5.0 mm	11	3	8		
5.1-10.0 mm	8	2	6	B	0.8%
10.1-15.0 mm	0	0	0		
15.1-20.0 mm	0	0	0		
20.1-25.0 mm	0	0	0		
≥ 25.1 mm	0	0	0		
Total	953	415	538		

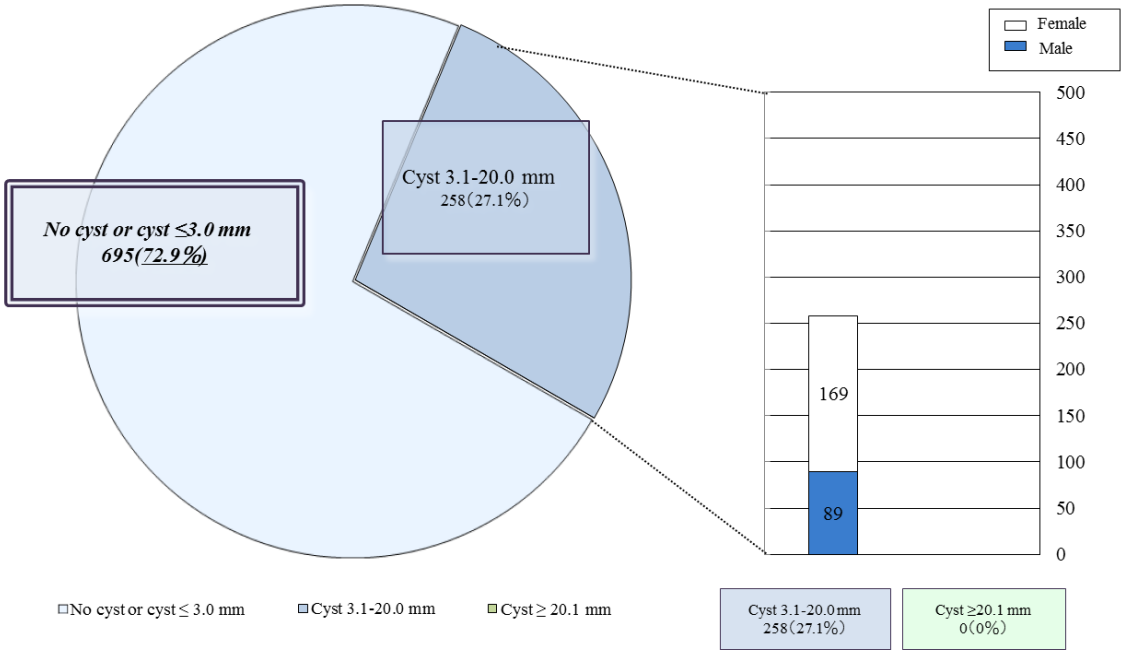


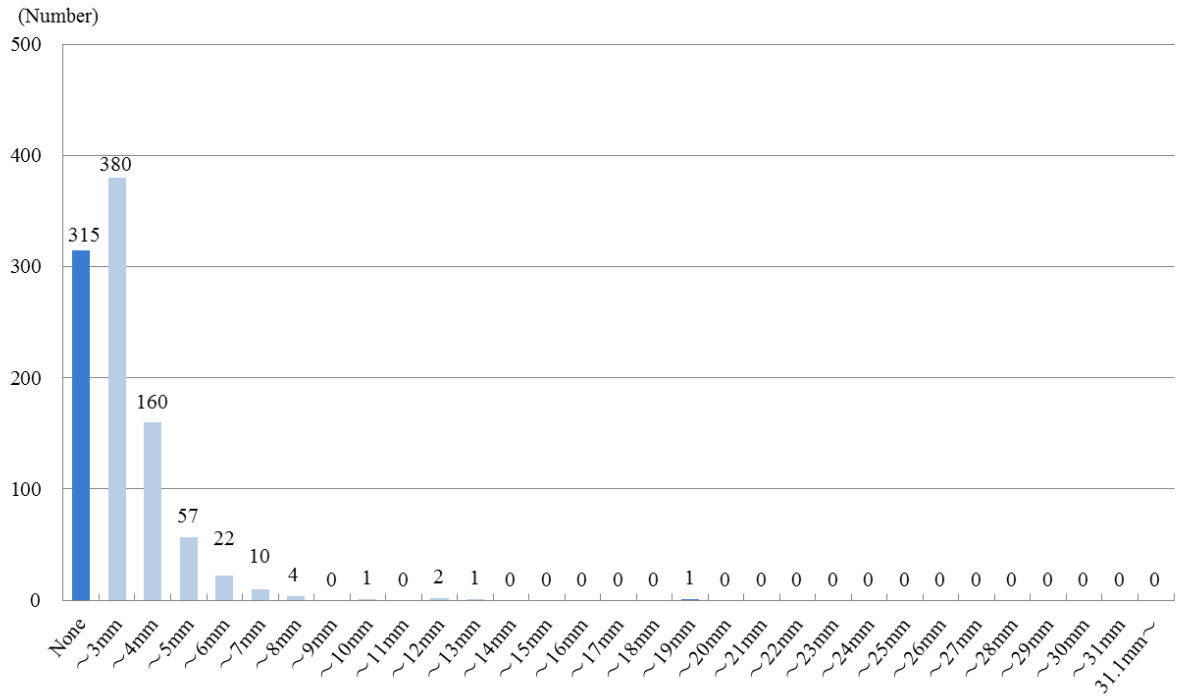


3. Cyst size

As of 30 June 2018

Cyst size	Total	Male	Female	Class	Proportion
None	315	145	170	A1	72.9%
≤ 3.0 mm	380	181	199	A2	27.1%
3.1-5.0 mm	217	73	144		
5.1-10.0 mm	37	15	22		
10.1-15.0 mm	3	1	2		
15.1-20.0 mm	1	0	1		
20.1-25.0 mm	0	0	0	B	0.000%
≥ 25.1 mm	0	0	0		
Toal	953	415	538		





Outline of Mental Health and Lifestyle Survey for FY 2016

（Revised version）

Reported on June 2018

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 about radiation, 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.

Based on the understanding gained from the results of the Mental Health and Lifestyle Survey for FY 2011-2015, we will continue watching for changes of mental health and lifestyle among residents, and offer care when necessary.

2. Methods

2-1 Target Groups

• Those who were registered as residents of municipalities designated as evacuation zones from 11 March 2011 till 1 April 2012. Note that these people remain as the target group even after their departure from the designated evacuation zones.

• Those who were registered as residents of municipalities designated as evacuation zones as of 1 April 2016.

• Those as deemed necessary based on Basic Survey results, even if the above conditions are not met.

208,044 (As of 31 October 2017)

〔Designated evacuation zones〕

Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate, Minami-soma, Tamura, Kawamata, and the part of Date (specifically recommended for evacuation).

Ages 0-3 Survey:	3,668 individuals born from 2 April 2013 to 1 April 2016
Ages 4-6 Survey:	4,194 individuals born from 2 April 2010 to 1 April 2013
Primary School Survey:	10,479 individuals born from 2 April 2004 to 1 April 2010
Middle School Survey:	5,837 individuals born from 2 April 2001 to 1 April 2004
Adults Survey:	183,866 individuals born before 1 April 2001

2-2 Survey Methods

Survey sheets (self-administered or completed by parents) were mailed to the participants.

2-3 Data Tabulation Period

Data tabulation period was from 2 February 2017 through 31 October 2017.

2-4 Number of Respondents and Valid Responses

The numbers of respondents (response rates) were as follows: 798 (21.8%) for the ages 0-3 survey; 889 (21.2%) for the ages 4-6 survey; 2,231(21.3%) for the primary school survey; 1,002 (17.2%) for the middle school survey; and 37,530 (20.4%) for adults survey.

The numbers of valid responses (valid response rates) were as follows: 798 (21.8%) for the ages 0-3 survey; 889 (21.2%) for the ages 4-6 survey; 2,209 (21.1%) for the primary school survey; 1,002 (17.2%) for the middle school survey; and 37,466 (20.4%) for adults survey.

The results were tabulated by item for each question, as shown in the report. Due to some unreported items, the total may not match the aforementioned valid responses. Since the proportions in the report are rounded, there are instances where the total does not add up to 100%.

3. Results

3-1 Age 0-3 years

- Of 3,668 people in the Target Group, 798 (21.8%) valid responses received.
- Regarding the health conditions, 99.4% of responses indicated no particular issues (‘very good’, ‘good’, ‘normal’), which showed a slight increase from the results of FY 2015 (98.7%).
- The average sleep was 9 hours and 53 minutes and the average nap was 1 hour and 54 minutes, which are at the same level as the results of FY 2015 survey (average sleep: 9 hours and 52 minutes, average nap: 1 hour and 56 minutes), and also not significantly different from another major survey result[1)] (10 hours and 7 minutes) aimed at younger children in daycare (3-year-old) .

3-2 Age 4-6 years

- Of 4,194 people in the Target Group, 889 (21.2%) valid responses received.
- Regarding the health conditions, 99.5% of responses indicated no particular issues (‘very good’, ‘good’, ‘normal’), which was almost the same as the FY 2015 survey (99.1%).
- Regarding exercise habits, 3.5% responded “almost no exercise on a daily basis”, showing a decrease from FY2015 (4.6%).
- Average sleep was 9 hours and 37 minutes, and average nap was 1 hour and 33 minutes which are in the same levels as FY2015 (average sleep: 9 hours and 40 minutes; average nap: 1 hour and 30 minutes), also not significantly different from national survey results[1)] (9 hours and 55 minutes) aimed at older children in daycare (5 year-old).
- In the survey on children’s emotions and behavior (SDQ Japanese Edition), 11.1% of the 888 valid responses scored 16 or higher, which is the threshold score from the preceding study, and 3.9% scored 20 or higher, which is the initial support standard. Compared to the FY 2015 survey (10.8% scoring 16 or higher, 3.2% scoring 20 or higher), proportion at 16 or higher remained the same, while 20 or higher showed a slight trend of increase.

Tabulating the results by gender, for boys, of the 432 valid respondents, 13.0% scored 16 or higher, and 4.6% scored 20 or higher, showing a slight trend of increase compared to FY 2015 (16 or higher 12.5%, 20 or higher 3.8%). For girls, of the 456 valid respondents, 9.4% scored 16 or higher, and 3.3% scored 20 or higher, compared to FY 2015 (16 or higher 9.1%, 20 or higher 2.6%), while the proportion at 16 or higher remained the same, 20 or higher showed a slight trend of increase.

As for the distribution of 16 or higher cases in locations at the time of research, within Fukushima was 10.4% of 710 valid responses, outside Fukushima was 14.0% of 178 valid responses. Compared to the FY2015 (in 10.9%, out 10.5%), proportions in Fukushima slightly decreased, while outside Fukushima showed a trend of increase.

3-3 Primary School

- Of 10,479 people in the Target Group, 2,209 (21.1%) valid responses were received.
- Regarding the health conditions, 98.9% of responses indicated no particular issues (‘very good’, ‘good’, ‘normal’), which was almost the same as the FY 2015 survey (98.7%).
- Regarding the exercise habits, 32.8% of respondents answered that they rarely exercise outside of physical education, showed an increase from that of FY 2015 (30.5%). Compared to the report from a national survey[3)] in FY 2013, where the group that responded they occasionally or never exercise outside of physical education classes in school consisted of 11.8% of boys and 23.4% of girls, exercise habits are still insufficient.
- The average of sleep was 8 hours and 52 minutes, which was similar to that of FY 2015 survey (8 hours and 54 minutes), and was also almost the same as that in a national survey[2)] (boys: 9 hours and 00 minute, girls: 8 hours and 56 minutes).
- Regarding SDQ scores, of the 2,207 valid respondents, 12.6% scored 16 or higher and 4.6% scored 20 or higher. Compared to the FY 2015 survey (13.7% scoring 16 or higher, 5.7% scoring 20 or higher), both of the proportions of those scored 16 or higher and 20 or higher were on a decreasing trend.

  Tabulating the results by gender, for boys, of the 1,109 valid responses, 15.0% scored 16 or higher, and 6.4% scored 20 or higher. Compared to the FY 2015 survey (15.8% scoring 16 or higher, 7.0% scoring 20 or higher), both of the proportions of those scored 16 or higher and 20 or higher were on a decreasing trend. Among the 1,098 valid responses for girls, 10.3% scored 16 or higher, and 2.8% scored 20 or higher. Compared to the FY 2015 survey (11.4% scoring 16 or higher, 4.3% scoring 20 or higher), both of the proportions of those scored 16 or higher and 20 or higher were on a decreasing trend.

  As for the distribution of 16 or higher cases in locations at the time of research, within Fukushima was 12.0% of 1,681 valid responses, outside Fukushima was 14.8% of 526 valid responses. Compared to the FY2015 (in 12.5%, out 17.1%), both of the proportions in and out of Fukushima showed a trend of decrease.

3-4 Middle School

- Of 5,837 people in the Target Group, 1,002 (17.2%) valid responses received.
- Regarding the health conditions, 96.9% of responses indicated no particular issues (‘Very good’, ‘Good’, ‘Normal’), resulted in the same level as the FY 2015 (97.1%) survey.
- Regarding the exercise habits, 30.8% responded that they rarely exercise outside of physical education, showed a slight increase from the FY 2015 survey (29.3 %).
- Average of sleep was 7 hours and 6 minutes, which was almost the same as the FY 2015 survey (7 hours and 7 minutes).
- Regarding the SDQ scores, of the 915 valid respondents, 12.3% scored 16 or higher and 4.9% scored 20 or higher. Compared to the FY 2015 survey (11.6% scored 16 or higher and 4.5% scored 20 or higher), the proportion of 16 or higher slightly increased while that of 20 or higher remained at the same level.

  Tabulating the results by gender, for boys, of the 483 valid respondents, 13.7% scored 16 or higher, and 6.0% scored 20 or higher. Compared to the FY 2015 survey (11.6% scored 16 or higher and 4.6% scored 20 or higher), both proportions increased. Among the 432 valid responses for girls, 10.9% scored 16 or higher, and 3.7% scored 20 or higher. Compared to the FY 2015 survey (11.6% scoring 16 or higher, 4.5% scoring 20 or higher), both proportions slightly decreased.

  As for the distribution of 16 or higher cases in locations as at the time of research, within Fukushima was 11.0% of 724 valid responses, outside Fukushima was 17.3% of 191 valid responses. Compared to the FY2015 (in 10.9%, out 13.9%), the proportion in Fukushima remained the same while out of Fukushima showed an increase trend

General Summary of Children

- In regards to the exercise habits, the proportion of group that rarely exercises indicated an trend of increase.
- The average sleep was similar to the FY 2015 survey.
- The SDQ was used as an indicator to evaluate children’s mental health. The percentage of people scoring 16 or higher on the SDQ was still higher for all groups compared to the percentage (9.5%) in prior research on the general population in unaffected areas of Japan[4)]. However, when compared to the FY 2015 survey, the trends appeared to vary by items of research, gender and locations.

3-5 Adults (people born on or before April 1, 2001)

Mental Health

- Of 183,866 people in the Target Group, 37,466 (20.4%) valid responses received.
- Regarding the health conditions, 83.0% of responses indicated no particular issues ('Very good', 'Good', 'Normal'), consistent with levels as the FY 2015 survey (82.9%).
- Asked about their sleep, 60.7% of respondents were dissatisfied with their sleep, which is at the same level as the FY 2015 survey (60.5%).
- Regarding the exercise habits, 42.2% of respondents rarely exercised, showing a slight decrease from the FY 2015 survey (42.7%).
- The percentage of current smokers was 15.4%, which was slightly lower than the FY 2015 survey (16.8%). The percentage of current drinkers was 41.1%, which was at the same level as the FY 2015 survey (41.0%). However, the percentage of heavy drinkers (those who drink at least four drinks or more per day) was 8.2%, which was similar to the FY 2015 survey (7.8%). The proportion of heavy drinkers by gender, 17.1% for male, 9.2% for female, were at the same levels as FY 2015 survey (male:17.2%, female 9.0%).
- Regarding the K6, 6.8% scored 13 or higher in the FY 2016 survey, remained at the same level as the FY 2015 survey (7.1%). However this proportion in general region in Japan in normal time is reported to be 3.0%[5)], indicating our results are still high. While 6.4% of males scored 13 or higher, 7.2% of females scored 13 or higher. The similar trend was observed in the FY 2015 survey. Separating the results by age groups, age groups of 20s had the highest proportion of those scored 13 or higher 8.8%, and age group of 60s had the lowest ratio of 4.9%. Compared to the FY 2015 survey, the proportion of 13 or higher increased in the 10s age group, while it decreased in the 70s or older age group. Proportions remained the same in other age groups.

  As for the distribution of 13 or higher cases in locations at the time of research, within Fukushima was 6.4% of 26,975 valid responses, outside Fukushima was 9.4% of 4,662 valid responses, indicating that the results are at the same levels as the FY2015 (in 6.6%, out 9.7%).
- PCL-4, which is used to detect the trauma response, showed that 9.9% was above 12 points. While the proportion for males was 9.0%, for females it was 10.7%. Among age groups, 70s was the highest at 15.5% while 10s was the lowest at 3.0%.

  As for the distribution of PCL-4 12 or higher cases in locations at the time of research, within Fukushima was 9.6% of 25,746 valid responses, outside Fukushima was 11.7% of 4,517.
- As for the recognition of radiation health effects, to the question about radiation health effects in later years such as cancers, 34.8% responded as "possibility is extremely low," 32.7% as "possibility is low," 18.5% as "possibility is high," and 14.0% as "possibility is extremely high". Compared to the FY 2015 survey (19.0% "possibility is high" and 13.8% "possibility is extremely high"), the proportion presuming a possibility high or extremely high showed a decreasing trend.
- To the question about the possibility of genetic effects to the future generations, 31.0% responded "very low", 32.9% "low", 20.9% "high", and 15.2% "very high". Compared to FY 2015 survey

(high: 22.0%, very high: 15.6%), the proportion of respondents who answered “high” or “very high” shows a declining trend.

- To the question if the respondent have connections to someone to counsel with in case of mental or physical problems, 89.1% responded “Yes” and 10.9% “No.” Among those who responded “Yes,” 28,329 referred to “family, relatives,” 15,591 “friends, acquaintances,” and 8,464 “medical facilities except for psychiatrists” as possible consultants. Compared to the FY2015 survey (73.8% responded “yes”), the proportion shows an increasing trend.

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The standard value of K6 in Japan (150 regions, age 20-74 yo, 1,183 data analyzed)

Results of Mental Health and Lifestyle Survey for FY 2016

（Revised version）

Reported on June 2018

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 about radiation, 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.

Based on the understanding gained from the results of the Mental Health and Lifestyle Survey for FY 2011-2015, we will continue watching for changes of mental health and lifestyle among residents, and offer care when necessary.

2. Methods

2-1 Target Groups

• Those who were registered as residents of municipalities designated as the evacuation zones from 11 March 2011 till 1 April 2012. Note that these people remain as the target group even after their departure from the designated evacuation zones.

• Those who were registered as residents of municipalities designated as the evacuation zones as of 1 April 2016.

• Those as deemed necessary based on Basic Survey results, even though above conditions are not met.

208,044（As of 31 October 2017）

〔Designated evacuation zones〕

Hirono, Naraha, Tomioka, Kawauchi, Okuma, Futaba, Namie, Katsurao, Iitate, Minami-soma, Tamura, Kawamata, and the part of Date (specifically recommended for evacuation).

Ages 0-3 Survey:	3,668 individuals born from 2 April 2013 to 1 April 2016
Ages 4-6 Survey:	4,194 individuals born from 2 April 2010 to 1 April 2013
Primary School Survey:	10,479 individuals born from 2 April 2004 to 1 April 2010
Middle School Survey:	5,837 individuals born from 2 April 2001 to 1 April 2004
Adults Survey:	183,866 individuals born before 1 April 2001

2-2 Survey Methods

Survey sheets (self-administered or completed by parents) were mailed to the participants.

2-3 Data Tabulation Period

Data tabulation period was from 2 February 2017 through 31 October 2017.

2-4 Numbers of Respondents and Valid Responses

The numbers of respondents (response rates) were as follows: 798 (21.8%) for the ages 0-3 survey; 889 (21.2%) for the ages 4-6 survey; 2,231(21.3%) for the primary school survey; 1,002 (17.2%) for the middle school survey; and 37,530 (20.4%) for adults survey.

The numbers of valid responses (valid response rates) were as follows: 798 (21.8%) for the ages 0-3 survey; 889 (21.2%) for the ages 4-6 survey; 2,209 (21.1%) for the primary school survey; 1,002 (17.2%) for the middle school survey; and 37,466 (20.4%) for adults survey.

The results were tabulated by survey type and item for each question, as shown in the report. Due to some unreported items, the total may not match the aforementioned valid responses. Since the proportions in the report are rounded, there are instances where the total does not add up to 100%.

Table 1. Number of participants, respondents and valid responses (%)

		FY 2016	FY 2015	FY 2014	FY 2013	FY 2012		FY 2011
Participants	0-3 years	3,668	3,697	3,842	4,164	4,625	Children 1	11,717
	4-6 years	4,194	4,803	5,103	5,169	5,047		
	Primary school age	10,479	10,655	10,861	11,167	11,413	Children 2	11,791
	Middle school age	5,837	5,987	6,066	6,013	6,023	Children 3	6,077
	(Subtotal)	(24,178)	(25,142)	(25,872)	(26,513)	(27,108)	(Subtotal	29,585)
	Adults	183,866	184,758	186,881	185,859	184,507	Adults	180,604
	Total	208,044	209,900	212,753	212,372	211,615	Total	210,189
Respondents (%)	0-3 years	798 (21.8)	944 (25.5)	1,077 (28.0)	1,635 (39.3)	2,143 (46.3)	Children 1	7,824 (66.8)
	4-6 years	889 (21.2)	1,348 (28.1)	1,478 (29.0)	2,033 (39.3)	2,231 (44.2)		
	Primary school age	2,231 (21.3)	2,767 (26.0)	2,887 (26.6)	4,005 (35.9)	4,703 (41.2)	Children 2	7,509 (63.7)
	Middle school age	1,002 (17.2)	1,387 (23.2)	1,376 (22.7)	1,822 (30.3)	2,126 (35.3)	Children 3	3,412 (56.1)
	(Subtotal)	(4,920 (20.3))	(6,446 (25.6))	(6,818 (26.4))	(9,495 (35.8))	(11,203 (41.3))	(Subtotal	18,745 (63.4))
	Adults	37,530 (20.4)	44,010 (23.8)	43,845 (23.5)	46,388 (25.0)	55,076 (29.9)	Adults	73,569 (40.7)
	Total	42,450 (20.4)	50,456 (24.0)	50,663 (23.8)	55,883 (26.3)	66,279 (31.3)	Total	92,314 (43.9)
Valid responses (%)	0-3 years	798 (21.8)	944 (25.5)	1,077 (28.0)	1,634 (39.2)	2,143 (46.3)	Children 1	7,818 (66.7)
	4-6 years	889 (21.2)	1,348 (28.1)	1,478 (29.0)	2,032 (39.3)	2,230 (44.2)		
	Primary school age	2,209 (21.1)	2,740 (25.7)	2,859 (26.3)	3,987 (35.7)	4,683 (41.0)	Children 2	7,464 (63.3)
	Middle school age	1,002 (17.2)	1,387 (23.2)	1,324 (21.8)	1,820 (30.3)	2,118 (35.2)	Children 3	3,411 (56.1)
	(Subtotal)	(4,898 (20.3))	(6,419 (25.5))	(6,738 (26.0))	(9,473 (35.7))	(11,174 (41.2))	(Subtotal	18,693 (63.2))
	Adults	37,466 (20.4)	43,970 (23.8)	43,811 (23.4)	46,377 (25.0)	55,064 (29.8)	Adults	73,433 (40.7)
	Total	42,364 (20.4)	50,389 (24.0)	50,549 (23.8)	55,850 (26.3)	66,238 (31.3)	Total	92,126 (43.8)

Results of the FY 2016 Mental Health and Lifestyle Survey (Age group 0-3)

Among 3,668 people (age group 0-3) in the Mental Health and Lifestyle Survey, the valid response count was 798 (21.8%), of 64 (8.0%) via online response. The breakdown was 404 (50.6%) boys and 394 (49.4%) girls and the average age was 1.9 years old.

As for the current address, 722 (90.5%) lived within Fukushima and 76 (9.5%) lived outside Fukushima.

1. Health Condition of the Children (Q1)

Breakdown of the health condition was the following: 315 (40.3%) for ‘very good’; 338 (43.2%) for ‘good’; 124 (15.9%) for ‘normal’; 5 (0.6%) for ‘bad’; and 0 (0.0%) for ‘very bad’.

2. Current Height and Weight of the Children (Q2)

The average height/weight of boys was: 79.4 cm/10.3 kg for 1 year olds as of 1 April 2017; 87.8cm/12.9 kg for 2 year olds; and 95.8 cm/15.0 kg for 3 year olds. The average height/weight of girls was: 77.4 cm/9.8 kg for 1 year olds; 87.0 cm/12.2 kg for 2 year olds; and 94.5 cm/14.1 kg for 3 year olds.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 573 (72.7%) answered ‘no’ while 215 (27.3%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 2 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 680 (85.6%) answered ‘no’ while 114 (14.4%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 3 (multiple answers allowed).

Table 2. Breakdown of currently treated diseases

Disease	Count
Common cold	75
Atopic dermatitis	47
Asthma	26
Otitis media	25
Allergic conditions other than asthma, atopic dermatitis or allergic rhinitis	17
Allergic rhinitis	15
Odontopathy	15
Influenza	8
Sinusitis/ empyema	3
ADHD	1
Epilepsy	0
Other	30

Multiple answers

Table 3. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	55
Respiratory syncytial virus infection	17
Pneumonia	15
Influenza	11
Gastroenteritis	11
Febrile convulsion	10
Bronchitis	8
Asthma	5
Mycoplasma pneumonia	3
Rotavirus infection	3
Inguinal hernia	3
Kawasaki disease	1
Other	25

Multiple answers

5. Sleep Hours and Naps (Q5)

1) The average going-to-bed time was 9:07 PM and the average waking time was 7:00AM. The average sleep hours were 9 hour and 53 minutes.
2) For naps (Does your child take naps?), those who answered ‘no’ were 81 (10.2%) and ‘yes’ were 714 (89.8%). The average nap time was 1 hour and 54 minutes.

6. Regular Amount of Exercise (Q6)

Regarding exercise (What is the child’s regular amount of exercise?) for two year olds and above at the time of the survey, those who answered ‘almost every day’ were 274 (54.5%); ‘2-4 times a week’ were 155 (30.8%); ‘once a week’ were 57 (11.3%); and ‘barely exercise’ were 17 (3.4%).

7. Dietary Habits (Q7)

1) For breast milk (Does your child drink breast milk?), those who answered ‘yes’ were 120 (15.1%) and ‘no’ were 674 (84.9%).
2) See Table 4 for the dietary habits in the past month (among those who were one year old and above at the time of the survey).

Table 4. Dietary habits in the past month

	Yes	No	Valid responses
1. Does your child consume fish more than three days a week?	404 (53.1%)	357 (46.9%)	761
2. Does your child consume seaweed, mushrooms or vegetables other than pickles with almost every meal?	541 (71.1%)	220 (28.9%)	761
3. Does your child consume fruit almost every day?	472 (62.2%)	287 (37.8%)	759
4. Does your child consume soy products almost every day?	531 (69.8%)	230 (30.2%)	761
5. Does your child consume dairy products almost every day?	623 (81.9%)	138 (18.1%)	761

8. Child Rearing (Q8)

For child rearing (Do you ever lose confidence in child rearing?), those who answered ‘yes’ were 87 (10.9%), ‘no’ were 368 (46.2%), and ‘cannot say’ were 341 (42.8%).

Results of the FY 2016 Mental Health and Lifestyle Survey (Age group 4-6)

Among the 4,194 people for the survey (age group 4-6), there were 889 (21.2%) valid responses, of 56 (6.3%) via online response. The breakdown was 432 (48.6%) boys and 457 (51.4%) girls with an average age of 5.1 years old.

As for the current address, 710 (79.9%) lived within Fukushima and 179 (20.1%) lived outside Fukushima.

1. Health Condition of the Children (Q1)

Breakdown of the health condition was the following: 288 (34.0%) for ‘very good’; 322 (38.0%) for ‘good’; 234 (27.6%) for ‘normal’; 4 (0.5%) for ‘bad’; and 0 (0.0%) for ‘very bad.’

2. Current Height and Weight of the Children (Q2)

The average height/weight of boys was the following: 102.3 cm/16.4 kg for 4 year olds as of 1 April 2017, 109.4 cm/18.9 kg for 5 year olds and 116.1 cm/21.8 kg for 6 year olds. The average height/weight for girls was the following: 103.0 cm/16.9 kg for 4 year olds, 108.5 cm/18.3 kg for 5 year olds, and 114.7 cm/20.6 kg for 6 year olds.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 548 (62.1%) answered ‘no’ and 334 (37.9%) answered ‘yes’.

The breakdown of diseases for individuals who answered ‘yes’ is shown in Table 5 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 789 (89.4%) answered ‘no’ and 94 (10.6%) answered ‘yes’.

The breakdown of diseases for those who answered ‘yes’ is shown in Table 6 (multiple answers allowed).

Table 5. Breakdown of currently treated diseases

Disease	Count
Allergic rhinitis	80
Asthma	69
Atopic dermatitis	59
Common cold	57
Odontopathy	51
Otitis media	31
Allergic conditions other than asthma, atopic dermatitis or allergic rhinitis	21
Sinusitis/ empyema	19
Influenza	15
ADHD	11
Epilepsy	1
Other	44

Multiple answers

Table 6. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	48
Gastroenteritis	19
Asthma	11
Influenza	11
Pneumonia	8
Bronchitis	6
Febrile convulsion	5
Mycoplasma pneumonia	4
Inguinal hernia	4
Respiratory syncytial virus infection	3
Rotavirus infection	0
Kawasaki disease	0
Other	22

Multiple answers

5. Sleep Hours and Naps (Q5)

1) The average going-to-bed time was 9:11 PM and the average waking time was 6:49 AM. The average sleep hours were 9 hours and 37 minutes.
2) For naps (Does your child take naps?), those who answered 'no' were 561 (63.4%), and 'yes' were 324 (36.6%). The average nap time was 1 hour and 33 minutes.

6. Regular Amount of Exercise (Q6)

For exercise (What is your regular amount of exercise?), those who answered 'almost every day' were 512 (57.7%), '2-4 times a week' were 263 (29.7%), 'once a week' were 81 (9.1%), and 'barely exercise' were 31 (3.5%).

7. Dietary Habits (Q7)

See Table 7 for the dietary habits in the past month.

Table 7. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Does your child eat faster than others?	79 (8.9%)	809 (91.1%)	888
	Yes	No	Valid Responses
2. Does your child drink sugary beverages almost every day?	262 (29.5%)	627 (70.5%)	889
3. Does your child consume fish more than three days a week?	427 (48.0%)	462 (52.0%)	889
4. Does your child consume seaweed, mushrooms or vegetables other than pickles with almost every meal?	603 (67.8%)	286 (32.2%)	889
5. Does your child consume fruit almost every day?	483 (54.4%)	405 (45.6%)	888
6. Does your child consume soy products almost every day?	500 (56.3%)	388 (43.7%)	888
7. Does your child consume dairy products almost every day?	737 (82.9%)	152 (17.1%)	889
8. Does your child consume prepared foods almost every day?	102 (11.5%)	787 (88.5%)	889
9. Does your child eat out almost every day?	8 (0.9%)	881 (99.1%)	889

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 888 valid responses, 99 (11.1%) were 16 points and above[1)], and 35 (3.9%) were 20 points and above[2)] (Fig. 1). The average total points were 9.1 points.

   For boys, among the 432 valid responses, 56 (13.0%) were 16 points and above; 20 (4.6%) were 20 points and above. For girls, among the 456 valid responses, 43 (9.4%) were 16 points and above; and 15 (3.3%) were 20 points and above (Fig. 2). The average total score for boys was 9.7 points while the total score for girls was 8.5.
2) Regarding whether children have any issues in one or more areas (emotions, attention, behavior or

interaction with others), those that answered ‘no’ were 678 (76.4%), ‘yes (minor issues)’ were 174 (19.6%), ‘yes (clear issues)’ were 29 (3.3%), and ‘yes (serious issues)’ were 6 (0.7%).

3) Among those who answered ‘yes’ to the above question, regarding whether or not their child is upset or concerned due to the issue, those who answered ‘not at all’ were 103 (50%); ‘only a little’ were 91 (44.2%); ‘very’ were 10 (4.9%); and ‘greatly’ were 2 (1.0%).

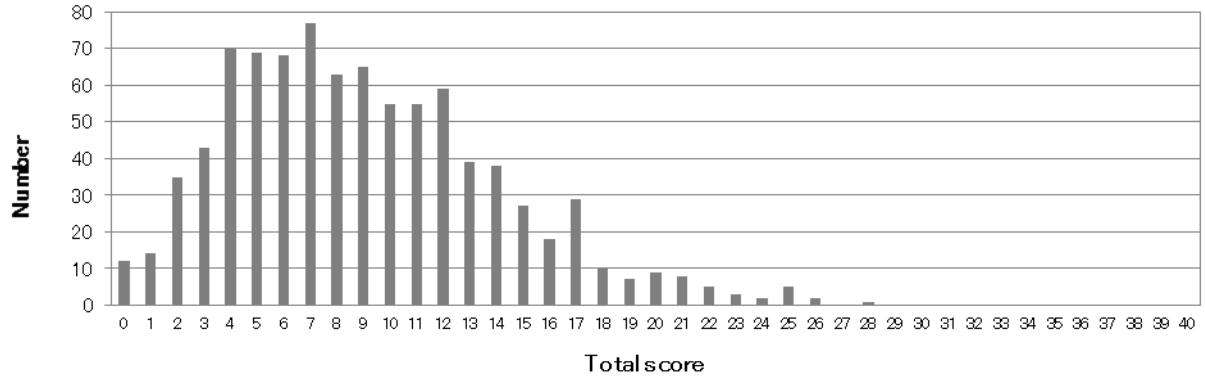


Figure1. Children’s emotions and behavior for age group 4-6 (SDQ) ：Overall

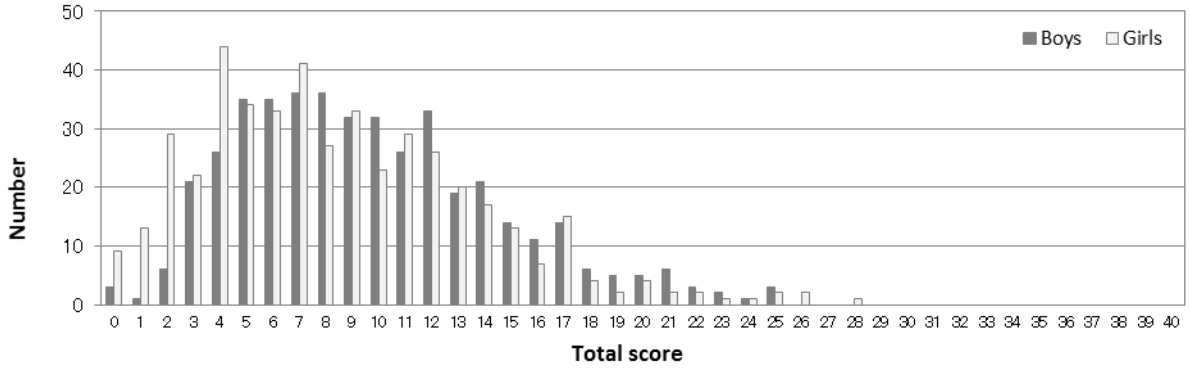


Figure2. Children’s emotions and behavior for age group 4-6 (SDQ) by sex

1) 16 points : A standard value indicated by previous research
2) 20 points : A standard established by Fukushima Medical University physicians to provide support

9. Nursery School and Kindergarten (Q9)

To the question “Do your children ever not want to go to nursery school or kindergarten?” 136 (15.3%) answered ‘yes,’ 719 (81.2%) answered ‘no,’ and 31 (3.5%) answered ‘the child was not attending nursery school or kindergarten at the moment.’

Results of the FY 2016 Mental Health and Lifestyle Survey (Primary school age)

Among 10,479 people of the Mental Health and Lifestyle Survey (for primary school students), 2,209 (21.1%) provided valid responses, of 147 (6.7%) via online response. . The breakdown was 1,110 (50.2%) boys and 1,099 (49.8%) girls with an average age of 9.3 years old.

As for the current address, 1,682 (76.1%) lived within Fukushima and 527 (23.9%) lived outside Fukushima.

1. Health Condition of The Children (Q1)

Breakdown of the health state was the following: 546 (26.8%) for ‘very good’; 854 (41.9%) for ‘good’; 615 (30.2%) for ‘normal’; 22 (1.1%) for ‘bad’; and 0 (0.0%) for ‘very bad’.

2. Current Height and Weight of the Children (Q2)

The average height/weight of boys was the following: 121.7 cm/24.1 kg for 1st graders; 127.3 cm/27.7 kg for 2nd graders; 134.3 cm/32.1 kg for 3rd graders; 138.8 cm/34.1 kg for 4th graders; 144.8 cm/38.5 kg for 5th graders; and 151.6 cm/43.8 kg for 6th graders. The average height/weight of girls was the following: 120.8 cm/23.4 kg for 1st graders; 125.8 cm/25.9 kg for 2nd graders; 132.2 cm/29.9 kg for 3rd graders; 139.2 cm/34.0 kg for 4th graders; 145.5 cm/39.0 kg for 5th graders; and 149.9 cm/41.8 kg for 6th graders.

3. Currently Treated Diseases (Q3)

For currently treated diseases, 1,389 (63.3%) answered ‘no’ and 806 (36.7%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 8 (multiple answers allowed).

4. Experience of Hospitalization in the Past Year (Q4)

For experience of hospitalization in the past year, 2,046 (92.8%) answered ‘no’ and 159 (7.2%) answered ‘yes.’

The breakdown of diseases for those who answered ‘yes’ is shown in Table 9 (multiple answers allowed).

Table 8. Breakdown of currently treated diseases

Disease	Count
Allergic rhinitis	318
Odontopathy	193
Atopic dermatitis	128
Asthma	87
Common cold	66
Allergic conditions other than asthma, atopic dermatitis or allergic rhinitis	62
Sinusitis/ empyema	46
ADHD	39
Influenza	34
Otitis media	33
Epilepsy	13
Other	125

Multiple answers

Table 9. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	86
Influenza	47
Gastroenteritis	22
Asthma	16
Mycoplasma pneumonia	12
Bronchitis	9
Pneumonia	5
Rotavirus infection	2
Febrile convulsion	2
Inguinal hernia	2
Respiratory syncytial virus infection	1
Kawasaki disease	0
Other	27

Multiple answers

5. Sleep (Q5)

The average going-to-bed time was 9:32 PM and the average waking time was 6:24 AM. The average sleep hours were 8 hours and 52 minutes.

6. Regular Amount of Exercise (Q6)

For exercise (What is the child's regular amount of exercise?), those who answered 'almost every day' were 187 (8.5%); '2-4 times a week' were 690 (31.3%); 'once a week' were 603 (27.4%); and 'barely exercise' were 724 (32.8%).

7. Dietary Habits (Q7)

The dietary habits in the past month are shown in Table 10.

Table 10. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Does your child eat faster than others?	291 (13.2%)	1,913 (86.8%)	2,204
	Yes	No	Valid Responses
2. Does your child skip breakfast often?	144 (6.5%)	2,065 (93.5%)	2,209
3. Does your child drink sugary beverages almost every day?	565 (25.6%)	1,644 (74.4%)	2,209
4. Does your child consume seaweed, mushrooms or vegetables other than pickles with almost every meal?	1,083 (49.0%)	1,126 (51.0%)	2,209
5. Does your child consume vegetables other than pickles, seaweed, or mushrooms with almost every meal?	1,474 (66.8%)	734 (33.2%)	2,208
6. Does your child consume fruit almost every day?	847 (38.4%)	1,360 (61.6%)	2,207
7. Does your child consume soy products almost every day?	1,243 (56.3%)	965 (43.7%)	2,208
8. Does your child consume dairy products almost every day?	1,906 (86.3%)	302 (13.7%)	2,208
9. Does your child consume prepared foods almost every day?	168 (7.6%)	2,039 (92.4%)	2,207
10. Does your child eat out almost every day?	12 (0.5%)	2,197 (99.5%)	2,209

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 2,207 valid responses, 279 (12.6%) were 16 points and above[1)], and 102 (4.6%) were 20 points and above[2)] (Fig. 3). The average total point was 8.7.

   For boys, among the 1,109 valid responses, 166 (15.0%) were 16 points and above, and 71 (6.4%) were 20 points and above. For girls, among the 1,098 valid responses, 113 (10.3%) were 16 points and above and 31 (2.8%) were 20 points and above (Fig. 4). The average total score for boys was 9.2 points while the total score for girls was 8.1 points.

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those who answered 'no' were 1,608 (73.2%); 'yes (minor issues)' were 472 (21.5%); 'yes (clear issues)' were 95 (4.3%); and 'yes (serious issues)' were 23 (1.0%).

3) Among those who answered 'yes' for the above questions, regarding whether or not the child is upset or concerned due to the issue: those who answered 'not at all' were 179 (31.1%); 'only a little' were 356 (61.9%);'very' were 34 (5.9%); and 'greatly' were 6 (1.0%).

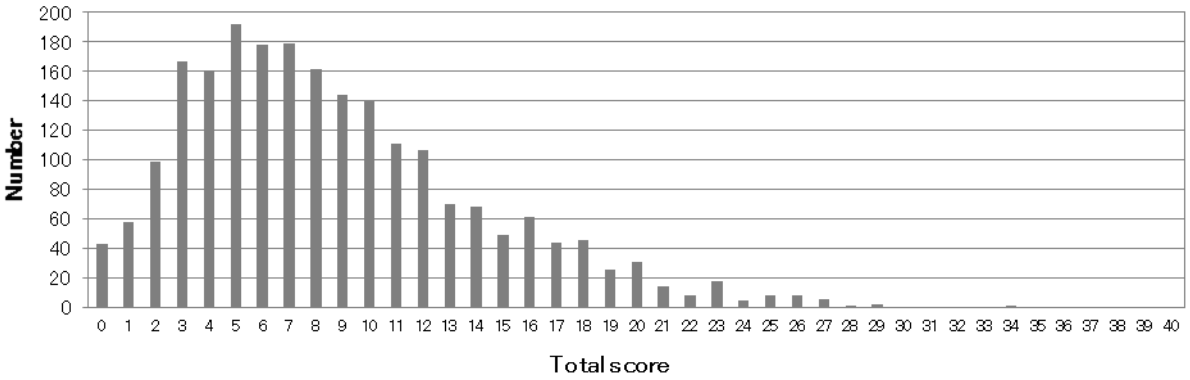


Figure3. Children's emotions and behavior among primary school students (SDQ): Overall

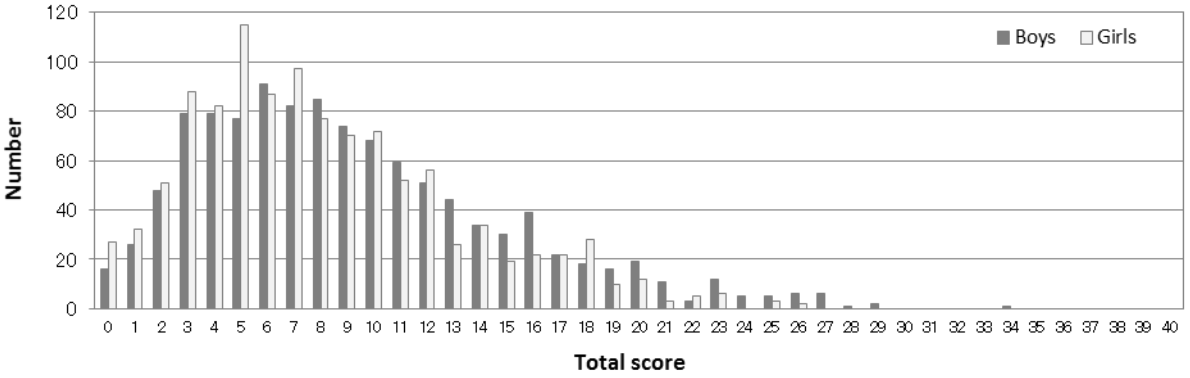


Figure4. Children's emotions and behavior among primary school students (SDQ) by sex

1) A standard value indicated by previous research
2) A standard established by Fukushima Medical University physicians to provide support.

9. School (Q9)

To the question "Do your children ever not want to go to school?" 222 (10.2%) answered 'yes' and 1,959 (89.8%) answered 'no.'

Results of the FY 2016 Mental Health and Lifestyle Survey (Middle school age)

Among the 5,837 people for the survey (for middle school students), there were 1,002 (17.2%) valid responses, of 80 (8.0%) via online response. . The breakdown was 526 (52.5%) boys and 476 (47.5%) girls with an average age of 13.9 years old.

As for the current address, 785 (78.3%) lived within Fukushima and 217 (21.7%) lived outside Fukushima.

1. Health Condition of the Child (Q1)

Breakdown of the health condition was the following: 192 (29.7%) for ‘very good’; 206 (31.9%) for ‘good’; 228 (35.3%) for ‘normal’; 19 (2.9%) for ‘bad’; and 1 (0.2%) for ‘very bad’.

2. Current Height and Weight of the Child (Q2)

The average height/weight of boys was the following: 158.8 cm/48.8 kg for 7th graders; 164.5 cm/54.0 kg for 8th graders; and 167.9 cm/58.3 kg for 9th graders. The average height/weight for girls were the following: 154.6 cm/46.9 kg for 7th graders; 156.3 cm/49.8 kg for 8th graders; and 156.5 cm/52.0 kg for 9th graders.

3. Sleep (Q3)

1) The average sleeping hours were 7 hours and 6 minutes.
2) For sleep satisfaction, 310 (47.8%) answered ‘sufficient’, 275 (42.4%) answered ‘slightly insufficient’, and 64 (9.9%) answered ‘insufficient’.

4. Regular Amount of Exercise (Q4)

For exercise (What is your regular amount of exercise aside from physical education classes?), those who answered ‘almost every day’ were 292 (44.8%), ‘2-4 times a week’ were 110 (16.9%), ‘once a week’ were 49 (7.5%), and ‘barely exercise’ were 201 (30.8%).

5. Dietary Habits (Q5)

The dietary habits in the past month are as shown in Table 11 (next page).

Table11. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Do you eat faster than others?	152 (23.3%)	499 (76.7%)	651
	Yes	No	Valid responses
2. Do you skip breakfast often?	86 (13.2%)	564 (86.8%)	650
3. Do you go to sleep within 1-2 hours after dinner?	62 (9.5%)	589 (90.5%)	651
4. Do you drink sugary beverages almost every day?	210 (32.2%)	442 (67.8%)	652
5. Do you consume fish more than three days a week?	286 (43.9%)	366 (56.1%)	652
6. Does your child consume seaweed, mushrooms or vegetables other than pickles with almost every meal?	455 (69.8%)	197 (30.2%)	652
7. Do you consume fruit almost every day?	201 (30.9%)	450 (69.1%)	651
8. Do you consume soy products almost every day?	349 (53.6%)	302 (46.4%)	651
9. Do you consume dairy products almost every day?	539 (82.8%)	112 (17.2%)	651
10. Do you consume prepared foods almost every day?	93 (14.3%)	557 (85.7%)	650
11. Do you eat out almost every day?	3 (0.5%)	647 (99.5%)	650

6. Currently Treated Diseases (Q6)

For currently treated diseases, 616 (67.4%) answered ‘no’ while 298 (32.6%) answered ‘yes.’

The breakdown of diseases for individuals who answered ‘yes’ is shown in Table 12 (multiple answers allowed).

7. Experience of Hospitalization in the Past Year (Q7)

For experience of hospitalization in the past year, 885 (97.0%) answered ‘no’ and 27 (3.0%) answered ‘yes.’

The breakdown of those who answered ‘yes’ is shown in Table 13 (multiple answers allowed).

Table 12. Breakdown of currently treated diseases

Disease	Count
Allergic rhinitis	125
Odontopathy	71
Atopic dermatitis	43
Asthma	24
Allergic conditions other than asthma, atopic dermatitis or allergic rhinitis	23
ADHD	14
Sinusitis/ empyema	11
Common cold	8
Influenza	7
Epilepsy	6
Otitis media	1
Other	67

Multiple answers

Table 13. Breakdown of diseases during hospitalization in the past year

Disease	Count
Common cold	14
Influenza	11
Gastroenteritis	3
Pneumonia	1
Bronchitis	1
Asthma	0
Mycoplasma pneumonia	0
Respiratory syncytial virus infection	0
Rotavirus infection	0
Febrile convulsion	0
Kawasaki disease	0
Inguinal hernia	0
Other	7

Multiple answers

8. Child's Emotions and Behavior (Q8)

1) For child's emotions and behavior (SDQ Japanese version), among the 915 valid responses, 113 (12.3%) were 16 points and above[1)] and 45 (4.9 %) were 20 points and above[2)] (Fig. 5). The average total point was 8.2.

   For boys, among the 483 valid responses, 66 (13.7%) were 16 points and above and 29 (6.0%) were 20 points and above. For girls, among the 432 valid responses, 47 (10.9%) were 16 points and above and 16 (3.7%) were 20 points and above (Fig. 6). The average total score for boys was 8.5 points and the total score for girls was 7.9.

2) Regarding whether children have any issues in one or more areas (emotions, focus, behavior or interaction with others), those who answered 'no' were 634 (69.7%),'yes (minor issues)' were 191 (21.0%), 'yes (clear issues)' were 60 (6.6%), and 'yes (serious issues)' were 24 (2.6%).

3) Among those that answered 'yes' for the above question, regarding whether or not the child is confused or concerned due to the issue, those who answered 'not at all' were 47 (17.6%), 'only a little' were 164 (61.4%), 'very' were 37 (13.9%), and 'greatly' were 19 (7.1%).

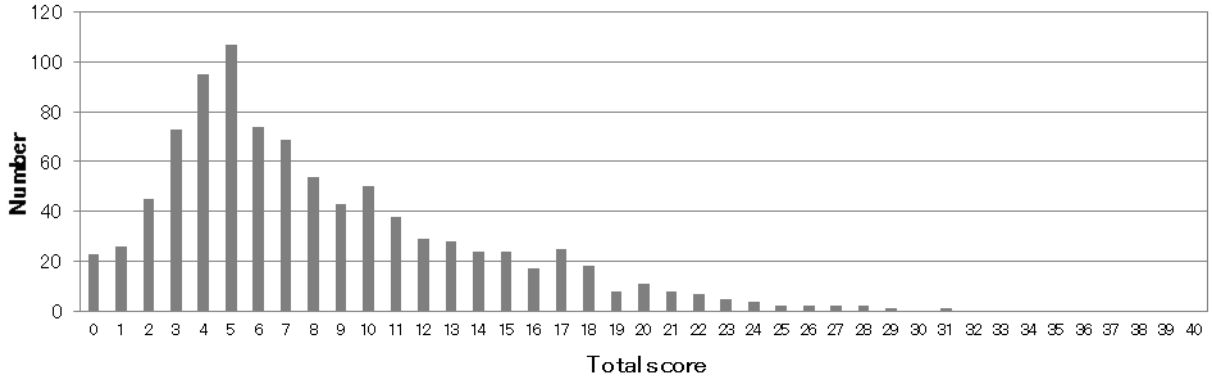


Figure5. Children' s emotions and behavior for middle school students (SDQ) : Overall

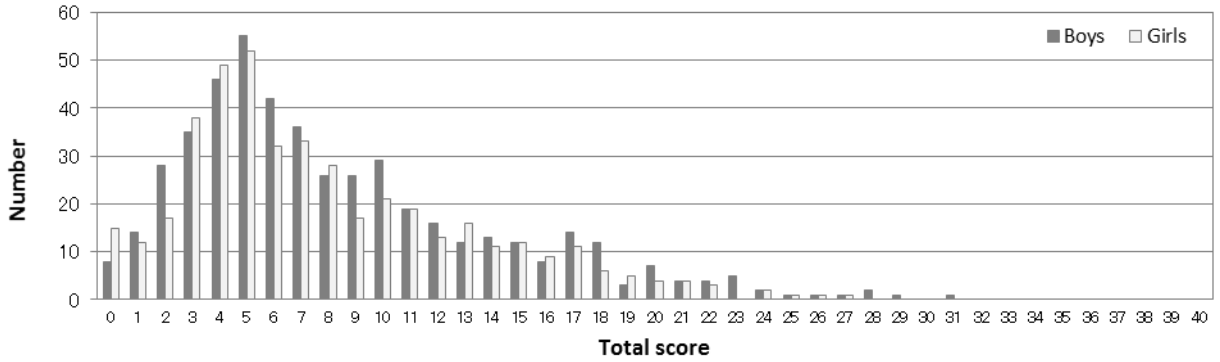


Figure6. Children's emotions and behavior for middle school students (SDQ) by sex

1) A standard value indicated by previous research
2) A standard established by Fukushima Medical University physicians to provide support.

9. School (Q9)

To the question "Do your children ever not want to go to school?" 126 (14.1%) answered 'yes' and 769 (85.9%) answered 'no.'

Results of the FY 2016 Mental Health and Lifestyle Survey (Adults)

Among the 183,866 adults for the Mental Health and Lifestyle Survey, there were 37,466 (20.4%) valid responses, of 1,566 (4.2%) via online response. The breakdown was 16,987 (45.3%) males and 20,479 (54.7%) females with an average age of 61.9 years old.

As for the current address, 32,063 (85.6%) lived within Fukushima and 5,403 (14.4%) lived outside Fukushima.

1. Health condition (Q1)

Breakdown of the health condition was the following: 1,346 (4.2%) for 'very good'; 5,385 (16.7%) for 'good'; 19,961 (62.0%) for 'normal'; 4,979 (15.5%) for 'bad'; and 505 (1.6%) for 'very bad'.

2. Height and Weight (Q2)

1) The average height/weight of males was 165.8 cm/66.4 kg and the average BMI was 24.1 kg/m^2. Among males, those with less than BMI 18.5 kg/m^2 were 580 (3.6%); 18.5 kg/m^2 and above and less than 25.0 kg/m^2 were 9,835 (60.3%); 25.0 kg/m^2 and above and less than 27.5 kg/m^2 were 3,506 (21.5%); 27.5 kg/m^2 and above and less than 30.0 kg/m^2 were 1,495 (9.2%); and 30.0 kg/m^2 and above were 901 (5.5%).

   The average height/weight of females was 153.1 cm/54.2 kg and the average BMI was 23.2 kg/m^2. For females, those with a BMI less than 18.5 kg/m^2 were 1,464 (7.6%); 18.5 kg/m^2 and above and less than 25.0 kg/m^2 were 12,529 (65.2%); 25.0 kg/m^2 and above and less than 27.5 kg/m^2 were 2,894 (15.1%); 27.5 kg/m^2 and above and less than 30.0 kg/m^2 were 1,324 (6.9%); and 30.0 kg/m^2 and above were 1,016 (5.3%).

2) For body weight change (Did you have any body weight change compared to last year?), those who answered 'it increased by 3 kg or more' were 4,365 (12.4%); 'it did not change (±3 kg)' were 28,034 (79.3%); and 'it decreased by 3 kg or more' were 2,931 (8.3%).

   For body weight change for males, those who answered 'it increased by 3 kg or more' were 1,834 (11.4%); 'it did not change (±3 kg)' were 12,885 (80.0%); and 'it decreased by 3 kg or more' were 1,387 (8.6%).

   For body weight change for females, those who answered 'it increased by 3 kg or more' were 2,531 (13.2%); 'it didn't change (±3 kg)' were 15,149 (78.8%); and 'it decreased by 3 kg or more' were 1,544 (8.0%).

3. Medical History in the Past Year (Q3)

Medical history in the past year (Have you been diagnosed with some of the following diseases in the past year?) is shown in Table 14.

Table 14. Experience of diagnoses by general illness and the state of attending hospital as outpatient

(Upper row is the number of individuals/lower row is proportion)

Name of illness	Valid responses	Diagnosed or not		Currently attending hospital as outpatient[1)]	
		No	Yes	Yes	No
Hypertension (Or high blood pressure)	36,442	20,333 (55.8%)	16,109 (44.2%)	14,523 (92.1%)	1,251 (7.9%)
Diabetes (Or high blood sugar)	35,736	30,199 (84.5%)	5,537 (15.5%)	4,810 (89.7%)	551 (10.3%)
Dyslipidemia	35,728	22,497 (63.0%)	13,231 (37.0%)	9,050 (70.9%)	3,711 (29.1%)
Mental disorder	35,933	32,294 (89.9%)	3,639 (10.1%)	2,714 (77.2%)	801[2)] (22.8%)
Cancer (Including leukemia and lymphoma)	36,139	33,676 (93.2%)	2,463 (6.8%)		
Stroke	36,290	34,508 (95.1%)	1,782 (4.9%)		
(Types of stroke) Multiple answers					
Cerebral infarction			1,239		
Cerebral hemorrhage			219		
Subarachnoid hemorrhage			188		
Other			13		
I don't know			155		
Heart disease	36,367	31,592 (86.9%)	4,775 (13.1%)		
(Types of heart disease) Multiple answers					
Myocardial infarction			558		
Angina			1,285		
Arrhythmia			2,474		
Other			725		
I don't know			319		
Pneumonia (Within the last 10 years)	36,518	35,271 (96.6%)	1,247 (3.4%)		
Bone fracture after age 50 (Tabulated responses from age 50 or older at the time of survey)	27,647	24,339 (88.0%)	3,308 (12.0%)		
Thyroid disease	36,310	34,898 (96.1%)	1,412 (3.9%)		
(Types of thyroid disease) Multiple answers					
Hyperthyroidism (Basedow disease)			324		
Hypothyroidism			516		
Other			530		

1) Proportion of the valid responses

2) Among these, 419 individuals answered that they were not currently attending hospital as outpatient since they have recovered.

4. Sleep (Q4)

1) The average sleep hours were 7 hours and 2 minutes.
2) As for sleep satisfaction, those who answered ‘sufficient’ were 12,703 (39.3%); ‘slightly insufficient’ were 14,902 (46.1%); ‘very insufficient’ were 3,871 (12.0%); and ‘greatly insufficient or couldn’t go to sleep” were 844 (2.6%).
3) Experiences related to sleep (Have you experienced the following conditions at least three times a week?) are shown in Table 15.

Table 15. Experiences related to sleep among adults

	Yes	No	Valid responses
1. It takes time to fall sleep at night after going to bed.	12,806 (40.1%)	19,122 (59.9%)	31,928
2. I wake up during the night in the middle of sleep	20,671 (64.5%)	11,393 (35.5%)	32,064
3. I wake up before the time I set and can’t go back to sleep.	12,546 (39.9%)	18,895 (60.1%)	31,441
4. Total hour of sleep is not enough.	11,167 (36.1%)	19,784 (63.9%)	30,951
5. I feel depressed during the day.	7,653 (24.9%)	23,094 (75.1%)	30,747
6. My physical and mental activity levels during the day are low.	8,891 (28.6%)	22,143 (71.4%)	31,034
7. I feel sleepy during the day.	15,284 (48.6%)	16,183 (51.4%)	31,467

5. Exercise (Q5)

Those who answered they exercised ‘almost every day’ were 5,818 (15.9%), ‘2-4 times per week’ were 9,112 (24.9%), ‘once a week’ were 6,241 (17.0%), and ‘almost never’ were 15,486 (42.2%).

6. Smoking (Q6)

As for smoking (Do you smoke tobacco or cigarettes except for cigars and pipes?), those who answered ‘have never smoked’ were 20,199 (57.6%); ‘I quit’ were 9,447 (27.0%); and ‘yes’ were 5,399 (15.4%).

Among those who responded ‘yes’, the average smoking history was 31.6 years, the average number of cigarettes was 16.1 per day.

7. Alcohol consumption (Q7)

1) For alcohol consumption (Do you currently drink alcohol?), those who answered ‘no, or barely drink (less than once a month)’ were 19,087 (54.2%); ‘I quit’ were 1,675 (4.8%); and ‘yes (at least once a month)’ were 14,458 (41.1%).
2) Among those who answered ‘yes (at least once per month)’, those who answered ‘one day a week’ were 2,004 (14.4%); ‘two days a week’ were 1,462 (10.5%); ‘three days a week’ were 1,362 (9.8%); ‘four days a week’ were 816 (5.9%); ‘five days a week’ were 1,442 (10.4%); ‘six days a week’ were 1,749 (12.6%); and ‘seven days a week’ were 5,037 (36.3%).

3) The average alcohol consumption per day was around 2.2 drinks per day. Among the 35,220 valid responses for alcohol consumption (Q7-1), 2,874 (8.2%) consumed excessively (4 drinks and above).

4) For experience related to alcohol consumption (Answer the following questions about the past 30 days. CAGE screens for alcoholism.), the responses of each item are shown in Table 16. 'Yes' was 1 point and the total points of the four items were calculated.

The results by age group are shown in Table 17. Overall, those with 0 points were 8,171 (62.9%); 1 point was 2,924 (22.5%); 2 points were 1,152 (8.9%); 3 points were 546 (4.2%); and 4 points were 192 (1.5%).

For males, those with 0 points were 5,058 (57.1%); 1 point were 2,288 (25.8%); 2 points were 910 (10.3%); 3 points were 442 (5.0%); and 4 points were 159 (1.8%). For females, 0 points were 3,113 (75.4%); 1 point were 636 (15.4%); 2 points were 242 (5.9%); 3 points were 104 (2.5%); and 4 points were 33 (0.8%).

Table 16. Experience related to alcohol consumption (Upper row is the number of individuals/lower row is percentage)

		No	Yes	Valid responses
1	Have you ever felt you should cut down on your drinking?	9,172 (69.6%)	4,004 (30.4%)	13,176
2	Have people annoyed you by criticizing your drinking?	11,848 (90.8%)	1,194 (9.2%)	13,042
3	Have you ever felt bad or guilty about your drinking?	11,434 (87.6%)	1,621 (12.4%)	13,055
4	Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	12,093 (92.5%)	975 (7.5%)	13,068

Since there are missing values for each item, totals may not match.

Table 17. Experience related to alcohol consumption by age group

(Upper row is the number of individuals/lower row is percentage)

	0 points	1 point	2 points	3 points	4 points	Valid responses
20s	468 (77.0%)	89 (14.6%)	30 (4.9%)	16 (2.6%)	5 (0.8%)	608
30s	680 (67.9%)	189 (18.9%)	83 (8.3%)	37 (3.7%)	12 (1.2%)	1,001
40s	916 (62.3%)	319 (21.7%)	143 (9.7%)	67 (4.6%)	26 (1.8%)	1,471
50s	1,184 (58.8%)	521 (25.9%)	186 (9.2%)	88 (4.4%)	36 (1.8%)	2,015
60s	2,561 (61.3%)	982 (23.5%)	389 (9.3%)	184 (4.4%)	63 (1.5%)	4,179
70s and above	2,362 (63.6%)	824 (22.2%)	321 (8.6%)	154 (4.1%)	50 (1.3%)	3,711
Overall	8,171 (62.9%)	2,924 (22.5%)	1,152 (8.9%)	546 (4.2%)	192 (1.5%)	12,985

8. Appetite (Q8)

When asked about their appetite (How often have you lost appetite in the last two weeks?), 27,879 (77.7%) answered zero, 6,262 (17.5%) answered a few days, 990 (2.8%) answered more than a week, and 735 (2.0%) answered almost every day.

9. Dietary Habits (Q9)

The dietary habits in the past month are as shown in Table 18.

Table 18. Dietary habits in the past month

	Faster	Normal/ Slower	Valid responses
1. Do you eat faster than others?	10,099 (27.3%)	26,828 (72.7%)	36,927
	Yes	No	Valid responses
2. Do you skip breakfast often?	5,561 (15.1%)	31,282 (84.9%)	36,843
3. Do you eat snacks during daytime or late at night almost every day?	10,171 (27.7%)	26,500 (72.3%)	36,671
4. Do you consume dinner within 2 hours before going-to-bed more than three times a week?	7,669 (20.9%)	28,951 (79.1%)	36,620
5. Do you consume prepared foods almost every day?	8,875 (24.1%)	27,917 (75.9%)	36,792

10. Overall mental health (Q10)

1) For overall mental health (K6), among the 31,637 valid responses, the number of those with 13 points※3 and above[1] was 2,160 (6.8%) (Fig. 7). The average points were 4.4 points.

For males, among the 14,448 valid responses, the number of those with 13 points and above was 928 (6.4%). For females, among the 17,189 valid responses, 13 points and above were 1,232 (7.2%) (Fig. 8). The average points for males and females were 4.1 and 4.6 points respectively.

Table 19 (next page) shows the data by age group.

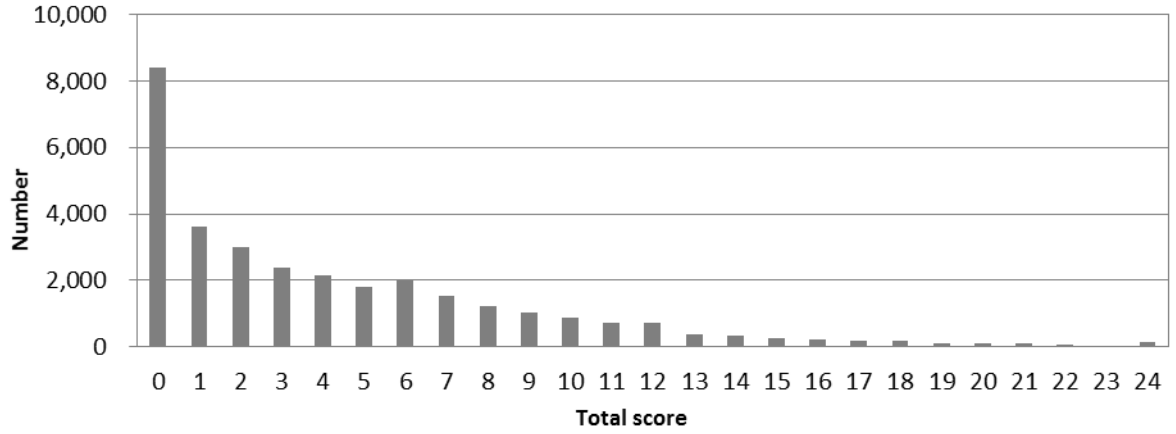


Figure7. The general mental health state (K6) : Overall

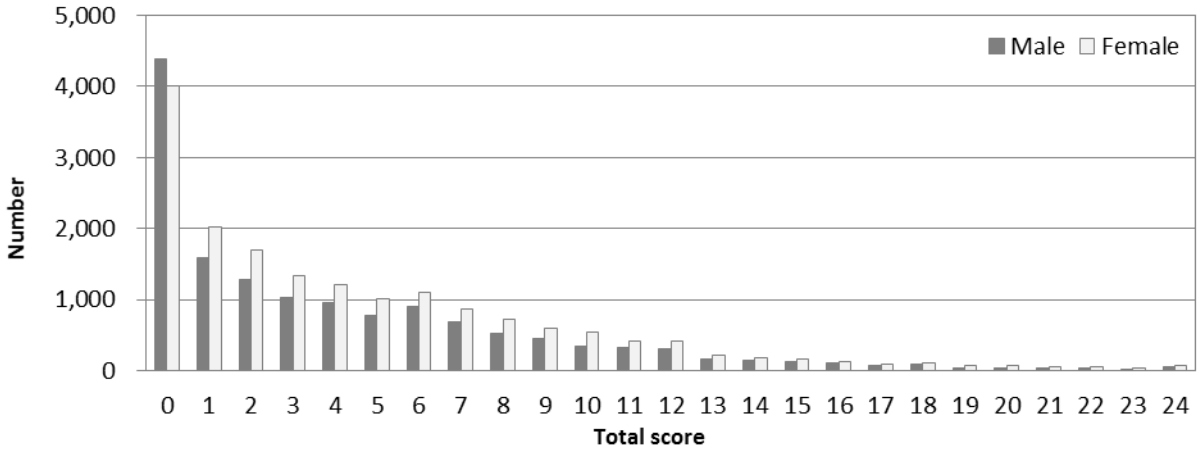


Figure8. The general mental health state (K6) by gender

Table 19. General mental health state (K6) by age group

	13 points and above	Valid responses
10s	47 (8.2%)	571
20s	133 (8.8%)	1,509
30s	222 (8.4%)	2,633
40s	259 (8.3%)	3,126
50s	330 (8.3%)	3,984
60s	437 (4.9%)	8,888
70 and above	732 (6.7%)	10,926

※3. 13 points :A standard value indicated by previous research

2) To the question if they had problems in daily lives because of such experiences/difficulties, 21,270 (65.4%) responded “Not at all”, 7,134 (21.9%) “A little”, 2,790 (8.6%) “Sometimes” 670 (2.1%) “Most of the times”, and 638 (2.0%) “Always”.

11. Experience of Great East Japan Earthquake and Trauma Reactions (Q11)

1) About experiences related to the Great East Japan Earthquake (multiple answers), 32,117 referred to "earthquake," 6,430 to "Tsunami," 30,833 to "Nuclear Power Plant accident," and 608 to "none."

2) PTSD Checklist (PCL-4) received 30,263 valid answers, of which 3,001 (9.9%) scored 12 points and above※4 (Figure 9). The average score was 6.8.

For males, of 13,831 valid responses, 1,246 (9.0%) scored 12 points and above, and for females, of 16,432 valid answers, 1,755 (10.7%) scored 12 points and above. The average of males was 6.7, while that of females was 6.9.

Classification by age groups is as in Table 20. (next page)

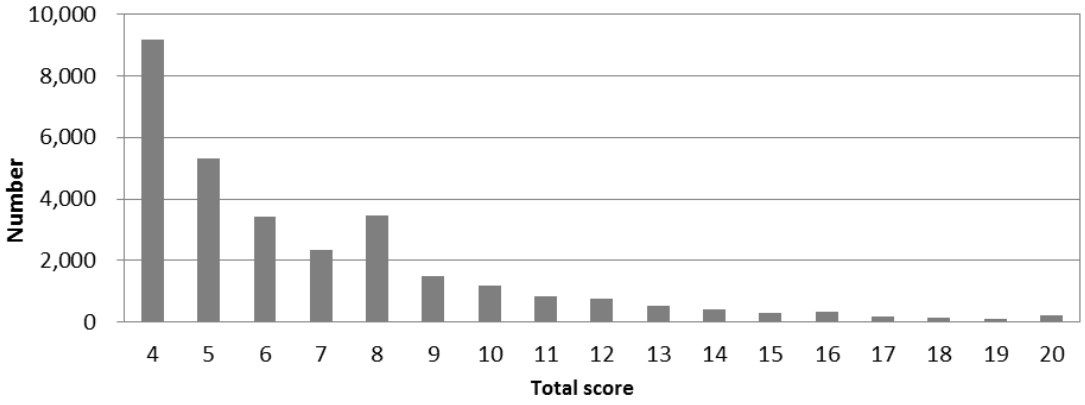


Figure9. Trauma Reaction of the general public (PCL-4): Overall

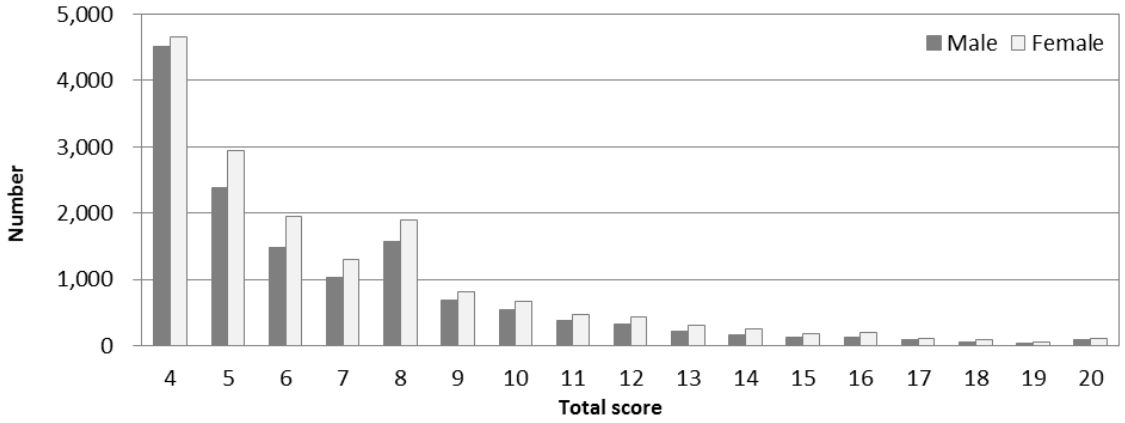


Figure10. Trauma Reaction of the general public (PCL-4): by gender

Table 20 Trauma Reaction among adults (PCL-4): Classified by age groups (number (ratio))

	12 points and above	Valid responses
10s	17 (3.0%)	561
20s	74 (5.1%)	1,465
30s	133 (5.2%)	2,562
40s	217 (7.1%)	3,069
50s	295 (7.6%)	3,885
60s	685 (8.0%)	8,554
70 and above	1,580 (15.5%)	10,167

※4. 12 points: A standard value indicated by previous research

12. Current Living Conditions (Q12)

1) To the question whether or not one had to live separately from family due to disaster, 11,464 (31.7%) answered 'yes' and 24,741 (68.3%) answered 'no'.
2) The number of residents in one household (including self) before the disaster was the following: one (living alone), 2,807 (8.1%); two, 8,511 (24.5%); three, 6,890 (19.8%); four, 5,790 (16.6%); five, 4,155 (11.9%); six, 3,377 (9.7%); seven, 2,051 (5.9%); eight, 811 (2.3%); nine, 244 (0.7%); and ten and above, 141 (0.4%).

   The current number of residents in one household was the following: one (living alone), 5,351 (15.0%); two, 13,064 (36.6%); three, 6,897 (19.3%); four, 4,767 (13.4%); five, 2,590 (7.3%); six, 1,697 (4.8%); seven, 913 (2.6%); eight, 294 (0.8%); nine, 87 (0.2%); and ten and above, 47 (0.1%).
3) About the current residence

   3-1) For the current residence (multiple answers allowed), 4,049 lived in municipally subsidized rental housing, 1,869 in temporary housing, 1,608 in restoration public housing, 3,952 in rented houses or apartments, 735 in relative's houses, 24,243 in owned houses, and 506 in other kinds of habitats.

   3-2) For the current evacuation status (question addressed to those who used to live in an area where evacuation was ordered and thereafter lifted), 7,923 (45.0%) responded "living in the house at the original address," 4,506 (25.6%) responded "living in a different address from the original, but in the same region where the evacuation order was lifted," and 5,192 (29.5%) responded "not living in the region where the evacuation order was lifted (including occasionally visiting the original house)."
4) For the form of employment, 9,570 (27.2%) were full-time or self-employed, 2,878 (8.2%) were part-time, and 22,742 (64.6%) were unemployed (including students and homemakers).
5) For how one sees their financial circumstances, 3,821 (10.6%) answered 'tough,' 8,353 (23.2%) answered 'slightly tough,' 21,548 (59.8%) answered 'normal,' 1,672 (4.6%) answered 'slightly comfortable,' and 617 (1.7%) answered 'comfortable.'
6) Asked if they (or their spouse) were pregnant before the disaster, or if they were living together with their underage children (grandchild excluded), 5,013 (16.0%) answered 'yes,' and 26,347 (84.0%) answered 'no.'

   Among those who answered 'yes,' 456 (9.1%) answered they (or their spouse) were pregnant, 2,099 (41.9%) answered they were living with their pre-school children, 1,829 (36.5%) answered they were living with their primary school children, 890 (17.8%) answered they were living with their middle school children, 1,320 (26.3%) answered they were living with their underage children who had graduated from middle school. (Multiple answers allowed.)
7) Asked if they (or their spouse) were currently pregnant, or if they were currently living with their underage children (grandchild excluded), 4,049 (13.3%) answered 'yes,' and 26,497 (86.7%) answered 'no.'

   Among those who answered 'yes,' 276 (6.8%) answered they (or their spouse) were currently pregnant, 1,686 (41.6%) answered they were living with their preschool children, 1,622 (40.1%) answered they were living with their primary school children, 952 (23.5%) answered they were living with their middle school children, and 1,012 (25.0%) answered they were living with their underage children who had graduated from middle school. (Multiple answers allowed.)

13. Awareness of Health Effects Caused By Radiation (Q13)

1) Awareness of health effects caused by radiation is shown in Table 21.

Table 21. Awareness of health effects caused by radiation

(Upper row is the number of individuals/lower row is proportion)

		Possibility is very low	←	→	Possibility is very high	Valid responses
1	How likely do you think health disorders (for example, cancer) will occur in the future due to the current radiation exposure?	10,910 (34.8%)	10,253 (32.7%)	5,793 (18.5%)	4,388 (14.0%)	31,344
2	How likely do you think health disorders will occur in future generations (children or grandchildren) due to the current radiation exposure?	9,532 (31.0%)	10,142 (32.9%)	6,424 (20.9%)	4,685 (15.2%)	30,783

2) When asked how frequently they experienced inconveniences in daily life due to the anxieties about radiation for the past month, 1,504 (4.7%) answered 'frequently,' 4,345 (13.6%) answered 'sometimes,' 6,670 (20.8%) answered 'rarely,' and 19,519 (60.9%) answered 'never.'

14. Sources of advice (Q14)

When asked if they knew anyone or any organization that they can consult regarding mental or physical issues caused by the Great East Japan Earthquake, 32,540 (89.1%) answered 'yes,' and 3,966 (10.9%) answered 'no.'

Breakdown of sources of advice for those who answered 'yes' is shown in Table 22.

Table 22. Break down of sources of advice

	Number
Family/relatives	28,329
Friends/acquaintances	15,591
Colleagues/superiors	3,237
Municipal consultation service (City public health bureau, health center, etc.)	7,521
Prefectural consultation service (Prefectural public health bureau/public health and welfare office, etc.)	1,757
Mental health and welfare center	788
Fukushima Center for Disaster Mental Health	1,004
Visiting care/nursing care service organizations	2,324
Medical institutions such as psychosomatic medicine/psychiatry/neurology/mental clinics	4,395
Medical institutions other than the above (general internal medicine, surgical department, ophthalmology, otorhinolaryngology, orthopedics, obstetrics and gynecology, etc.	8,464
Facilities related to religion such as temples, shrines, churches, etc.	508
Other	248

(Multiple answers)

Data from the FY 2016 Mental Health and Lifestyle Survey (Age group 0-3)

			Number	Proportion
Response methods	(798 valid responses)	・Mailed Survey Sheets	734	92.0%
		・On-line	64	8.0%
Sex	(798 valid responses)	・Boys	404	50.6%
(Average age 1.9)		・Girls	394	49.4%
The address as of the time of survey	(798 valid responses)	・Within the prefecture	722	90.5%
		・Outside the prefecture	76	9.5%
Q1 Health condition	(782 valid responses)	・Very good	315	40.3%
		・Good	338	43.2%
		・Normal	124	15.9%
		・Bad	5	0.6%
		・Very bad	0	0.0%
Q2 Height and weight		(Listed in the main document by sex and age)		(P3)
Q3 Currently treated diseases	(788 valid responses)	・No	573	72.7%
		・Yes	215	27.3%
		(Breakdown is listed in the main document.)		(P3 Table 2)
Q4 Experience of hospitalization in the past year	(794 valid responses)	・No	680	85.6%
		・Yes	114	14.4%
		(Breakdown is listed in the main document.)		(P3 Table 3)
Q5 Sleep hours and naps				
1) Sleep hours	(796 valid responses)	・Average sleep hours: 9 h 53 min		
	(796 valid responses)	・Average sleep time: 9:07 PM		
	(796 valid responses)	・Average wake-up time: 7:00 AM		
2) Naps	(795 valid responses)	・No	81	10.2%
		・Yes	714	89.8%
	(702 valid responses)	(Average nap time: 1 h 54 min)		
Q6 Usual amount of exercise	(503 valid responses)	・Almost every day	274	54.5%
		・2-4 times a week	155	30.8%
		・Once a week	57	11.3%
		・Rarely	17	3.4%
Q7 Dietary habits				
1) Breast milk	(794 valid responses)	・Yes	120	15.1%
		・No	674	84.9%
2) Diet in the past month		・Listed in the main document		(P4 Table 4)
Q8 Lack of confidence in child rearing	(796 valid responses)	・Yes	87	10.9%
		・No	368	46.2%
		・Not sure	341	42.8%

Data from the FY 2016 Mental Health and Lifestyle Survey (Age group 4-6)

			Number	Proportion
Response methods	(889 Vaild responses)	・Mailed Survey Sheets	833	93.7%
		・On-line	56	6.3%
Sex	(889 Vaild responses)	・Boys	432	48.6%
(Average age 5.1)		・Girls	457	51.4%
The address as of the time of survey	(889 Vaild responses)	・Within the prefecture	710	79.9%
		・Outside the prefecture	179	20.1%
Q1 Health condition	(848 Vaild responses)	・Very good	288	34.0%
		・Good	322	38.0%
		・Normal	234	27.6%
		・Bad	4	0.5%
		・Very bad	0	0.0%
Q2 Height and weight		(Listed in the main document by sex and age)		(P5)
Q3 Currently treated diseases	(882 Vaild responses)	・No	548	62.1%
		・Yes	334	37.9%
		(Breakdown is listed in the main document)		(P5 Table 5)
Q4 Experience of hospitalization in the past year	(883 Vaild responses)	・No	789	89.4%
		・Yes	94	10.6%
		(Breakdown is listed in the main document)		(P5 Table 6)
Q5 Sleep hours and naps				
1) Sleep hours	(886 Vaild responses)	・Average sleep hours: 9 h 37 min		
	(887 Vaild responses)	・Average sleep time: 9:11 PM		
	(886 Vaild responses)	・Average wake-up time: 6:49 AM		
2) Naps	(885 Vaild responses)	・No	561	63.4%
		・Yes	324	36.6%
	(296 Vaild responses)	(Average nap time: 1 h 33 min)		
Q6 Usual amount of exercise	(887 Vaild responses)	・Almost every day	512	57.7%
		・2-4 times a week	263	29.7%
		・Once a week	81	9.1%
		・Rarely	31	3.5%
Q7 Dietary habits in the past month		(Listed in the main document)		(P6 Table 7)
Q8 Child's emotions and behavior (SDQ)				
1) SDQ	(888 Vaild responses)	・Average total score: 9.1 points		
	(432 Vaild responses)	・Male average total score: 9.7 points		
	(456 Vaild responses)	・Female average total score: 8.5 points		
		・16 points and above	99	11.1%
		(Male)	56	13.0%
		(Female)	43	9.4%
		・20 points and above	35	3.9%
		(Male)	20	4.6%
		(Female)	15	3.3%
2) Presence or absence of difficult issues	(887 Vaild responses)	・No	678	76.4%
		・Yes (minor issues)	174	19.6%
		・Yes (clear issues)	29	3.3%
		・Yes (serious issues)	6	0.7%
3) Becoming upset	(206 Vaild responses)	・Not at all	103	50.0%
		・A little	91	44.2%
		・Very	10	4.9%
		・Greatly	2	1.0%
Q9 Child resists going to nursery school or kindergarten.	(886 Vaild responses)	・Yes	136	15.3%
		・No	719	81.2%
		・The child is not attending nursery school.	31	3.5%

Data from the FY 2016 Mental Health and Lifestyle Survey (Primary school age)

			Number	Proportion
Response methods	(2,209 Vaild responses)	・Mailed Survey Sheets	2,062	93.3%
		・On-line	147	6.7%
Sex	(2,209 Vaild responses)	・Boys	1,110	50.2%
(Average age: 9.3)		・Girls	1,099	49.8%
The address as of the time of survey	(2,209 Vaild responses)	・Within the prefecture	1,682	76.1%
		・Outside the prefecture	527	23.9%
Q1 Health condition	(2,037 Vaild responses)	・Very good	546	26.8%
		・Good	854	41.9%
		・Normal	615	30.2%
		・Bad	22	1.1%
		・Very bad	0	0.0%
Q2 Height and weight		(Listed in the main document by sex and age)		(P8)
Q3 Currently treated diseases	(2,195 Vaild responses)	・No	1,389	63.3%
		・Yes	806	36.7%
		(Breakdown is listed in the main document)		(P8 Table 8)
Q4 Experience of hospitalization in the past year	(2,205 Vaild responses)	・No	2,046	92.8%
		・Yes	159	7.2%
		(Breakdown is listed in the main document)		(P8 Table 9)
Q5 Sleep hours	(2,196 Vaild responses)	・Average sleep hours: 8 h 52 min		
	(2,200 Vaild responses)	・Average sleep time: 9:32 PM		
	(2,196 Vaild responses)	・Average wake-up time: 6:24 AM		
Q6 Usual amount of exercise	(2,204 Vaild responses)	・Almost every day	187	8.5%
		・2-4 times a week	690	31.3%
		・Once a week	603	27.4%
		・Rarely	724	32.8%
Q7 Dietary habits in the past month		(Listed in the main document)		(P9 Table 10)
Q8 Child's emotions and behavior (SDQ)				
1) SDQ	(2,207 Vaild responses)	・Average total score: 8.7 points		
	(1,109 Vaild responses)	・Male average total score: 9.2 points		
	(1,098 Vaild responses)	・Female average total score: 8.1 points		
		・16 points and above	279	12.6%
		(Male)	166	15.0%
		(Female)	113	10.3%
		・20 points and above	102	4.6%
		(Male)	71	6.4%
		(Female)	31	2.8%
2) Presence or absence of difficult issues	(2,198 Vaild responses)	・No	1,608	73.2%
		・Yes (minor issues)	472	21.5%
		・Yes (clear issues)	95	4.3%
		・Yes (serious issues)	23	1.0%
3)Becoming upset	(575 Vaild responses)	・Not at all	179	31.1%
		・A little	356	61.9%
		・Very	34	5.9%
		・Greatly	6	1.0%
Q9 Child resists going to school.	(2,181 Vaild responses)	・Yes	222	10.2%
		・No	1,959	89.8%

Data from the FY 2016 Mental Health and Lifestyle Survey (Middle school age)

			Number	Proportion
Response methods	(1,002 Vaild responses)	・Mailed Survey Sheets	922	92.0%
		・On-line	80	8.0%
Sex	(1,002 Vaild responses)	・Boys	526	52.5%
(Average age: 13.9)		・Girls	476	47.5%
The address as of the time of survey	(1,002 Vaild responses)	・Within the prefecture	785	78.3%
		・Outside the prefecture	217	21.7%
Q1 Health condition	(646 Vaild responses)	・Very good	192	29.7%
		・Good	206	31.9%
		・Normal	228	35.3%
		・Bad	19	2.9%
		・Very bad	1	0.2%
Q2 Height and weight		(Listed in the main document by sex and age)		(P11)
Q3 Sleep				
1) Sleep hours	(650 Vaild responses)	・Average sleep hours: 7 h 6 min		
2) Sufficiency of sleep over the past month	(649 Vaild responses)	・Sufficient	310	47.8%
		・Slightly insufficient	275	42.4%
		・Insufficient	64	9.9%
Q4Usual amount of exercise	(652 Vaild responses)	・Almost every day	292	44.8%
		・2-4 times a week	110	16.9%
		・Once a week	49	7.5%
		・Rarely	201	30.8%
Q5 Dietary habits in the past month		(Listed in the main document)		(P12 Table11)
Q6 Currently treated diseases	(914 Vaild responses)	・No	616	67.4%
		・Yes	298	32.6%
		(Breakdown is listed in the main document)		(P12 Table12)
Q7 Experience of hospitalization in the past year	(912 Vaild responses)	・No	885	97.0%
		・Yes	27	3.0%
		(Breakdown is listed in the main document)		(P12 Table13)
Q8 Child's emotions and behavior (SDQ)				
1)SDQ	(915 Vaild responses)	・Average total score: 8.2 points		
	(483 Vaild responses)	・Male average total score: 8.5 points		
	(432 Vaild responses)	・Female average total score: 7.9 points		
		・16 points and above	113	12.3%
		(Male)	66	13.7%
		(Female)	47	10.9%
		・20 points and above	45	4.9%
		(Male)	29	6.0%
		(Female)	16	3.7%
2) Presence or absence of difficult issues	(909 Vaild responses)	・No	634	69.7%
		・Yes (minor issues)	191	21.0%
		・Yes (clear issues)	60	6.6%
		・Yes (serious issues)	24	2.6%
3) Becoming upset	(267 Vaild responses)	・Not at all	47	17.6%
		・A little	164	61.4%
		・Very	37	13.9%
		・Greatly	19	7.1%
Q9 Child resists going to school.	(895 Vaild responses)	・Yes	126	14.1%
		・No	769	85.9%

Data from the FY 2016 Mental Health and Lifestyle Survey (Adults)

			Number	Proportion
Response methods	(37,466 Vaild responses)	・Mailed Survey Sheets	35,900	95.8%
		・On-line	1,566	4.2%
Sex	(37,466 Vaild responses)	・Male	16,987	45.3%
(Average age: 61.9)		・Female	20,479	54.7%
The address as of the time of survey	(37,466 Vaild responses)	・Within the prefecture	32,063	85.6%
		・Outside the prefecture	5,403	14.4%
Q1 Health condition	(32,176 Vaild responses)	・Very good	1,346	4.2%
		・Good	5,385	16.7%
		・Normal	19,961	62.0%
		・Bad	4,979	15.5%
		・Very bad	505	1.6%
Q2 Height and weight		(Listed in the main document)		(P14)
Q3 Medical history in the past year		(Listed in the main document)		(P15 Table14)
Q4 Sleep				
1) Sleep hours	(36,504 Vaild responses)	・Average sleep hours: 7 h 2 min		
2) Sufficiency of sleep over the past month	(32,320 Vaild responses)	・Sufficient	12,703	39.3%
		・Slightly insufficient	14,902	46.1%
		・Very insufficient	3,871	12.0%
		・Greatly insufficient or couldn't get any	844	2.6%
3) Experience related to sleep		(Listed in the main document)		(P16 Table15)
Q5 Usual amount of exercise	(36,657 Vaild responses)	・Almost every day	5,818	15.9%
		・2-4 times a week	9,112	24.9%
		・Once a week	6,241	17.0%
		・Rarely	15,486	42.2%
Q6 Smoking	(35,045 Vaild responses)	・Have never smoked	20,199	57.6%
		・Quit	9,447	27.0%
		・Yes	5,399	15.4%
		(Average number of years of smoking : 31.6)		
		(Average cigarettes per day: 16.1)		
Q7 Alcohol				
1) Alcohol consumption	(35,220 Vaild responses)	・No/ Rarely	19,087	54.2%
		・Quit	1,675	4.8%
		・Yes (more than once a month)	14,458	41.1%
2) Frequency of consumption	(13,872 Vaild responses)	(Listed in the main document)		(P16)
3) Daily alcohol consumption	(13,465 Vaild responses)	・2.2 dorinks on average		
4) Experiences related to alcohol	(12,985 Vaild responses)	(Listed in the main document)		(P17 Table16,17)
Q8 Appetite	(35,866 Vaild responses)	・0 days	27,879	77.7%
		・A few days	6,262	17.5%
		・More than a week	990	2.8%
		・Almost every day	735	2.0%
Q9 Dietary habits in the past month		(Listed in the main document)		(P18 Table18)
Q10 General mental health state				
1) Mental health state (K6)	(31,637 Vaild responses)	・Average score: 4.4 points		
	(14,448 Vaild responses)	・Male average score: 4.1points		
	(17,189 Vaild responses)	・Female average score: 4.6 points		
		・13 points and above	2,160	6.8%
		(Male)	928	6.4%
		(Female)	1,232	7.2%
		(Listed in the main document by age)		(P20 Table19)
2) Inconveniences in daily life	(32,502 Vaild responses)	・Not at all	21,270	65.4%
		・A little	7,134	21.9%
		・Sometimes	2,790	8.6%
		・Mostly	670	2.1%
		・Always	638	2.0%

			Number	Proportion
Q11 Experience of Great East Japan Earthquake and Trauma Reactions				
1) As the experiences related to the Great East Japan Earthquake	※Multiple answers	・ Earthquake	32,117	—
		・ Tsunami	6,430	—
		・Nuclear Power Plant accident	30,833	—
		・none	608	—
2) PTSD Checklist(PCL-4)	(30,263 Vaild responses)	・Average score 6.8 Points		
	(13,831 Vaild responses)	(males) 6.7 Points		
	(16,432 Vaild responses)	(females) 6.9 Points		
		・More than 12 points	3,001	9.9%
		(males)	1,246	9.0%
		(females)	1,755	10.7%
		(Classification by age groups Details are listed in the main document.)		(P22 Table20)
Q12 Current living conditions				
1) Living conditions with family	(36,205 Vaild responses)	・Yes	11,464	31.7%
		・No	24,741	68.3%
2) Number of people within household Before the disaster	(34,777 Vaild responses)	・One (living alone)	2,807	8.1%
		・Two	8,511	24.5%
		・More than three	23,459	67.5%
		(Details are listed in the main document.)		(P23)
At present	(35,707 Vaild responses)	・One (living alone)	5,351	15.0%
		・Two	13,064	36.6%
		・More than three	17,292	48.4%
		(Details are listed in the main document.)		(P23)
3) About the current residence				
3-1) Current residence	*Multiple answers	・Municipally subsidized rental housing	4,049	—
		・Temporary housing	1,869	—
		・Restoration public housing	1,608	—
		・Rented house/apartment	3,952	—
		・Relative's house	735	—
		・Owned house	24,243	—
		・Other	506	—
3-2) For the current evacuation status	(17,621 Vaild responses)	・Living in the house at the original address	7,923	45.0%
		・Living in a different address from the original, but in the same region where the evacuation order was lifted	4,506	25.6%
		・Not living in the region where the evacuation order was lifted	5,192	29.5%
4) Form of employment	(35,190 Vaild responses)	・Full-time/self-employed	9,570	27.2%
		・Part-time	2,878	8.2%
		・Unemployed (including students and homemakers)	22,742	64.6%
5) Current financial circumstances	(36,011 Vaild responses)	・Tough	3,821	10.6%
		・Slightly tough	8,353	23.2%
		・Normal	21,548	59.8%
		・Slightly comfortable	1,672	4.6%
		・Comfortable	617	1.7%
6) Lived with a child before the disaster	(31,360 Vaild responses)	・Yes	5,013	16.0%
		(Pregnant)	456	—
		(Preschool child)	2,099	—
		(Primary school child)	1,829	—
		(Middle school child)	890	—
		(Minor who graduated from middle school)	1,320	—
		・No	26,347	84.0%
7) Currently living with a child	(30,546 Vaild responses)	・Yes	4,049	13.3%
		(Pregnant)	276	—
		(Preschool child)	1,686	—
		(Primary school child)	1,622	—
		(Middle school child)	952	—
		(Minor who graduated from middle school)	1,012	—
		・No	26,497	86.7%
Q13 Health effects caused by radiation				
1) Awareness of health effects caused by radiation		(Listed in the main document)		(P24 Table21)
2) Inconveniences in daily life	(32,038 Vaild responses)	・Frequently	1,504	4.7%
		・Sometimes	4,345	13.6%
		・Rarely	6,670	20.8%
		・Never	19,519	60.9%
Q14 Sources of advice	(36,506 Vaild responses)	・Yes	32,540	89.1%
		・No	3,966	10.9%
		(Breakdown is listed in the main document.)		(P24 Table22)

Mental Health and Lifestyle Survey for FY 2016

Summary of Support（Revised version）

Reported on June 2018

1. Purpose

The "Mental Health and Lifestyle Survey" aims to provide a feedback mechanism so that results of the Fukushima Health Survey can be useful to residents for their better health management and to connect those who require mental health or lifestyle-related support to appropriate health/medical facilities.

2. Target Groups

Out of those who responded to the "Mental Health and Lifestyle Survey" for FY 2016, people deemed to require counseling/support by telephone or mail were identified as Targets.

This report also tabulates those who responded by 31 October 2017 and received support by 31 December of the same year.

Age 0-3 years: Targets born between April 2, 2013and April 1, 2016.

Age 4-6 years: Targets born between April 2, 2010 and April 1, 2013.

Primary School: Targets born between April 2, 2004 and April 1, 2010.

Middle School: Targets born between April 2, 2001 and April 1, 2004.

Adults: Targets born on or before April 1, 2001.

In this survey, "Children" refers to the people in the Target Group of middle school age and younger, and "Adults" refers to people in the target Group older than the foregoing.

3. Methods

3.1 Individual Notices of Results

Survey questionnaires for FY 2016 were distributed by mail in February 2017, and the results were sent in September and October to those who responded by 31 August 2017. We introduced our special call center for the "Mental Health and Lifestyle Survey" to provide more information related to the survey results, and posted "Frequently Asked Questions about the survey results" on our Japanese website. The items of results provided to the participants are as follows:

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 Support by telephone and others

In accordance with the level of significance and urgency by selection criteria, our "Mental Health Support Team" that consists of Clinical Psychologists, Public Nurses, Medical Nurses, etc. provided Telephone Counseling. In Telephone Counseling, we inquired about their health status to assess current problems, and advised further examination at health/medical facilities when necessary.

As for mail support, we sent return postcards to confirm their wishes for telephone support and introduction of our "Mental Health and Lifestyle Survey" call center. Also for those deemed to require support pertaining to their lifestyle, a brochure encouraging lifestyle improvement was enclosed. The Telephone Counseling was provided to those who requested it in the return postcard, and to those who the "Mental Health Support Team" deemed necessary.

The criteria for support are as stipulated in (A) and (B) below.

4. Criteria to select the Support Targets

4.1 Telephone Counseling

(A) Criteria by scored assessments:

- Children: SDQ※4 score ≥20,

  ※4 Since the SDQ is only applicable to those 4 years old and older, age 0-3 were decided by other items than assessment scores.

- Adults: Those with K6 scores ≥15, and those with K6 scores 13-14 with PCL-4※5 scores ≥ 12.

  ※5 PCL-4: Scale for problems or traumatic reactions associated with disaster experiences

(B) Criteria by items other than score in scales:

- Children: those who were deemed to require urgent support out of a group identified by the contents of free-answer sections.
- Adults: those who meet the lifestyle conditions below:

  -Of those who have previous history of hypertension (HT) or diabetes (DM) and not receiving medical treatments, BMI ≥27.5 kg/m^2 (HT/DM • BMI), or consume ≥42 drinks in total per week (HT/DM • Excessive drinking) (Multiply the number of days per week by the average daily drinking volume).

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

  - Those who were deemed to require urgent support out of a group identified based on the contents of free-answer sections.

4.2 Mail Support

(A) Criteria by score in scales

- Children: SDQ score ≥16 (criterion in initial screening[1]) who do not meet the foregoing criteria for Telephone Counseling.
- Adults: K6 score ≥10 (criterion for anxiety disorder in initial screening[2]) or PCL-4 score ≥12 who do not meet the foregoing criteria for telephone counseling.

(B) Criteria by items other than score in scales

- Children: those who were deemed to not require urgent support out of a group identified by the contents of free-answer sections.
- Adults: those who meet the following conditions:

  -not receiving necessary medical services while body weight increased more than 3kg/y and BMI ≥27.5.

  -consume ≥42 drinks in total per week with a CAGE score of 2 or 3.

  -unsatisfied with the quality of sleep and currently depressed or inactive during the day.

  -have a history of mental disorder and responded about their current hospital visits as none or not responding at all.

  -those who were deemed not require urgent support out of a group identified by the contents of free-answer sections.

4.3 General Information by Mail (Sending a Booklet)

Except for the Support Targets of (4.1) and (4.2), we sent a booklet to those who met the criteria below.

- Adults: weight gain of ≥3 kg/y, BMI ≥25.0 and BMI <27.5 kg/m^2 (Mild obesity).

Those who meet none of the above criteria, but with a CAGE score ≥2.

5 Categories of supports and results

In telephone counseling support, we asked about health status and current problems.

According to the types of the support, we categorized the counseling sessions as “listened carefully,” “recommended seeing a doctor,” “advised lifestyle changes,” “offered psychoeducation,” “provided information (such as social resources),” and “miscellaneous.”

The results of telephone counseling were categorized into four groups as shown in 5.1, “Follow-up 1,” “Follow-up 2,” “Follow-up 3,” and “Declined .”

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

5.1 Categories of Results

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

5.2 Continued Support

Follow-up support:	Targets requiring continued telephone counselling.
Referred to outside institutions:	Targets required to be referred to municipal government or the Fukushima Center for Disaster Mental Health.
Mail support	Targets 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	Targets needing services related to the Basic Survey and/or Thyroid Ultrasound Examination of FMU's Radiation Medical Science Center.

6. Results

6.1 Providing the Results to Targets

The results were providing to 4,902 children in total, 795 for age 0-3, 888 for age 4-6, 2,220 for primary school children, and 999 middle school children. For adults, 37,275 results were informed, totaling 42,177 with the results of children.

6.2 Number of Support Targets and Supports Received

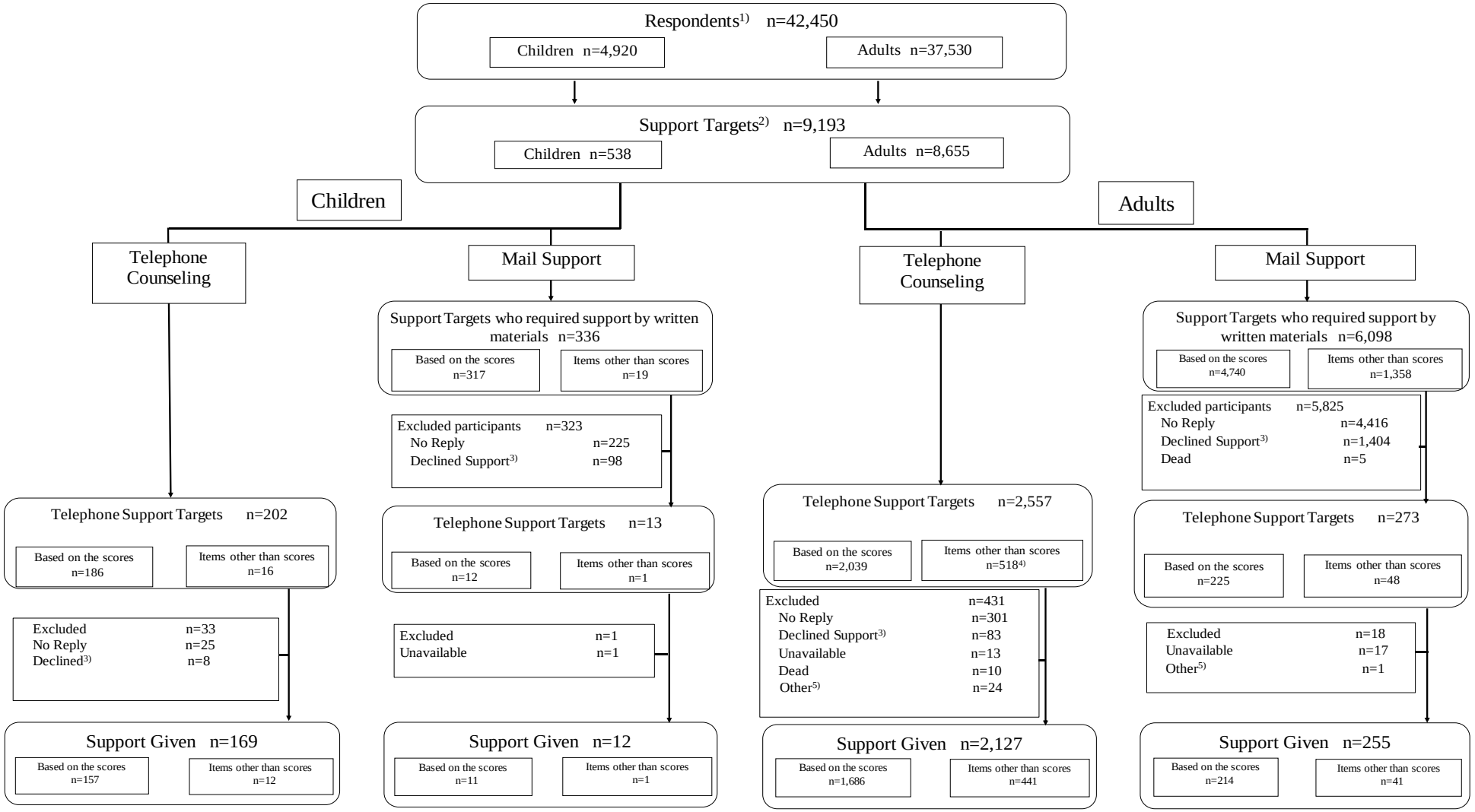
Of total 538 children identified as Support Targets, 202 needed telephone counseling and 336 required mail support. Of 336 Mail Support Targets, 13 were assessed to require telephone counseling.

Of total 8,655 adults identified as Support Targets; 2,557 needed telephone counselling and 6,098 required mail support. After receiving the mail support, 273 were assessed to require telephone counseling. The number of those with mild obesity as the criteria for sending a booklet was 330 and 1,243 met the criteria of CAGE scores. The total number to receive a booklet was 1,573.

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

Figure 1 shows the numbers of Support Targets and provided support. It excludes targets who only met the criteria for sending a booklet.

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



1) Those who responded by 31 October 2017.
2) Those who received support by 31 December 2017.
3) Those who indicated no desire for support in the return postcard.
4) The number includes 256 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 Support Targets and provided supports

6.3 Telephone Support for Children

(A) Characteristics of Children identified as Support Targets

Of all children who were Support Targets; 202 required telephone counseling and 13 were assessed to require telephone support as the results of mail support, totaling 215. The status of children requiring support is per Table 1. As for gender and area distribution, there were more boys than girls and more from Fukushima than outside.

Table 1: Characteristics of children in Support Targets (By sex and area)

Support Targets	Total		0-3 years		4-6 years		Primary school age		Middle school age	
	215		5		38		114		58	
Male	139	(64.7%)	4	(80.0%)	22	(57.9%)	76	(66.7%)	37	(63.8%)
Female	76	(35.3%)	1	(20.0%)	16	(42.1%)	38	(33.3%)	21	(36.2%)
Within Fukushima	158	(73.5%)	5	(100.0%)	32	(84.2%)	80	(70.2%)	41	(70.7%)
Outside Fukushima	57	(26.5%)	0	(0.0%)	6	(15.8%)	34	(29.8%)	17	(29.3%)
Support Provided	181		3		32		101		45	
Within Fukushima	129	(71.3%)	3	(100.0%)	27	(84.4%)	68	(67.3%)	31	(68.9%)
Outside Fukushima	52	(28.7%)	0	(0.0%)	5	(15.6%)	33	(32.7%)	14	(31.1%)

Areas at the time of sending survey questionnaires in FY 2016

(B)Status of Support Targets

Based on the results of survey, we conducted Telephone Counseling to identify current problems. As a result, 71 participants appeared to have problems, the most frequent case being “school-related issue,” followed by “anger, irritation and violence,” and “physical health problem.” As for problems of parents, “school-related issue” came first, followed by “physical health problem” and “sleep”.

In order to grasp the problems of participants more comprehensively, further interviews were carried out using question items designed with advice from doctors specialized in Child Psychiatry. The results are in Table 2. “Developmental problems” and “child-rearing anxiety” were raised the most. Also, 18 (15.8%) were identified to be taking mental care.

Table 2: Status of participants who received telephone counseling

Support provided	Total		0-3 years		4-6 years		Primary school age		Middle school age	
	181		3		32		101		45	
Have sleeping problems										
Yes	10	(7.8%)	0	(0.0%)	1	(4.0%)	4	(5.8%)	5	(15.6%)
No	118	(92.2%)	2	(100.0%)	24	(96.0%)	65	(94.2%)	27	(84.4%)
Unclear	53	-	1	-	7	-	32	-	13	-
Have appetite problems										
Yes	6	(4.8%)	0	(0.0%)	0	(0.0%)	4	(5.8%)	2	(6.7%)
No	119	(95.2%)	2	(100.0%)	24	(100.0%)	65	(94.2%)	28	(93.3%)
Unclear	56	-	1	-	8	-	32	-	15	-
Have friendship problems										
Yes	13	(11.4%)	0	(0.0%)	1	(4.8%)	10	(16.9%)	2	(6.3%)
No	101	(88.6%)	2	(100.0%)	20	(95.2%)	49	(83.1%)	30	(93.8%)
Unclear	67	-	1	-	11	-	42	-	13	-
Feel energetic										
Yes	120	(98.4%)	2	(100.0%)	26	(96.3%)	61	(98.4%)	31	(100.0%)
No	2	(1.6%)	0	(0.0%)	1	(3.7%)	1	(1.6%)	0	(0.0%)
Unclear	59	-	1	-	5	-	39	-	14	-
Somatization										
Yes	11	(10.3%)	0	(0.0%)	2	(8.7%)	6	(11.5%)	3	(10.0%)
No	96	(89.7%)	2	(100.0%)	21	(91.3%)	46	(88.5%)	27	(90.0%)
Unclear	74	-	1	-	9	-	49	-	15	-
Rebellious										
Yes	16	(16.2%)	0	(0.0%)	1	(5.3%)	12	(24.0%)	3	(10.7%)
No	83	(83.8%)	2	(100.0%)	18	(94.7%)	38	(76.0%)	25	(89.3%)
Unclear	82	-	1	-	13	-	51	-	17	-
Irritable										
Yes	10	(11.0%)	0	(0.0%)	0	(0.0%)	8	(18.2%)	2	(7.7%)
No	81	(89.0%)	2	(100.0%)	19	(100.0%)	36	(81.8%)	24	(92.3%)
Unclear	90	-	1	-	13	-	57	-	19	-

"Unclear" are the cases confirmation was deemed unnecessary at the telephone support

Proportions do not include the number of 'Unclear'.

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

Support provided	Total		0-3 years		4-6 years		Primary school age		Middle school age	
	181		3		32		101		45	
Emotionally dependent										
Yes	6	(7.0%)	0	(0.0%)	3	(15.8%)	3	(7.3%)	0	(0.0%)
No	80	(93.0%)	2	(100.0%)	16	(84.2%)	38	(92.7%)	24	(100.0%)
Unclear	95	-	1	-	13	-	60	-	21	-
Bored										
Yes	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
No	85	(100.0%)	2	(100.0%)	19	(100.0%)	39	(100.0%)	25	(100.0%)
Unclear	96	-	1	-	13	-	62	-	20	-
Have developmental problems										
Yes	27	(22.9%)	0	(0.0%)	5	(19.2%)	19	(30.6%)	3	(10.7%)
No	91	(77.1%)	2	(100.0%)	21	(80.8%)	43	(69.4%)	25	(89.3%)
Unclear	63	-	1	-	6	-	39	-	17	-
Emotional or behavioral problems										
Yes	14	(13.5%)	0	(0.0%)	3	(13.6%)	9	(17.6%)	2	(6.9%)
No	90	(86.5%)	2	(100.0%)	19	(86.4%)	42	(82.4%)	27	(93.1%)
Unclear	77	-	1	-	10	-	50	-	16	-
Mental disorder										
Yes	4	(3.8%)	0	(0.0%)	0	(0.0%)	3	(5.8%)	1	(3.6%)
No	100	(96.2%)	2	(100.0%)	22	(100.0%)	49	(94.2%)	27	(96.4%)
Unclear	77	-	1	-	10	-	49	-	17	-
Traumatic stress reaction after the disaster										
Yes	3	(3.0%)	0	(0.0%)	0	(0.0%)	3	(6.3%)	0	(0.0%)
No	96	(97.0%)	2	(100.0%)	21	(100.0%)	45	(93.8%)	28	(100.0%)
Unclear	82	-	1	-	11	-	53	-	17	-
School adjustment										
Well-adjusted	122	(91.7%)	2	(100.0%)	25	(96.2%)	65	(92.9%)	30	(85.7%)
Fail to adjust	11	(8.3%)	0	(0.0%)	1	(3.8%)	5	(7.1%)	5	(14.3%)
Unclear	48	-	1	-	6	-	31	-	10	-
Home or living environment problems										
Yes	4	(4.0%)	0	(0.0%)	0	(0.0%)	4	(7.8%)	0	(0.0%)
No	97	(96.0%)	2	(100.0%)	21	(100.0%)	47	(92.2%)	27	(100.0%)
Unclear	80	-	1	-	11	-	50	-	18	-
Guardian's anxiety about child rearing										
Yes	29	(25.2%)	1	(50.0%)	5	(20.8%)	19	(31.1%)	4	(14.3%)
No	86	(74.8%)	1	(50.0%)	19	(79.2%)	42	(68.9%)	24	(85.7%)
Unclear	66	-	1	-	8	-	40	-	17	-
Guardian's physical health										
Good	99	(93.4%)	2	(100.0%)	22	(100.0%)	50	(89.3%)	25	(96.2%)
Bad	7	(6.6%)	0	(0.0%)	0	(0.0%)	6	(10.7%)	1	(3.8%)
Unclear	75	-	1	-	10	-	45	-	19	-
Guardian's mental health										
Good	97	(91.5%)	2	(100.0%)	22	(100.0%)	47	(85.5%)	26	(96.3%)
Bad	9	(8.5%)	0	(0.0%)	0	(0.0%)	8	(14.5%)	1	(3.7%)
Unclear	75	-	1	-	10	-	46	-	18	-
Treatments										
Psychiatry or psychosomatic medicine	18	(15.8%)	0	(0.0%)	0	(0.0%)	14	(22.6%)	4	(13.3%)
Other	8	(7.0%)	0	(0.0%)	1	(5.0%)	4	(6.5%)	3	(10.0%)
No	88	(77.2%)	2	(100.0%)	19	(95.0%)	44	(71.0%)	23	(76.7%)
Unclear	67	-	1	-	12	-	39	-	15	-
Utilization of professional support										
Yes	26	(22.2%)	1	(33.3%)	5	(22.7%)	14	(23.3%)	6	(18.8%)
No	91	(77.8%)	2	(66.7%)	17	(77.3%)	46	(76.7%)	26	(81.3%)
Unclear	64	-	0	-	10	-	41	-	13	-

"Unclear" are the cases confirmation was deemed unnecessary at the telephone support

Proportions do not include the number of 'Unclear'.

(C)The results of support

The results of telephone counseling are in Table 3. After the telephone support, 160 (88.4%) were categorized as 'Follow-up 1,' 10 (5.5%) were categorized as 'Follow-up 2,' 9 (5.0%) were categorized as 'Follow-up 3,' and 2 (1.1%) declined support.

Table 3: Results of telephone counseling

Support provided	Total	0-3 years	4-6 years	Primary school age	Middle school age
	181	3	32	101	45
Follow-up 1	160 (88.4%)	3 (100.0%)	29 (90.6%)	87 (86.1%)	41 (91.1%)
Follow-up 2	10 (5.5%)	0 (0.0%)	3 (9.4%)	5 (5.0%)	2 (4.4%)
Follow-up 3	9 (5.0%)	0 (0.0%)	0 (0.0%)	7 (6.9%)	2 (4.4%)
Declined support	2 (1.1%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	0 (0.0%)

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.

The reasons for classifying as "Follow-up 2" are in Table 4. As for differences of problems among children and among parents, children have more mental health problems and school maladaptation while the parents raised issues about child rearing the most.

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

	Total	0-3 years	4-6 years	Primary school age	Middle school age
Number of 'Follow-up 2'	10	0	3	5	2
(Children)					
Physical problems	1 (10.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	0 (0.0%)
Mental problems	3 (30.0%)	0 (0.0%)	1 (33.3%)	2 (40.0%)	0 (0.0%)
School maladaptation	3 (30.0%)	0 (0.0%)	0 (0.0%)	2 (40.0%)	1 (50.0%)
Other	3 (30.0%)	0 (0.0%)	2 (66.7%)	0 (0.0%)	1 (50.0%)
(Guardian)					
Physical problems	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mental problems	1 (10.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	0 (0.0%)
Child rearing problems	3 (30.0%)	0 (0.0%)	1 (33.3%)	2 (40.0%)	0 (0.0%)
Isolation	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

The breakdown provides the total number.

The results of telephone support in categories are in Table 5. The categories of support being: "listened carefully," 151 (83.4%); "recommended seeing a doctor," 3 (1.7%); "advised lifestyle changes," 3 (1.7 %); "offered psychoeducation," 13 (7.2%); "provided information by phone," 2 (1.1%); and "other (checked residents' condition)," 31 (17.1%).

Table 5: Categories of the support

Support provided	Total 181	0-3 years 3	4-6 years 32	Primary school age 101	Middle school age 45
Listened carefully	151 (83.4%)	3 (100.0%)	30 (93.8%)	81 (80.2%)	37 (82.2%)
Recommended seeing a doctor	3 (1.7%)	0 (0.0%)	1 (3.1%)	2 (2.0%)	0 (0.0%)
Advised lifestyle changes	3 (1.7%)	0 (0.0%)	1 (3.1%)	1 (1.0%)	1 (2.2%)
Offered psychoeducation	13 (7.2%)	1 (33.3%)	2 (6.3%)	8 (7.9%)	2 (4.4%)
Provided information by phone	2 (1.1%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	1 (2.2%)
Other (checked residents' condition)	31 (17.1%)	0 (0.0%)	3 (9.4%)	19 (18.8%)	9 (20.0%)

The breakdown provides the total number.

Among those who needed continued support services, “Follow-up support,” “referred to outside institution,” and “directed to other departments” had 1 case each (Table 6).

Table 6: Continued support

Support provided	Total 181	0-3 years 3	4-6 years 32	Primary school age 101	Middle school age 45
Follow-up support	1 (0.6%)	0 (0.0%)	1 (3.1%)	0 (0.0%)	0 (0.0%)
Referred to outside institutions	1 (0.6%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	0 (0.0%)
Mail support	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Directed to other departments	1 (0.6%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	0 (0.0%)

Follow-up support: Participants requiring continued telephone counselling.

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 Centre.

6.4 Telephone Support for Adults

6.4-1 Support by telephone support criteria

(A) Characteristics of Support Targets of Telephone Support

A total of 2,557 adults were identified as Support Targets for telephone counseling, of which 2,039 were identified by the scores, and 518 were assessed by items other than scores. Among the Support Targets, 2,127 (83.2%) received telephone support.

The gender/age distributions of Support Targets are in Table 7. Overall, more females than males, and those in their 70s, had the largest number.

Table 7: Support Targets for telephone counseling (By sex and age group)

	Based on the scores						Based on the items other than scores					
Age group	Total	Male		Female			Total	Male		Female		
15-19	53	18	(34.0%)	35	(66.0%)		4	3	(75.0%)	1	(25.0%)	
20-29	115	37	(32.2%)	78	(67.8%)		24	10	(41.7%)	14	(58.3%)	
30-39	192	73	(38.0%)	119	(62.0%)		55	23	(41.8%)	32	(58.2%)	
40-49	216	98	(45.4%)	118	(54.6%)		74	48	(64.9%)	26	(35.1%)	
50-59	273	121	(44.3%)	152	(55.7%)		92	57	(62.0%)	35	(38.0%)	
60-69	396	197	(49.7%)	199	(50.3%)		143	96	(67.1%)	47	(32.9%)	
70-79	422	172	(40.8%)	250	(59.2%)		72	38	(52.8%)	34	(47.2%)	
80-	372	147	(39.5%)	225	(60.5%)		54	24	(44.4%)	30	(55.6%)	
Total	2,039	863	(42.3%)	1,176	(57.7%)		518	299	(57.7%)	219	(42.3%)	

Ages are as of 1 April 2016

Among the telephone support targets, 2,039 (79.7%) lived within Fukushima Prefecture and 518 (20.3%) lived outside Fukushima. Among the targets who received telephone support, 1,709 (80.3%) lived within Fukushima Prefecture and 418 (19.7%) lived outside Fukushima (Table 8).

Table 8: Telephone Support Targets (By area)

Support provided	Support given		Based on the scores		Items other than scores	
	2,557		2,039		518	
Within Fukushima	2,039	(79.7%)	1,634	(80.1%)	405	(78.2%)
Outside Fukushima	518	(20.3%)	405	(19.9%)	113	(21.8%)
Participants receiving support	2,127		1,686		441	
Within Fukushima	1,709	(80.3%)	1,364	(80.9%)	345	(78.2%)
Outside Fukushima	418	(19.7%)	322	(19.1%)	96	(21.8%)

Areas at the time of sending survey questionnaires in FY 2016.

(B) The status of Support Targets

Based on survey results, we conducted Telephone Counseling to identify current problems. As a result, 980 support targets appeared to have problems, the most frequent case being “physical health problem,” followed by “sleep” and “depression”.

The frequency and proportion of “physical health problem,” “sleep,” and “receiving status of medical care” identified during the counseling using checklists are in Table 9.

1,048 (55.1%) have physical health problems and 966 (53.2%) have sleep problems.

As for receiving medical treatment, 318 (17.8%) are visiting mental clinics/psychiatrists, 1,063 (59.6%) are visiting medical facilities other than mental clinics or psychiatric offices.

Table 9: Health status of Support Targets who received the telephone counseling

	Total		Based on the scores		Items other than scores	
Support provided	2,127		1,686		441	
Physical condition						
Good	854	(44.9%)	574	(38.2%)	280	(70.0%)
Bad	1,048	(55.1%)	928	(61.8%)	120	(30.0%)
Unclear	225	—	184	—	41	—
Changes in physical condition						
Improved	181	(10.6%)	140	(10.5%)	41	(10.9%)
No change	1,329	(77.9%)	1,038	(78.1%)	291	(77.4%)
Worsened	177	(10.4%)	143	(10.8%)	34	(9.0%)
Have not had problems	18	(1.1%)	8	(0.6%)	10	(2.7%)
Unclear	422	—	357	—	65	—
Sleeping habit						
Good	851	(46.8%)	578	(40.4%)	273	(70.5%)
Bad	966	(53.2%)	852	(59.6%)	114	(29.5%)
Unclear	310	—	256	—	54	—
Changes in sleep						
Improved	142	(8.7%)	122	(9.7%)	20	(5.5%)
No change	1,386	(85.2%)	1,058	(83.9%)	328	(89.6%)
Worsened	78	(4.8%)	70	(5.6%)	8	(2.2%)
Have not had problems	21	(1.3%)	11	(0.9%)	10	(2.7%)
Unclear	500	—	425	—	75	—
Treatments						
Psychiatry or p	318	(17.8%)	294	(20.9%)	24	(6.3%)
Other ıer	1,063	(59.6%)	876	(62.3%)	187	(49.2%)
No No	404	(22.6%)	235	(16.7%)	169	(44.5%)
Unclear ːar	342	—	281	—	61	—
Utilization of professional support						
Yes	512	(32.5%)	415	(33.9%)	97	(27.6%)
No	1,063	(67.5%)	809	(66.1%)	254	(72.4%)
Unclear	552	—	462	—	90	—
Depression						
Yes	746	(42.9%)	692	(50.8%)	54	(14.4%)
No	991	(57.1%)	670	(49.2%)	321	(85.6%)
Unclear	390	—	324	—	66	—
Anxiety over the disaster/psychological trauma						
Yes	119	(7.9%)	111	(9.8%)	8	(2.2%)
No	1,383	(92.1%)	1,023	(90.2%)	360	(97.8%)
Unclear	625	—	552	—	73	—

"Unclear" are the cases confirmation was deemed unnecessary at the telephone support

Proportions do not include the number of 'Unclear.'

(C)The results of support

The results of telephone counseling are as Table 10. After the telephone counseling, 1,840 (86.5%) were designated as 'Follow-up 1,' 183 (8.6%) as 'Follow-up 2,' 56 (2.7%) as 'Follow-up 3,' and 48 (2.3%) as 'Declined Support'.

Table 10: Results of telephone counseling

	Total		Based on the scores		Items other than scores	
Support provided	2,127		1,686		441	
Follow-up 1	1,840	(86.5%)	1,453	(86.2%)	387	(87.8%)
Follow-up 2	183	(8.6%)	149	(8.8%)	34	(7.7%)
Follow-up 3	56	(2.6%)	45	(2.7%)	11	(2.5%)
Declined support	48	(2.3%)	38	(2.3%)	10	(2.3%)

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.

The reasons for 'Follow-up 2' were as Table 11. 104 (56.8%) for physical health problems, 116 (63.4%) for mental health problems, 6 (3.3%) for social maladaptation, 19 (10.4%) for isolation.

Table 11: Breakdown of the reasons for 'Follow-up 2'

	Total		Based on the scores		Items other than scores	
Number of 'Follow-up 2'	183		149		34	
Physical problems	104	(56.8%)	85	(57.0%)	19	(55.9%)
Mental problems	116	(63.4%)	97	(65.1%)	19	(55.9%)
Social maladaptation	6	(3.3%)	4	(2.7%)	2	(5.9%)
Isolation	19	(10.4%)	16	(10.7%)	3	(8.8%)
Other (checked residents' condition)	11	(6.0%)	8	(5.4%)	3	(8.8%)

The breakdown provides the total number.

The categories of support are: "listened carefully," 1,846 (86.8%); "recommended seeing a doctor," 156 (7.3%); "advised lifestyle changes," 366 (17.2%); "offered psychological education," 111 (5.2%); "provided information by phone," 52 (2.4%); and "other (checked residents' condition)," 227 (10.7%). (Table 12)

Table 12: The categories of the support

	Total		Based on the scores		Items other than scores	
Support provided	2,127		1,686		441	
Listened carefully	1,846	(86.8%)	1,448	(85.9%)	398	(90.2%)
Recommended seeing a doct	156	(7.3%)	54	(3.2%)	102	(23.1%)
Advised lifestyle changes	366	(17.2%)	129	(7.7%)	237	(53.7%)
Offered psychoeducation	111	(5.2%)	91	(5.4%)	20	(4.5%)
Provided information by phone	52	(2.4%)	16	(0.9%)	36	(8.2%)
Other (checked residents' condition)	227	(10.7%)	205	(12.2%)	22	(5.0%)

The breakdown provides the total number.

Among those who needed continued support, 204 were designated as 'Follow-up support,' 13 were referred to outside institutions, 14 for Mail support, and 2 were directed to other departments (Table 13).

Table 13: Continued support

Support provided	Total		Based on the scores		Items other than scores	
	2,127		1,686		441	
Follow-up support	204	(9.6%)	70	(4.2%)	134	(30.4%)
Referred to outside institutio	13	(0.6%)	8	(0.5%)	5	(1.1%)
Mail support	14	(0.7%)	13	(0.8%)	1	(0.2%)
Directed to other departments	2	(0.1%)	1	(0.1%)	1	(0.2%)

Follow-up support: Participants requiring continued telephone counselling.

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.

6.4-2 Telephone Counselling after Mail Support

(A) Characteristics of the Support Target (among the mail support target)

We have provided telephone counseling to those who requested it in response to the mail support and those who the "Mental Health Support Team" deemed necessary from the contents of their responses.

Of 273 participants identified as telephone support targets, 225 were by assessment scores and 48 were by other criteria. Of those, 255 (93.4%) received telephone counseling.

Gender/age distribution of the Support Targets is in Table 14. Overall, there were 132 males and 136 females. By age group, 70s had a largest number.

Table 14: Support Targets for telephone counseling among those who received mail support (By sex and age group)

	Based on the scores					Based on the items other than scores				
Age group	Total	Male		Female		Total	Male		Female	
15-19	2	2	(100.0%)	0	(0.0%)	0	0	(0.0%)	0	(0.0%)
20-29	5	0	(0.0%)	5	(100.0%)	1	0	(0.0%)	1	(100.0%)
30-39	9	4	(44.4%)	5	(55.6%)	3	2	(66.7%)	1	(33.3%)
40-49	16	8	(50.0%)	8	(50.0%)	6	2	(0.0%)	4	(0.0%)
50-59	21	11	(52.4%)	10	(47.6%)	5	3	(60.0%)	2	(40.0%)
60-69	44	17	(38.6%)	27	(61.4%)	22	15	(68.2%)	7	(31.8%)
70-79	78	36	(46.2%)	42	(53.8%)	5	3	(60.0%)	2	(40.0%)
80-	50	27	(54.0%)	23	(46.0%)	6	4	(66.7%)	2	(33.3%)
Total	225	105	(46.7%)	120	(53.3%)	48	29	(60.4%)	19	(39.6%)

Ages are as of 1 April 2016

Among the telephone support targets, 228 (85.1%) lived within Fukushima Prefecture and 40 (14.9%) lived outside Fukushima. The telephone counseling sessions were provided to 216 (84.7%) support targets who lived within Fukushima Prefecture and 39 (15.3%) who lived outside Fukushima (Table 15).

Table 15: Area distribution of the Telephone Support Targets (who received mail support)

	Support given		Based on the scores		Items other than scores	
Support provided	268		222		46	
Within Fukushima	228	(85.1%)	186	(83.8%)	42	(91.3%)
Outside Fukushima	40	(14.9%)	36	(16.2%)	4	(8.7%)
Participants receiving su	255		214		41	
Within Fukushima	216	(84.7%)	179	(83.6%)	37	(90.2%)
Outside Fukushima	39	(15.3%)	35	(16.4%)	4	(9.8%)

Areas at the time of sending survey questionnaires in FY 2016.

(B) The status of Support Targets (among the mail support target)

Based on survey results, we conducted Telephone Counseling to identify current problems. As a result, 38 appeared to have problems, the most frequent case being “physical health problem,” followed by “sleep” and “family matters.”

The frequency and proportion of “physical health problem,” “sleep,” and “receiving status of medical care” identified during counseling with checklists are in Table 16.

115 (51.3%) have physical health problems and 94 (45.4%) have sleep problems.

As for receiving status of medical treatment, 24 (11.7%) are visiting mental clinics/psychiatrists, 151 (73.7%) are visiting medical facilities other than mental clinics or psychiatrists.

Table 16: Health status of those who received telephone counseling (among mail support target)

	Total		Based on the scores		Items other than scores	
Support provided	255		214		41	
Physical condition						
Good	109	(48.7%)	88	(47.3%)	21	(55.3%)
Bad	115	(51.3%)	98	(52.7%)	17	(44.7%)
Unclear	31	—	28	—	3	—
Changes in physical condition						
Improved	19	(9.4%)	16	(9.5%)	3	(8.8%)
No change	158	(78.2%)	134	(79.8%)	24	(70.6%)
Worsened	25	(12.4%)	18	(10.7%)	7	(20.6%)
Have not had problems	0	(0.0%)	0	(0.0%)	0	(0.0%)
Unclear	53	—	46	—	7	—
Sleeping habit						
Good	113	(54.6%)	91	(53.2%)	22	(61.1%)
Bad	94	(45.4%)	80	(46.8%)	14	(38.9%)
Unclear	48	—	43	—	5	—
Changes in sleep						
Improved	15	(7.9%)	12	(7.6%)	3	(8.8%)
No change	168	(88.0%)	139	(88.5%)	29	(85.3%)
Worsened	5	(2.6%)	4	(2.5%)	1	(2.9%)
Have not had problems	3	(1.6%)	2	(1.3%)	1	(2.9%)
Unclear	64	—	57	—	7	—
Treatments						
Psychiatry or p	24	(11.7%)	21	(12.4%)	3	(8.6%)
Other	151	(73.7%)	126	(74.1%)	25	(71.4%)
No	30	(14.6%)	23	(13.5%)	7	(20.0%)
Unclear	50	—	44	—	6	—
Utilization of professional support						
Yes	68	(35.1%)	54	(33.8%)	14	(41.2%)
No	126	(64.9%)	106	(66.3%)	20	(58.8%)
Unclear	61	—	54	—	7	—
Depression						
Yes	47	(23.3%)	40	(23.8%)	7	(20.6%)
No	155	(76.7%)	128	(76.2%)	27	(79.4%)
Unclear	53	—	46	—	7	—
Anxiety over the disaster/psychological trauma						
Yes	8	(4.1%)	6	(3.8%)	2	(5.7%)
No	187	(95.9%)	154	(96.3%)	33	(94.3%)
Unclear	60	—	54	—	6	—

"Unclear" are the cases confirmation was deemed unnecessary at the telephone support

Proportions do not include the number of 'Unclear.'

(C) The results of support (among mail support target)

The results of Telephone Counseling are in Table 17. After the telephone counseling, 236 (92.5%) were designated as 'Follow-up 1,' 15 (5.9%) as 'Follow-up 2,' 2 (0.8%) as 'Follow-up 3,' and 0 (0.0%) as 'Declined Support'.

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

Support provided	Total		Based on the scores		Items other than scores	
	255		214		41	
Follow-up 1	236	(92.5%)	196	(91.6%)	40	(97.6%)
Follow-up 2	15	(5.9%)	13	(6.1%)	2	(4.9%)
Follow-up 3	2	(0.8%)	2	(0.9%)	0	(0.0%)
Declined support	0	(0.0%)	0	(0.0%)	0	(0.0%)

Follow-up 1: Targets confirmed to be improving or self-managing their problems.
Follow-up 2: Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.
Follow-up 3: Targets whose status could not be confirmed.

The reasons for 'Follow-up 2' were categorized into the following: 10 (66.7%) for physical health problems, 5 (33.3%) for mental health problems, 1 (6.7%) for social maladaptation, 2 (13.3%) for isolation. (Table 18).

Table 18: Breakdown of the reasons for 'Follow-up 2 (among the mail support target)

Number of 'Follow-up 2'	Total		Based on the scores		Items other than scores	
	15		13		2	
Physical problems	10	(66.7%)	9	(69.2%)	1	(50.0%)
Mental problems	5	(33.3%)	4	(30.8%)	1	(50.0%)
Social maladaptation	1	(6.7%)	1	(7.7%)	0	(0.0%)
Isolation	2	(13.3%)	2	(15.4%)	0	(0.0%)
Other (checked residents' condition)	0	(0.0%)	0	(0.0%)	0	(0.0%)

The breakdown provides the total number.

The types of support provided are: "listened carefully," 230 (90.2%); "recommended seeing a doctor," 16 (6.3%); "advised lifestyle changes," 32 (12.5%); "offered psychological education," 10 (3.9%); "provided information by phone," 2 (0.8%); and "other (checked residents' condition)," 20 (7.8%) (Table 19).

Table 19: Categories of the support (among the mail support targets)

Support provided	Total 255		Based on the scores 214		Items other than scores 41	
Listened carefully	230	(90.2%)	190	(88.8%)	40	(97.6%)
Recommended seeing a doctor	16	(6.3%)	7	(3.3%)	9	(22.0%)
Advised lifestyle changes	32	(12.5%)	15	(7.0%)	17	(41.5%)
Offered psychoeducation	10	(3.9%)	5	(2.3%)	5	(12.2%)
Provided information by phone	2	(0.8%)	1	(0.5%)	1	(2.4%)
Provided information by phone	20	(7.8%)	17	(7.9%)	3	(7.3%)

The breakdown provides the total number.

Among those who needed continued support, 17 were categorized as “Follow-up support”, and 2 were as “Mail support” (Table 20).

Table 20: Continued support

Support provided	Total 255		Based on the scores 214		Items other than scores 41	
Follow-up support	17	(6.7%)	9	(4.2%)	8	(19.5%)
Referred to outside institution	0	(0.0%)	0	(0.0%)	0	(0.0%)
Mail support	2	(0.8%)	1	(0.5%)	1	(2.4%)
Directed to other departments	0	(0.0%)	0	(0.0%)	0	(0.0%)

Follow-up support: Participants requiring continued telephone counselling.

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 Centre.

6.4-3 Support by items (lifestyle) other than scores

(A) Characteristics of Support Targets

Of total 256 identified as Support Targets, 157 on the basis of HT/DM • BMI, 65 by HT/DM • Excessive drinking, 7 by HT/DM • BMI • Excessive drinking, and 27 by high-risk drinking. Among the Support Targets, 189 (73.8%) were male and 67 (26.2%) were female. As for age distribution, those in their 60s had the largest number which was 69 (27.0%), followed by those in their 50s which was 61 (23.8%) and those in their 40s was 53 (20.7%). For the area distribution, 204 (79.7%) lived within Fukushima Prefecture and 52 (20.3%) lived outside Fukushima (Table 21).

Table 21: Telephone Support Targets identified by items other than scores

(By sex, age group and area)

Support provided	Total	HT/DM・BMI	HT/DM・Excessive drinking	HT/DM・BMI・Excessive drinking	High-risk drinking
	256	157	65	7	27
Sex					
Male	189 (73.8%)	95 (60.5%)	63 (96.9%)	7 (100.0%)	24 (88.9%)
Female	67 (26.2%)	62 (39.5%)	2 (3.1%)	0 (0.0%)	3 (11.1%)
Age group					
15-19	1 (0.4%)	1 (0.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
20-29	11 (4.3%)	10 (6.4%)	0 (0.0%)	0 (0.0%)	1 (3.7%)
30-39	30 (11.7%)	28 (17.8%)	0 (0.0%)	0 (0.0%)	2 (7.4%)
40-49	53 (20.7%)	31 (19.7%)	15 (23.1%)	2 (28.6%)	5 (18.5%)
50-59	61 (23.8%)	32 (20.4%)	20 (30.8%)	1 (14.3%)	8 (29.6%)
60-69	69 (27.0%)	34 (21.7%)	23 (35.4%)	3 (42.9%)	9 (33.3%)
70-79	20 (7.8%)	15 (9.6%)	3 (4.6%)	1 (14.3%)	1 (3.7%)
80-	11 (4.3%)	6 (3.8%)	4 (6.2%)	0 (0.0%)	1 (3.7%)
Area of residence					
Within Fukushima	204 (79.7%)	124 (79.0%)	51 (78.5%)	6 (85.7%)	23 (85.2%)
Outside Fukushima	52 (20.3%)	33 (21.0%)	14 (21.5%)	1 (14.3%)	4 (14.8%)

Age groups are calculated on the basis of 1 April 2016.

Areas are at the time of sending survey questionnaires in FY 2016.

(B) The status of support Targets

Telephone counselling was provided to 214 targets in total: 131 with ‘HT/DM • BMI’, 54 with ‘HT/DM • Excessive drinking,’ 7 with ‘HT/DM • BMI • Excessive drinking,’ and 22 with ‘high-risk drinking.’

In the telephone counseling sessions, we asked how aware they were 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

Support provided	HT/DM・BMI	HT/DM・Excessive drinking	HT/DM・BMI・Excessive drinking	High-risk drinking
Total 214	131	54	7	22
Exercise	71 (54.2%)	16 (29.6%)	3 (42.9%)	10 (45.5%)
Dietary habits	76 (58.0%)	22 (40.7%)	3 (42.9%)	10 (45.5%)
Drinking, smoking	29 (22.1%)	31 (57.4%)	6 (85.7%)	14 (63.6%)

Multiple answers allowed.

(C) The results of support (other than scores)

At the first telephone support, we found out that 103 (48.1%) had been receiving medical care. The number of those who require continued support, such as advice on lifestyle habits, was 111 (51.9%) in total: 72 with 'HT/DM • BMI,' 24 with 'HT/DM • Excessive drinking,' 6 with 'HT/DM • BMI • Excessive drinking,' and 9 with 'high-risk drinking.' (Table 23.)

Table 23: Results of the first telephone counseling

Support provided	Total	HT/DM・BMI	HT/DM・Excessive drinking	HT/DM・BMI・Excessive drinking	High-risk drinking
	214	131	54	7	22
No follow-up support	103 (48.1%)	59 (45.0%)	30 (55.6%)	1 (14.3%)	13 (59.1%)
Follow-up support	111 (51.9%)	72 (55.0%)	24 (44.4%)	6 (85.7%)	9 (40.9%)

Multiple answers allowed.

Among the 111 participants requiring follow-up support, we have provided follow-up support for 86 (77.5%) in total: of which 51 with 'HT/DM • BMI,' 22 with 'HT/DM • Excessive drinking,' 5 with 'HT/DM • BMI • Excessive drinking,' and 8 with 'high-risk drinking.' The number of those who were confirmed to have sought professional help or made lifestyle changes was 62 (72.1%) in total: 37 with 'HT/DM • BMI,' 15 with 'HT/DM • Excessive drinking,' 3 with 'HT/DM • BMI • Excessive drinking,' and 7 with 'high-risk drinking.' The breakdown of those who improved was: 29 by doctor examination, 50 by lifestyle improvement, and 19 by both of these (Table 24).

Table 24: Results of follow-up support

Support provided	Total	HT/DM・BMI	HT/DM・Excessive drinking	HT/DM・BMI・Excessive drinking	High-risk drinking
	111	72	24	6	9
Participants receiving follow-up support	86 (77.5%)	51 (70.8%)	22 (91.7%)	5 (83.3%)	8 (88.9%)
Did not improve	24 (27.9%)	14 (27.5%)	7 (31.8%)	2 (40.0%)	1 (12.5%)
Improved	62 (72.1%)	37 (72.5%)	15 (68.2%)	3 (60.0%)	7 (87.5%)
Breakdown*					
a.Visited doctors	29 (46.8%)	14 (37.8%)	7 (46.7%)	3 (100.0%)	5 (71.4%)
b. Improved lifestyle	50 (80.6%)	35 (94.6%)	11 (73.3%)	2 (66.7%)	2 (28.6%)
a & b	19 (30.6%)	12 (32.4%)	3 (20.0%)	2 (66.7%)	2 (28.6%)

Multiple data allowed for improved content.

7. Summary

Frequently raised problems in telephone support for children are: “school related issues,” “anger, irritation and violence,” and “physical health problem” (parents raised “school related issues,” “physical health problems,” and “sleep”; for adults, “physical health problems,” “sleep,” and “depression” prevailed.

As for support provided to children, “listening carefully” was the most frequent and followed by “Psychological education”. For adults, “listening carefully” was the most common, followed by “lifestyle instruction” and “recommended seeing a doctor”.

As a result of telephone support, those categorized as “Follow-up 2 (Support Targets not fully recovering from health problems, emotional aftermath of the disaster, adjustment problems, etc.)” were 5.5% among children, declined from FY2015 survey (13.6%). The result for adults was 8.6%, declined from FY2015 survey (12.5%). The mail support target was 5.9%, declined from FY2015 survey (6.6%).

The reasons for categorizing cases to “Follow-up 2” for children are “mental problem,” “school maladjustment” (for guardians, “child rearing” was the most), for adults, “physical problem” and “mental problem” were the major reasons.

Where deemed necessary by telephone support, we moved on to “follow-up support” and “referred to outside institution” to continue watching over and confirming the status quo, and to connect cases to regional medical services. Especially, of those to whom we provided continued support based on lifestyle support standards, 70% showed changes such as visits to doctors and lifestyle improvement, indicating a certain level of effect of telephone support.

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.