

**"We will promote the mental and physical health of residents of the Evacuation Areas, etc."**

Due to harsh experiences of the Great East Japan Earthquake and the accident at TEPCO's Fukushima Daiichi NPS and subsequent life as evacuees, many people are experiencing anxiety and stress. Accordingly, Fukushima Prefecture commenced the Mental Health and Lifestyle Survey with the aim of accurately understanding the mental and physical problems of residents and meticulously providing each of them with proper health, medical and welfare services.

Prepared based on the material for the 45th Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

Many of the residents whose houses are located in municipalities designated as Evacuation Areas were forced to evacuate and live as evacuees for a prolonged period of time. They have experienced drastic changes in their living environment and have been forced to change their individual lifestyles as well. In order to carefully watch not only the physical disorders but also mental problems of these residents and offer them appropriate support and build a better system therefor, Fukushima Prefecture has been conducting the Mental Health and Lifestyle Survey.

Included in this reference material on March 31, 2013

Updated on March 31, 2023

**[Eligible subjects]**

- Residents who were registered at any of the covered areas from March 11, 2011, to April 1, 2012 (also after moving out of the covered areas)
- Residents registered at any of the Evacuation Areas, etc. as of April 1 of the fiscal year during which the survey is conducted
- Others, as warranted, based on Basic Survey results, even if the above conditions are not met

**[Covered areas]**

Hirono Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, Iitate Village, Minamisoma City, Tamura City, Kawamata Town, and parts of Date City (areas containing Specific Spots Recommended for Evacuation)

**[Method]**

Inquiry sheets: Self-reporting responses or responses from guardians submitted by post or online

**[Major survey items]**

- Present physical and mental status
- Lifestyle (diet, sleep, smoking, and exercise habits)
- Present living conditions (adults)

**[Measures for support]**

Collected responses are evaluated and analyzed by the staff which include physicians of Fukushima Medical University. If respondents are considered to require counseling and support regarding their mental health and lifestyle, support by phone is provided by the "Mental and Physical Health Support Team," which consists of staff including certified public psychologists, public health nurses, and clinical nurses.

When professional medical care is considered to be required through the support by phone, registered physicians of medical institutions in Fukushima Prefecture (\*see p.153 of Vol. 2, "Mental Health and Lifestyle Survey: Outline (2/2)") are introduced.

When continued support is necessary, required support will be discussed and offered in collaboration with the municipality where the person had originally resided before evacuation.

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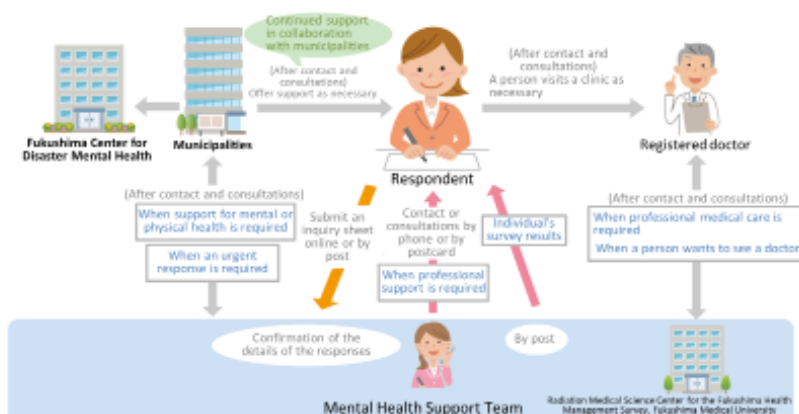
As in the case of the Comprehensive Health Checkup, the Mental Health and Lifestyle Survey also covers residents who were registered, as of March 11, 2011, and as of April 1 of the relevant survey year, at any of the municipalities that were designated as Restricted Areas, Deliberate Evacuation Areas or Evacuation-Prepared Areas in Case of Emergency or at any of the areas containing Specific Spots Recommended for Evacuation at the time of the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS. Others, as warranted, based on Basic Survey results are also covered, even if the above conditions are not met. Different inquiry sheets are used depending on the age groups, with the aim of taking required measures more appropriately. Children are divided into four age groups: those aged zero to 3; those aged 4 to 6; elementary school students; and junior high school students. People aged 16 or older are categorized as adults.

In addition to questions concerning mental problems, such as depression and traumatic stress, the survey items include questions about changes in lifestyles, such as diet, sleep, drinking, smoking, and exercise habits.

Included in this reference material on March 31, 2013

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- Procedures from submission of an inquiry sheet to receipt of support -  
Relevant organizations and doctors are collaboratively offering care.



\* For people who are considered to require continued support, care is provided in collaboration with regional registered doctors and municipalities, etc.

\* Survey results are sent individually from FY2014.

\* Registered doctors: Psychiatrists and pediatricians, etc., who have received lectures concerning disaster mental health and radiation medical science:  
As of July 1, 2022, there are 121 registered doctors in 78 medical institutions.

Number of people who received support by phone

	Children	Adults
FY2011	1,180	6,310
FY2012	623	5,991
FY2013	473	3,913
FY2014	327	3,053
FY2015	250	2,567
FY2016	181	2,382
FY2017	210	2,410
FY2018	167	2,404
FY2019	143	2,117
FY2020	117	2,213

Number of people who received support in writing

	Children	Adults
FY2011	1,066	10,898
FY2012	800	10,168
FY2013	752	7,664
FY2014	517	6,244
FY2015	435	6,075
FY2016	336	6,098
FY2017	375	5,545
FY2018	297	4,994
FY2019	314	4,408
FY2020	253	4,716

Prepared based on the materials for the 11th, 15th, 19th, 22nd, 26th, 27th, 31st, 32nd, 35th, 38th, 39th, 42nd and 45th  
Prefectural Oversight Committee Meetings for Fukushima Health Management Survey

Analysis results and advice based thereon are individually sent to people who have submitted inquiry sheets. For respondents who are considered to require professional support as a result of analyzing their responses, clinical psychotherapists, public health nurses, or clinical nurses, etc. make a phone call to offer support concerning problems with their mental health and lifestyles. If necessary, brochures containing health-related information and contacts for consultation services are provided by mail.

Remarks by people who have received support by phone include, "I am glad that I can confess what I cannot say to my family," or, "I am relieved to know that I can call this number to make consultations whenever I feel depressed."

Regarding those in need of continued support or professional medical care, support is offered in collaboration with municipalities, the Fukushima Center for Disaster Mental Health and registered doctors who can provide professional advice.

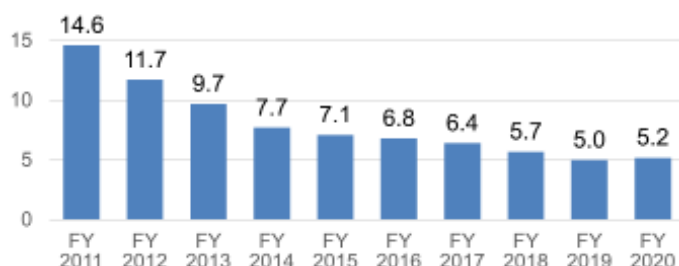
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**[Mental health of adults (aged 16 or older)]**

- Percentage of people who are considered to require support for their depressions and anxieties

(%) 20

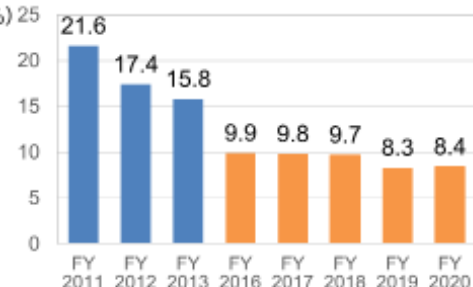


Measurement scale: **K6\***

\* Respondents reply to each question of a six-item questionnaire concerning their depression and anxieties with a score from zero to four points. When the total is 13 points or over, a mood disorder or anxiety disorder is suspected.

- Percentage of people who are considered to require support for their traumatic stresses due to the disaster

(%) 25



Measurement scale: **PCL\*** (FY2011 to FY2013)

**PCL-4\*\*** (FY2016 to FY2020)

\* Respondents reply to each question of a 17-item questionnaire concerning their frequently arising problems and need arising from their disaster experience (traumatic stress) with a score from one to five. When the total is 44 points or over, PTSD is suspected.

\*\* Respondents reply to each question of a 4-item questionnaire with a score from one to five points. When the total is 12 points or over, PTSD is suspected.

In order to ease psychological burdens associated with replying to the questionnaire, the FY2014 and FY2015 surveys did not include PCL-related questions.

Prepared based on the materials for the 45th Prefectural Oversight Committee Meetings for Fukushima Health Management Survey

K6<sup>1</sup> is used as a scale to evaluate the levels of mental health of adults (aged 16 or older). K6 still remains at a high level (bad), compared with the value (3.0%) in a prior study in Japan (Kawakami, 2007), although the values have been declining (improving) compared with the FY2011 survey and the FY2012 survey.

Females show higher values than males. By age group, values for younger people tend to be higher.

As a scale to evaluate traumatic stress of adults (aged 16 or older), PCL<sup>2</sup> is used. PCL declined (improved) significantly in the surveys in FY2016 to FY2020, compared with the results of the surveys in FY2011 to FY2013. However, it was found that nearly 10% of the examinees still have strong traumatic stress.

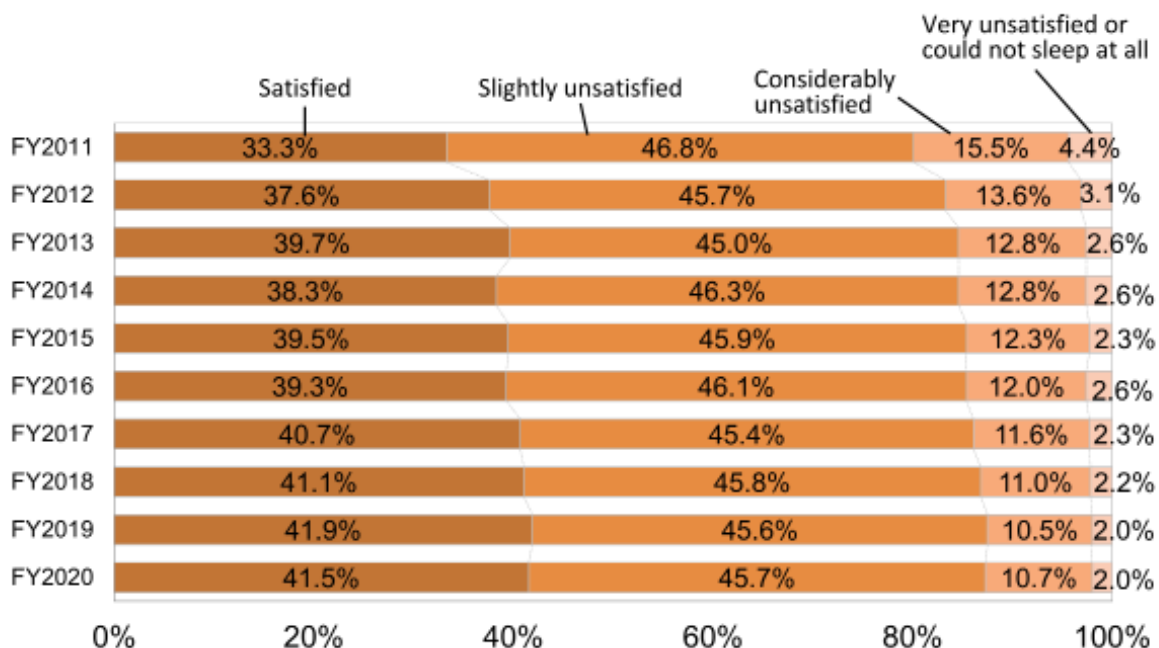
By gender, females generally show higher values than males, and values tend to become higher for older examinees.

1. K6: Respondents reply to each question of a six-item questionnaire concerning the frequencies with which they felt depressed or anxious during the past 30 days (such as "Have you felt extremely nervous?" or "Have you felt desperate and helpless?"). This survey targets people aged 16 or older to evaluate risks of any mood or anxiety disorder.
2. PCL (Post-Traumatic Stress Disorder Checklist): Respondents reply to each question concerning their mental and physical reactions (traumatic stress) during the past 30 days in relation to their disaster experience. This survey also targets people aged 16 or older to evaluate individuals' levels of traumatic stress. The survey was suspended for two years after being conducted in FY2011 to FY2013 and was resumed in FY2016 by significantly reducing questionnaire items (it has been confirmed that the reliability of this scale is unchanged even with fewer questionnaire items).

Included in this reference material on March 31, 2015

Updated on March 31, 2023

[Levels of satisfaction on sleep during the latest one-month period] Those aged 16 or older



Prepared based on the materials for the 45th Prefectural Oversight Committee Meetings for Fukushima Health Management Survey

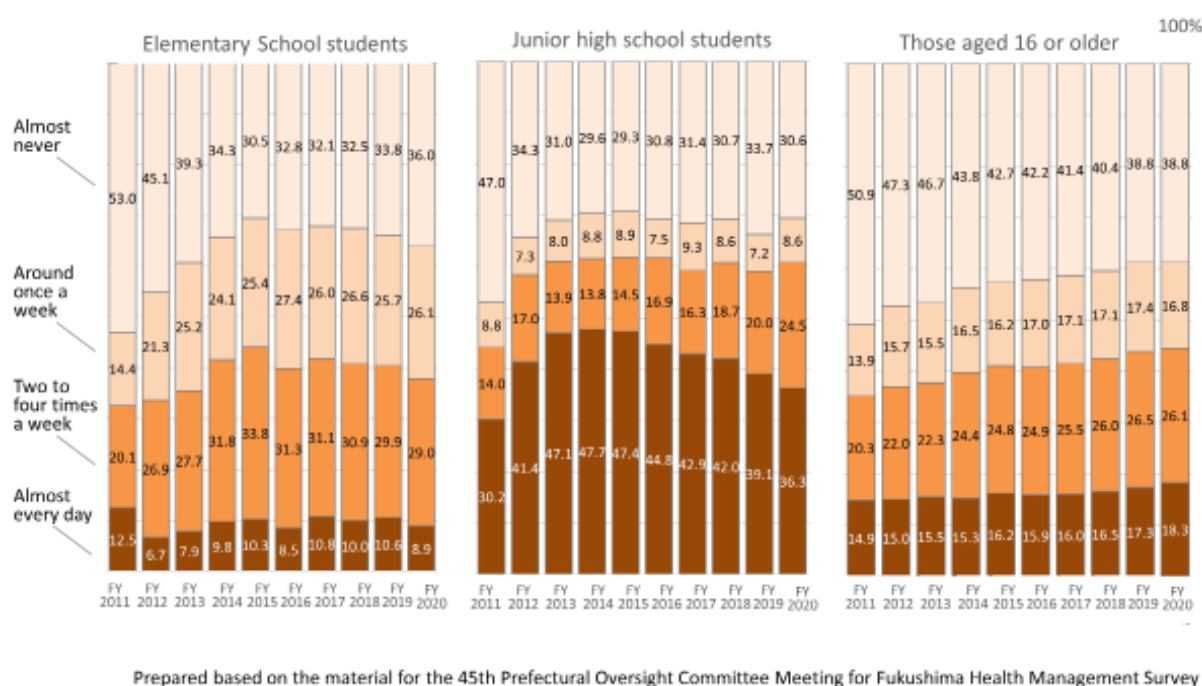
Sleep is a significant factor that exerts influence on various chronic diseases such as high blood pressure or diabetes, as well as affecting people's mental health.

The figure shows that slightly less than 60% of the respondents are still somewhat unsatisfied with their sleep, while the number of those satisfied with their sleep is gradually increasing.

Included in this reference material on March 31, 2016

Updated on March 31, 2023

[Percentages concerning daily exercises]



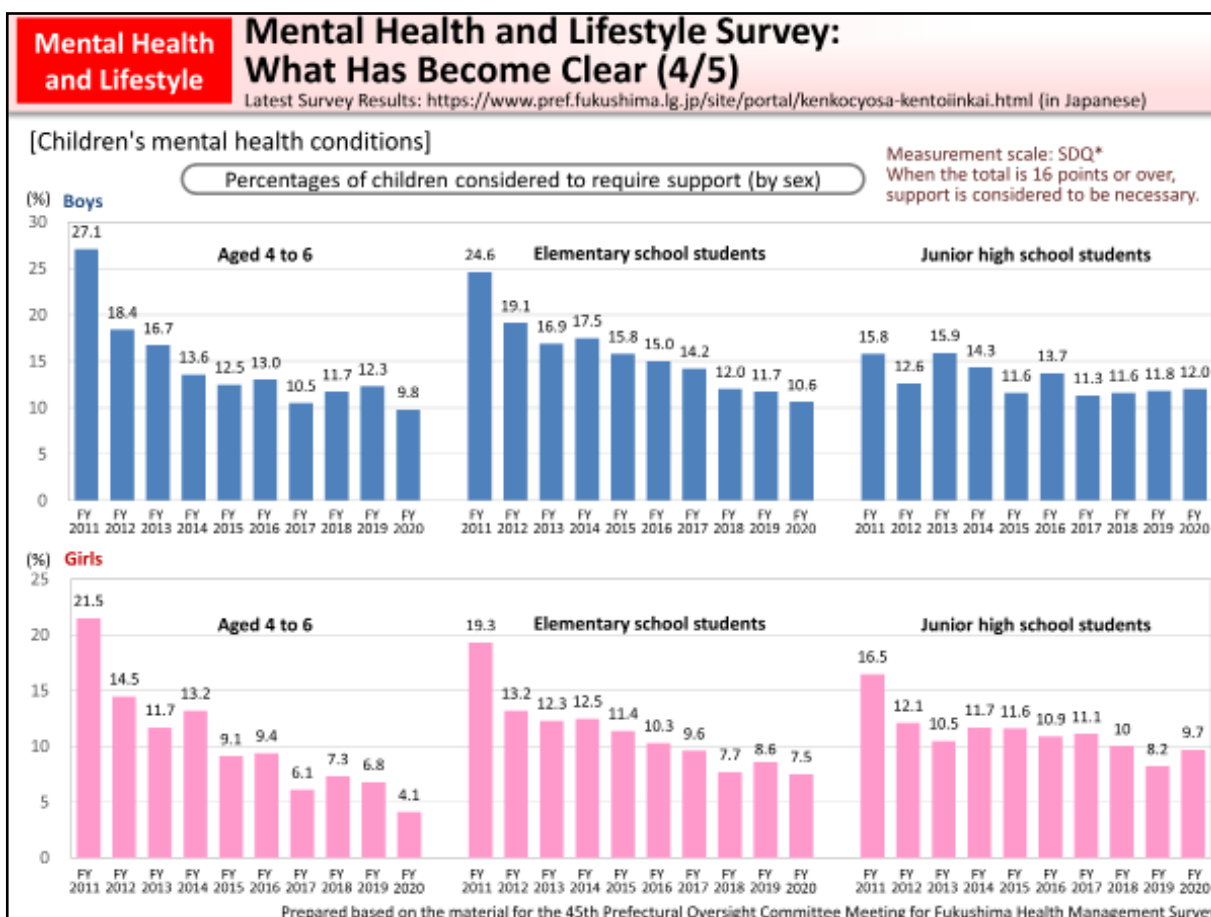
Elementary school students and junior high school students have come to have more chances for exercises gradually since FY2012, showing an improving trend. However, no significant change was observed from FY2016 to FY2020. The frequency of exercise has been increasing gradually among adults (aged 16 or older).

In particular, exercises are considered to exert a significant influence on the growth of elementary school students and junior high school students, and exercise habits are also very important for adults for improving their mental health and preventing lifestyle-related diseases.

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As an indicator to evaluate children's mental health conditions, SDQ<sup>1</sup> is utilized.

Compared with the percentage of children showing an SDQ score of 16 or over (9.5%) reported in a prior study in Japan (Matsuishi et al., 2008), the percentages of high-risk girls were almost the same or lower for all groups but the percentages of high-risk boys were still higher for all groups in the FY2020 survey.

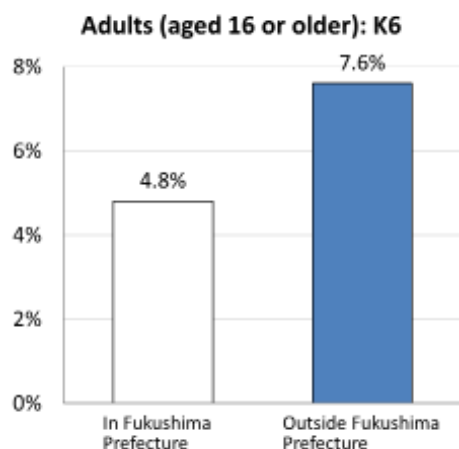
In the FY2020 survey, the percentages of high SDQ scores decreased for all categories compared with the results of the FY2011 survey. However, the improvement slowed down and the percentages remained almost unchanged from those of the FY2012 survey.

1. SDQ (Strengths and Difficulties Questionnaire): Respondents reply to each question of a 25-item questionnaire concerning children's moods and behavior during the past six months (such as "Gives due consideration to other's feelings" or "Is restless and cannot stay still for a long time"). This survey covers those aged 4 to 15 to judge whether they need professional support or not.

Included in this reference material on March 31, 2015

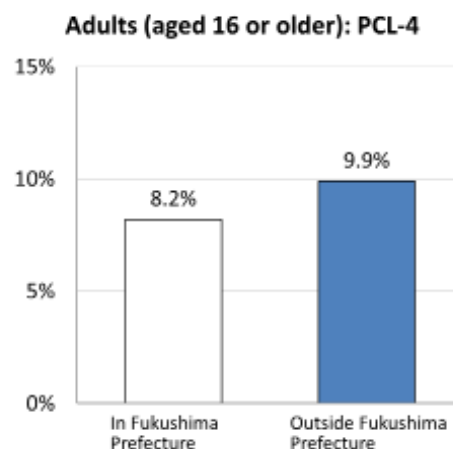
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[Mental health by place of residence at the time of the survey (in and outside Fukushima Prefecture): Percentages of people considered to require support]



Measurement scale: K6

Respondents reply to each question of a 6-item questionnaire concerning their depression and anxieties with a score from zero to four. When the total is 13 points or over, a mood disorder or anxiety disorder is suspected.



Measurement scale: PCL-4

Respondents reply to each question of a 4-item questionnaire concerning their occasionally arising mental and physical reactions originated from their disaster experience (traumatic stress) with a score from one to five. When the total is 12 points or over, PTSD is suspected.

Prepared based on materials for the 45th Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

Respondents to the survey for FY2020 were classified by their places of residence into those who resided in Fukushima Prefecture and those who resided outside Fukushima Prefecture at the time of the relevant survey, and a comparison was made concerning their mental health conditions using measurement scales, K6 and PCL-4. As a result, the percentage of people considered to require support based on the K6 scale among adults (aged 16 or over) tends to be higher for those outside Fukushima Prefecture than those in Fukushima Prefecture. Compared with the relevant percentage (3.0%) in a prior study in Japan (Kawakami, 2007), the percentage for those in Fukushima Prefecture was approximately 1.6 times and that for those outside Fukushima Prefecture was approximately 2.45 times higher. In the same manner, the percentage of people considered to require support based on the PCL-4 scale among adults (aged 16 or over) tends to be higher for those outside Fukushima Prefecture than those in Fukushima Prefecture.

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