

Report on Life and Health of Parents and Children after Fukushima Nuclear Power Plant Accident

Thank you for your cooperation in conducting the 3rd wave of the “Survey on Life and Health of Parents and Children after Fukushima Nuclear Power Plant Accident,” following the 1st (2013) and the 2nd (2014) surveys. We will send you the report of the results. This report summarizes major points of the survey results, with the aim of informing you about the overall life and health tendencies of parents and children in Fukushima. “Fukushima Child Health Project” is a cohort study designed to continue regular assessment of life and health conditions of children and parents in Fukushima, in order to identify measures required for developing an environment in which children can grow up in good health.

Thank you for your kind attention.

November, 2015

The 3rd wave of the “Survey on Life and Health of Parents and Children after the Fukushima Nuclear Power Plant Accident in 2015”

- Survey methods
 - Investigation period: Questionnaires were sent on January 8th 2015, and returned between January 15th to November 17th
 - Survey method: Mail survey
 - Participants: Among children born in the fiscal year 2008 (from April 2nd 2008 to April 1st 2009) and their mothers living in nine cities, towns, and villages in Nakadori region (Fukushima City, Koori Town, Kunimi Town, Date City, Koriyama City, Nihonmatsu City, Otama Village, Motomiya City, and Miharu Town), those that participated in the 2nd wave of the survey conducted in 2014 (N =1,605)
 - Response results: The number of responses were 1,207, (response rate of 75.2%)
- Notes on data
 1. Questionnaires are still being sent back by the participants. Questionnaires that were returned by May 21st (N=1,204) were analyzed on this occasion.
 2. Values in the graphs generally indicate the percentage of all responses (N=1,204). The data are rounded off to the first decimal place. Moreover, very small values are not indicated in graphs. Therefore, the total is not always 100%.
 3. Please inform us in advance if you cite any data from this survey.

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1. Responses to the survey

1.1 Over 70% of participants in the 2nd survey responded to this survey.

Participants in this survey were children born in fiscal year 2008 (from April 2nd 2008 to April 1st 2009) living in nine cities, towns, and villages in Nakadori region (Fukushima City, Koori Town, Kunimi Town, Date City, Koriyama City, Nihonmatsu City, Otama Village, Motomiya City, and Miharu Town) those that participated in the 1st (2013) and 2nd (2014) surveys. Over 75% of the participants of the 2nd survey responded to the 3rd survey.

Table 1-1: Responses based on districts

Districts	The 1 st survey (2013)			The 2 nd survey (2014)			The 3 rd survey (2015)		
	A	B	C	A	B	C	A	B	C
Fukushima City	2137	883	41.3	883	525	59.5	525	378	72.0
Koori Town	70	34	48.6	34	22	64.7	22	19	86.4
Kunimi Town	63	27	42.9	27	13	48.1	13	11	84.6
Date City	404	175	43.3	175	118	67.4	118	88	74.6
Koriyama City	2644	1076	40.7	1076	629	58.5	629	476	75.7
Nihonmatsu City	397	176	44.3	176	111	63.1	111	76	68.5
Otama Village	81	44	54.3	44	27	61.4	27	21	77.8
Motomiya City	290	125	43.1	125	82	65.6	82	59	72.0
Miharu Town	105	34	32.4	34	15	44.1	15	10	66.7
Others *		54		54	63		63	67	
Total	6191	2628	42.4	2628	1605	61.1	1605	1205	75.1

A: The number of participants B: The number of responses C: Response rates

- “Others,” refer to people that were registered in the resident register of the nine districts from October to December in 2012 and moved out from the district at the time of each survey.
- The number of responses from “others” exceeded the number of participants in the 2nd (2014) and 3rd (2015) surveys, because questionnaires were sent to addresses entered in the questionnaire of the last survey and if they had moved out of the nine districts they were classified as “others.”

2. Life of children

2.1 Playing outside “within 30 minutes” has decreased to less than 30%

Percentage of children that “never play outside” just after the accident to until six months after the accident was 62.8%. It decreased to 11.4% two years later (2013) and reached approximately 2%, three years later (2014). It is suggested that time playing outside has been increasing (Figure 2-1). On the other hand, even in 2015, four years after the accident, nearly 30% of the participants responded that they play outside for less than 30 minutes a day. It is suggested that some people are careful about playing outside even now.

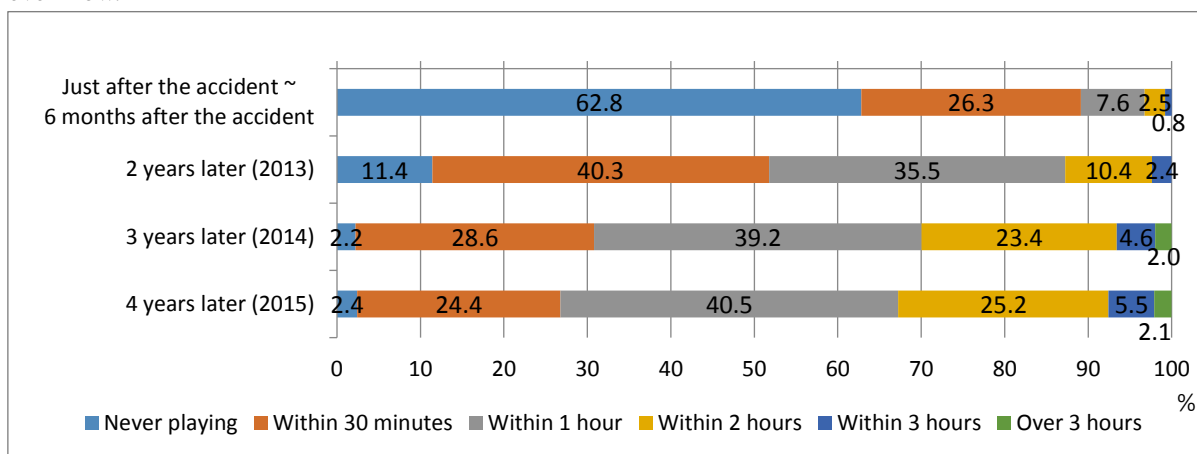


Figure 2-1: Changes in time playing outside

2.2 Time watching television among others is long

Figure 2-2 shows the current time spent playing outside and time watching TV among others. It can be seen that 42.4% of the respondents watch television, videos, and DVDs for two hours or less. According to the survey conducted in 2013 with children (N=60,000, aged 3-5 years) living in Osaka, attending nursery schools or kindergartens, 30.2% of five-year-old boys and 27.8% of five-year-old girls watched TV for over two hours (HP of Osaka Prefectural Government: <http://www.pref.osaka.lg.jp/kosodateshien/kids/chosa-kekka.html>). Compared to this data, it is suggested that children in this survey tended to watch TV among others for a longer time than children living in other prefectures.

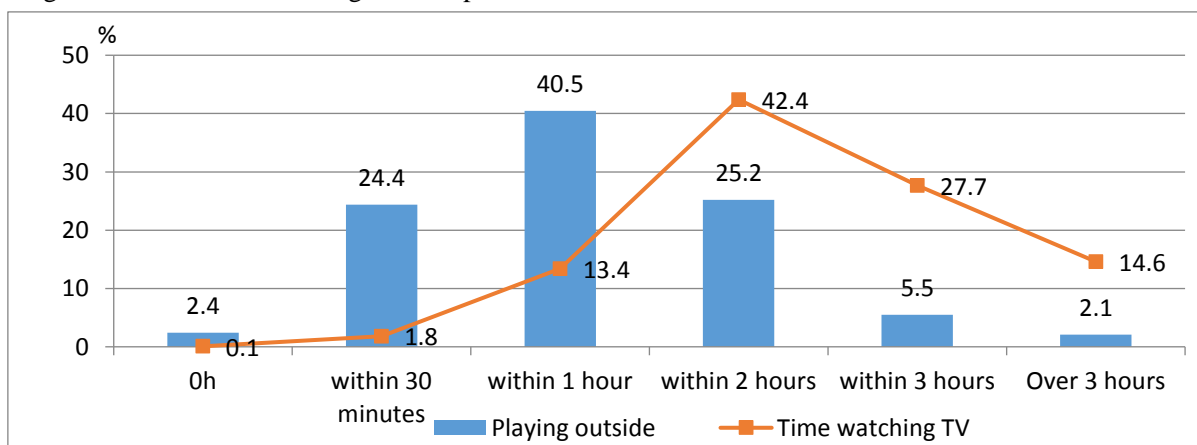


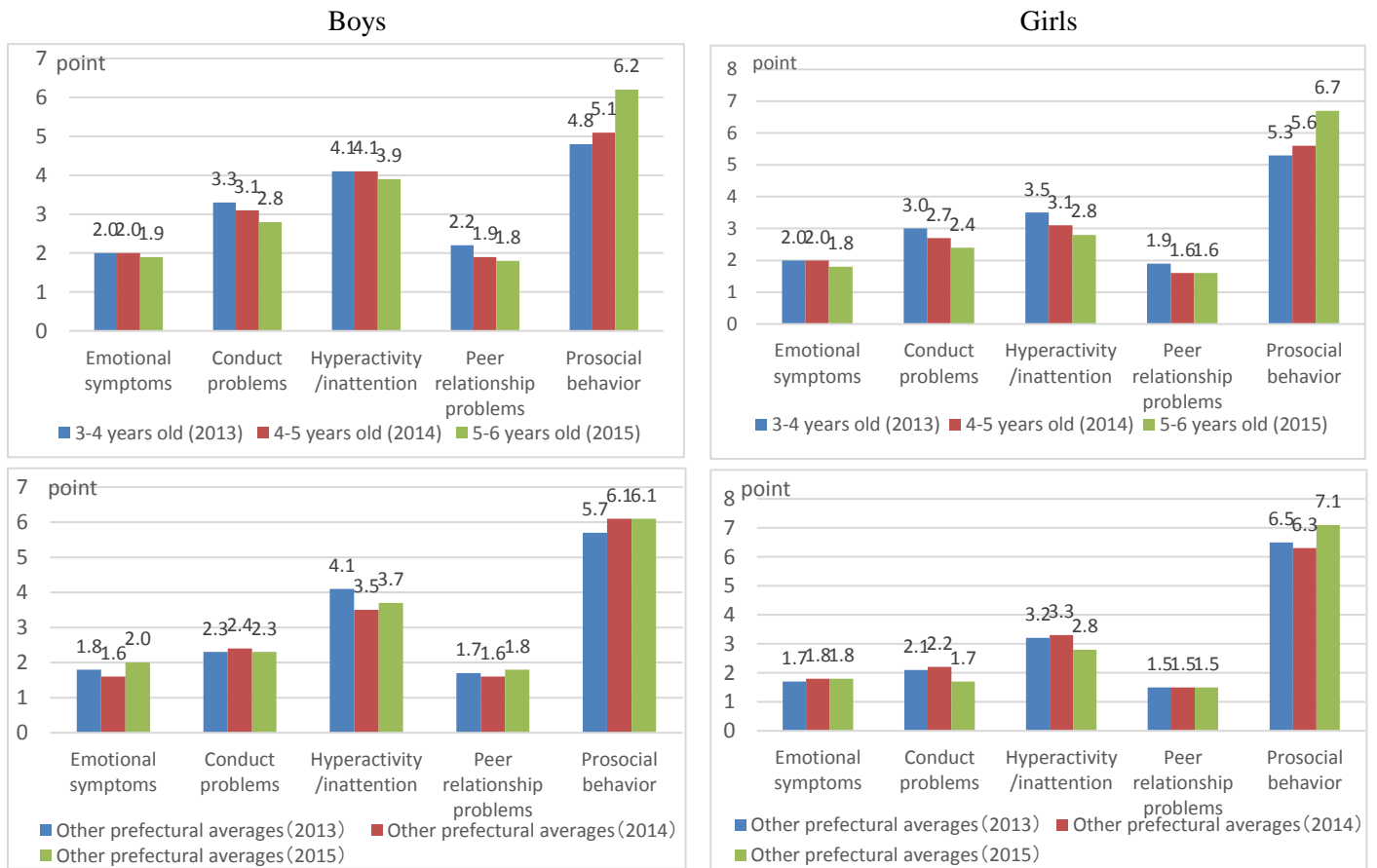
Figure 2-2: Time playing outside and watching TV among others in 2015

3. Children's development and health

3.1 It is nearly equal to the national average in all areas

Conditions of children's adaptation and mental health were comprehensively evaluated using the Japanese version of Strength and Difficulties Questionnaire (SDQ), which is an internationally used questionnaire that consists of five scales: "emotional symptoms," "conduct problems," "hyperactivity/inattention," "peer relationship problems," and "prosocial behavior." Emotional symptoms include emotional problems such as depression and anxiety, conduct problems include oppositional defiant disorders and antisocial behaviors, hyperactivity/inattention includes carelessness and lack of concentration, peer relationship problems include being isolated by friends and being unpopular, and prosocial behavior includes cooperation and empathy. When the score of prosocial behaviors is low and the scores of other scales are high, the need for support is highly recommended.

Figure 3-1 shows the results of the Japanese version of the SDQ in the 1st (2013), 2nd (2014), and 3rd (2015) surveys. It can be seen that the need for support for both boys and girls decreased in every domain as they got older. The results of research conducted by Noda et al. in other prefectures (Re-examination of the Japanese version of the strength and difficulties questionnaire, parent rating form; "Seishin Igaku (Psychiatry)" 2012) were compared with the results of this survey, which indicated that participants in this study showed a higher support needs than those in other prefectures until 2014. However, the difference decreased in 2015 and became nearly equal to the national average.



3-1: Children's adaptation and mental health

3.2 Children’s health conditions are generally positive

The percentage of participants responding that children’s health conditions are “good” was 57.8% in 2013, 56.8% in 2014, and 64.3% in 2015 (the 3rd survey). When the response, “rather good,” is included, approximately 97% of children were seen to be in good health

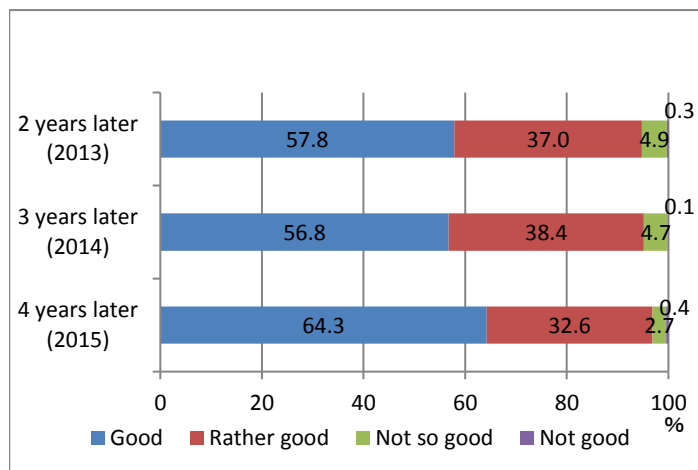


Figure 3-2: Children’s health conditions

3.3 Most physical symptoms have decreased

The percentage of children that have “often,” or “sometimes” displayed physical symptoms during the last six months decreased for most items compared to the results of 2013 and 2014 surveys. On the other hand, the percentage of “headaches” increased yearly. Moreover, “nosebleeds” increased slightly.

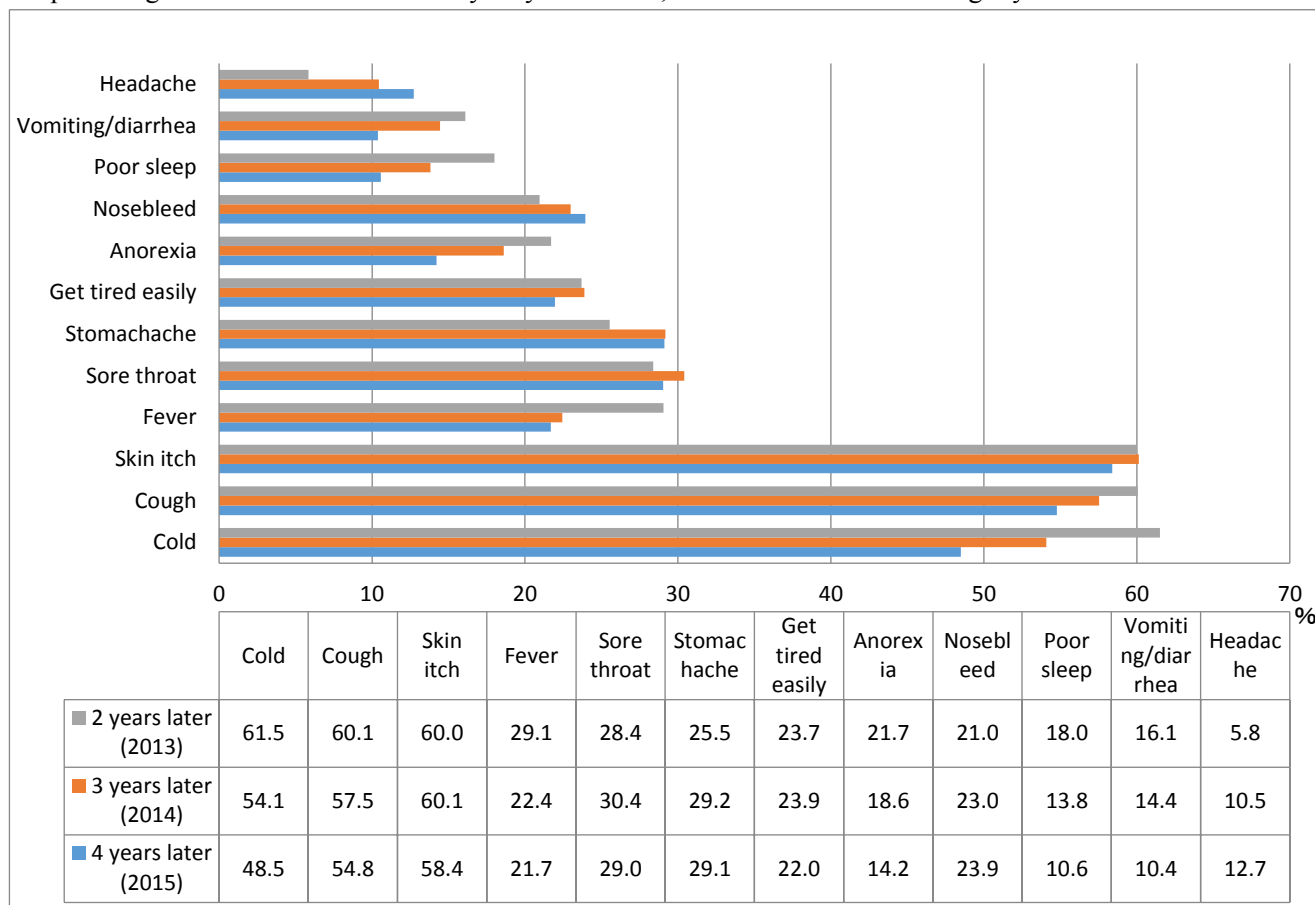


Figure 3-3: Children’s physical symptoms

4. Mothers' mental and physical health

4.1 Mothers' health conditions were also generally good

The percentage of mothers responding that their health conditions during the last six months were “good” or “rather good” was 77.3% in 2013, 78.7% in 2014, and 81.3% in 2015 (the 3rd survey). Mothers' health conditions have been improving yearly. However, nearly 20% of the participants responded that their health conditions were “not so good” or “not good” in 2015. It would be important to carefully watch this situation in the future.

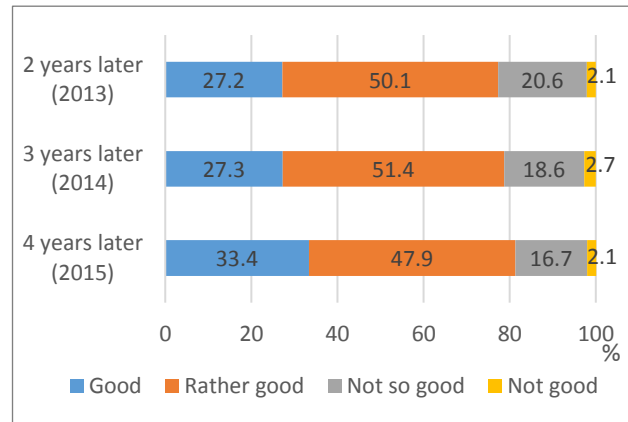


Figure 4-1: Health condition of mothers

4.2 Most physical symptoms have stabilized, or decreased

Figure 4-2 shows the percentage of mothers “often” or “sometimes” having subjective symptoms during the last six months. From 2013 to 2015, “stiff shoulders,” “lower back pain,” and “headache” were ranked as the top three physical symptoms. This ranking is identical to that of subjective symptoms with women in their 30s, indicated in the Comprehensive Survey of Living Conditions (Ministry of Health, Labor and Welfare, 2010). Though most of the symptoms have stabilized or decreased, just “nosebleeds” slightly increased.

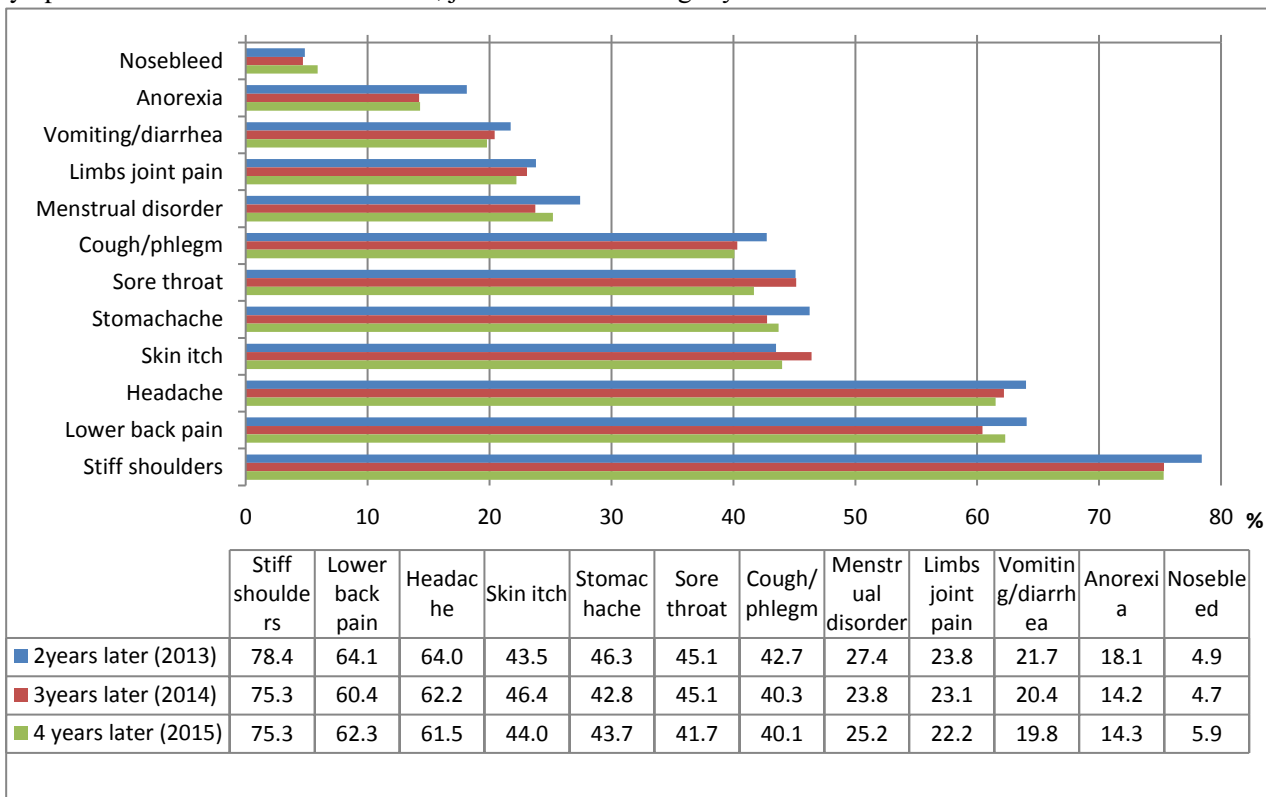


Figure 4-2: Subjective symptoms of mothers

4.3 Effects of the nuclear accident still remain, although mental conditions of mothers have stabilized

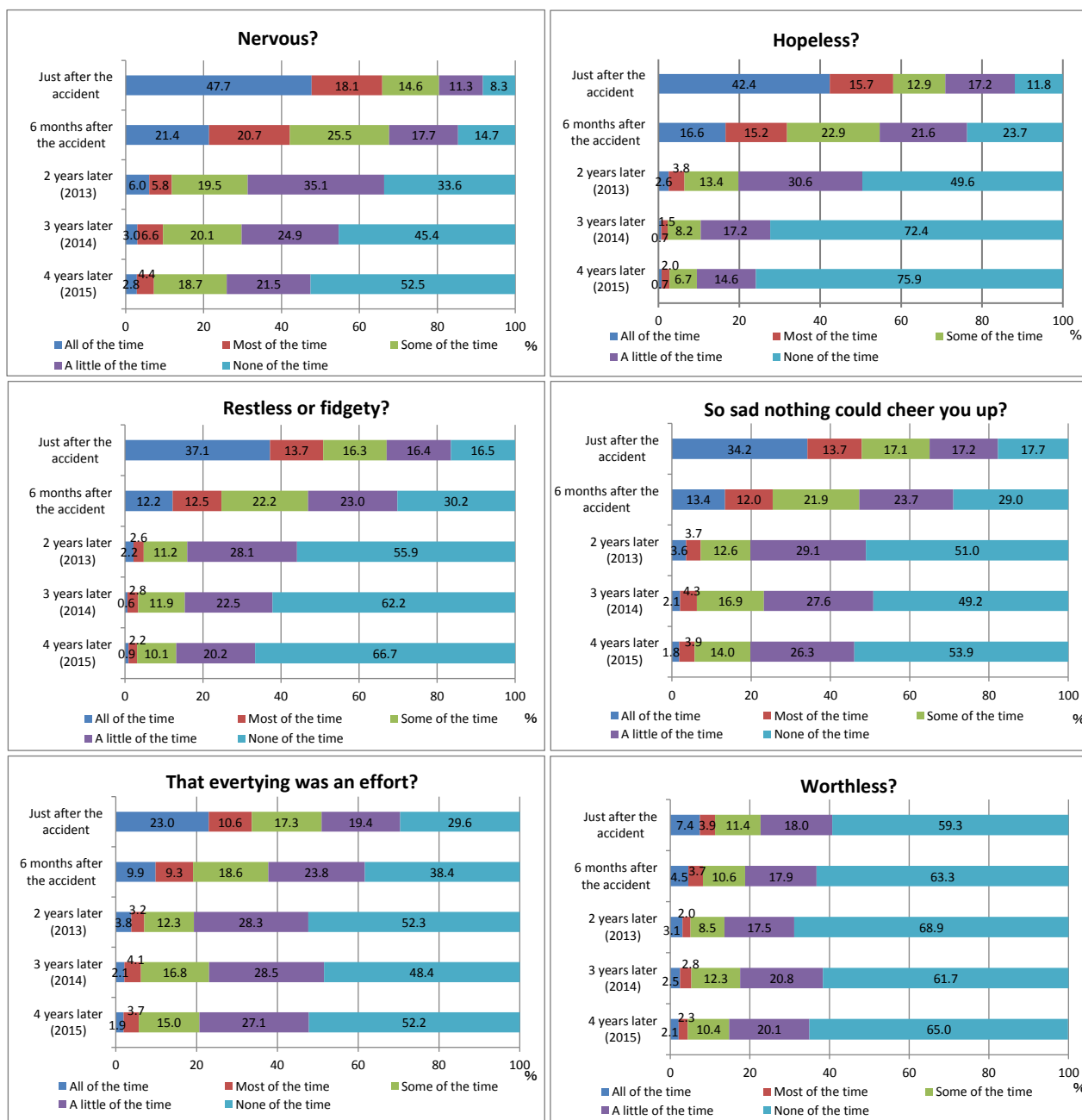


Figure 4-3: Changes in mental health conditions of mothers

Figure 4-3 shows changes in mothers' mental health conditions. The following question items are widely used for assessing indices expressing the ratio of mental health problems, including psychological stress: "How frequently have you experienced the following incidents during the last one month?" The results indicated that the percentage of the response "all of the time," decreased with the time course for most of the items. Generally speaking, it can be said that mental conditions of mothers have stabilized. However, the percentage of "none of the time" remained at 50-60% for the following three items: "nervous," "so sad nothing could cheer you up," and "that everything was an effort." It might be possible that memory of the disaster, anxiety about health caused by the nuclear accident, and anxiety about the future still affect the mental health condition of mothers even now, although four years have passed since the accident.

5. Life following Fukushima nuclear accident

5.1 Perception about the severity of contamination in the region has been declining

Figure 5-1 shows changes in people's perceptions about how serious they consider radioactive contamination in the area where they live. From 2013 to 2014, people considering it as "serious" have much decreased, whereas those perceiving it as "not so serious" have largely increased. Also from 2014 to 2015, the percentage of people that consider it "serious" have decreased from 13.0% to 6.6%, from 46.1% to 38.0% for "rather serious," whereas it increased from 34.6% to 45.8% for "not so serious." However, the fact that when adding "serious" and "rather serious," still 40% or more people consider the contamination of the area is serious cannot be ignored though four years have passed since the accident.

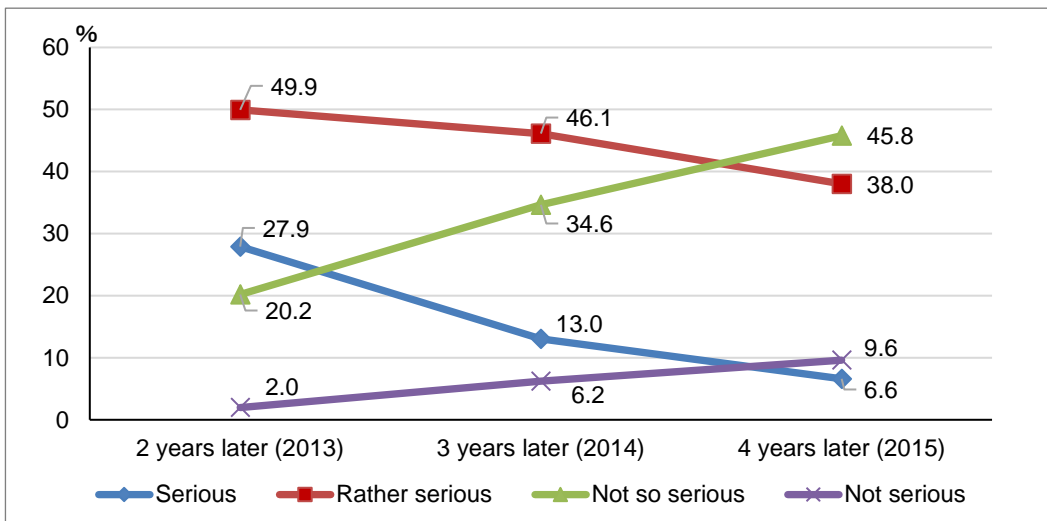


Figure 5-1: Perceptions about severity of radioactive contamination

5.2 Frequency of recuperation has decreased

Figure 5-2 shows that the frequency of recuperation activities has been decreasing. The percentage of people that often go to refresh has decreased to 6.6%, whereas people not visiting resorts have increased from 34.0% (2014) to 42.6% (2015). On the other hand, 50.8% of people responded that they sometimes go to refresh. Though less than before, it can be seen that many people are doing some recuperation activities.

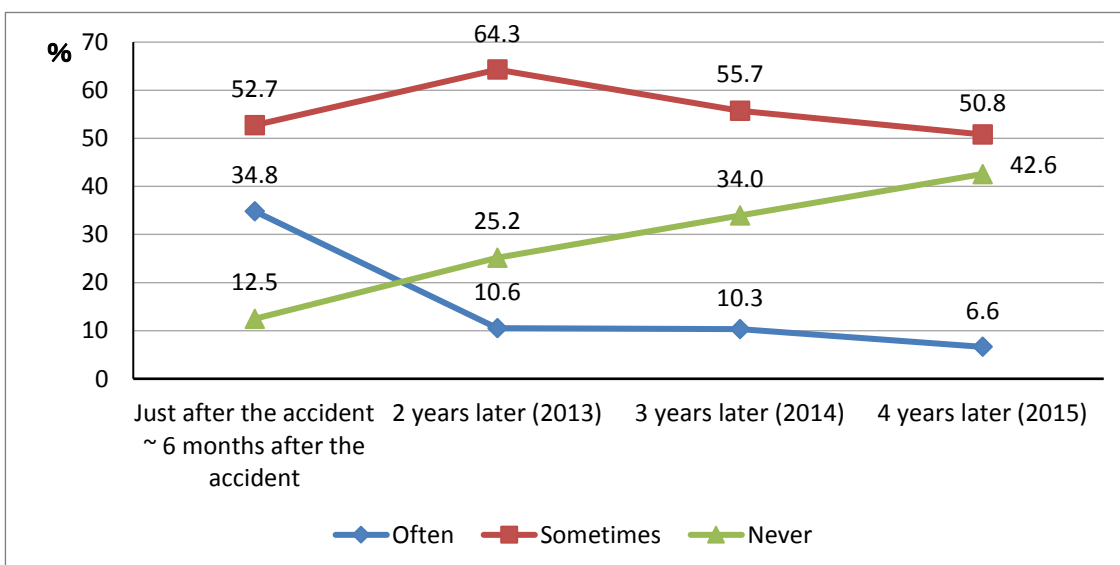


Figure 5-2: Frequency of recuperation activities

5.3 Three tendencies in life changes after the accident

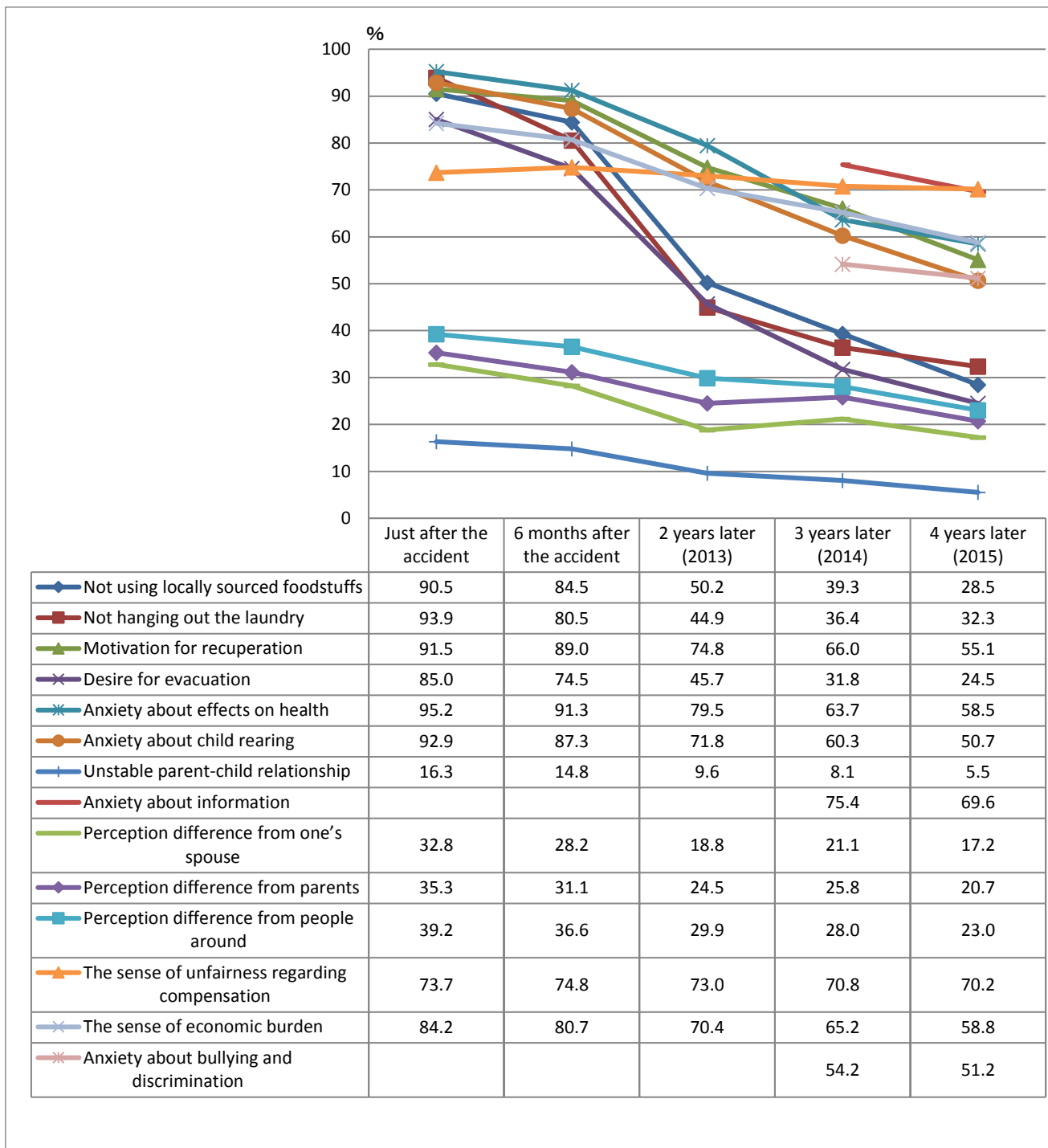


Figure 5-3: Lifestyle changes after the accident (the total percentage of “true” and “rather true”)

Figure 5-3 shows changes in life after the accident. The figure indicates three tendencies. The first tendency is shown for items about which over half the participants responded that it is true of them, such as “the sense of unfairness regarding compensation,” “anxiety about information related to radioactivity,” “the sense of economic burden,” “anxiety about effects on health,” “motivation for recuperation,” “anxiety about bullying and discrimination,” and “anxiety about child rearing.” The second tendency is shown for items about which the number of participants responding that it is true of them has decreased rapidly, such as “not using local sourced of foodstuff,” “not hanging out the laundry,” and “desire for evacuation.” The third tendency is shown for items about which a certain percentage of people responded that it is true of them, such as “differences in perceptions on how to deal with radioactivity, between spouses, parents, and surrounding people.”

6. Local conditions and attachment to communities

6.1 No change has been detected in the attachment to communities

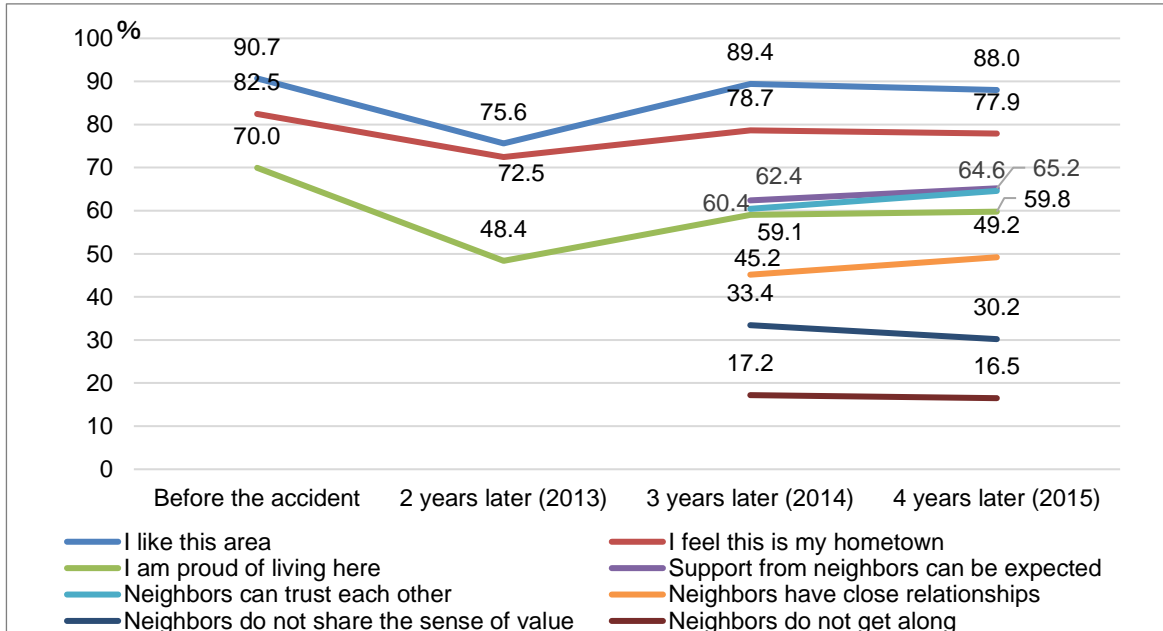


Figure 6-1: Local conditions and attachment to communities

Figure 6-1 shows changes in the perception of local conditions and the attachment to local communities. It can be seen that there is no significant difference between 2014 and 2015 in this measure. The percentage of people that “like this area” returned to an identical level to the time before the accident, which was also the same for people that “feel the town as one’s hometown.” On the other hand, the percentage of people that “are proud of living in this area” was different before and after the accident by approximately 10%. Some effects of the accident seem to be remaining even now.

6.2 No change in intention to continue living

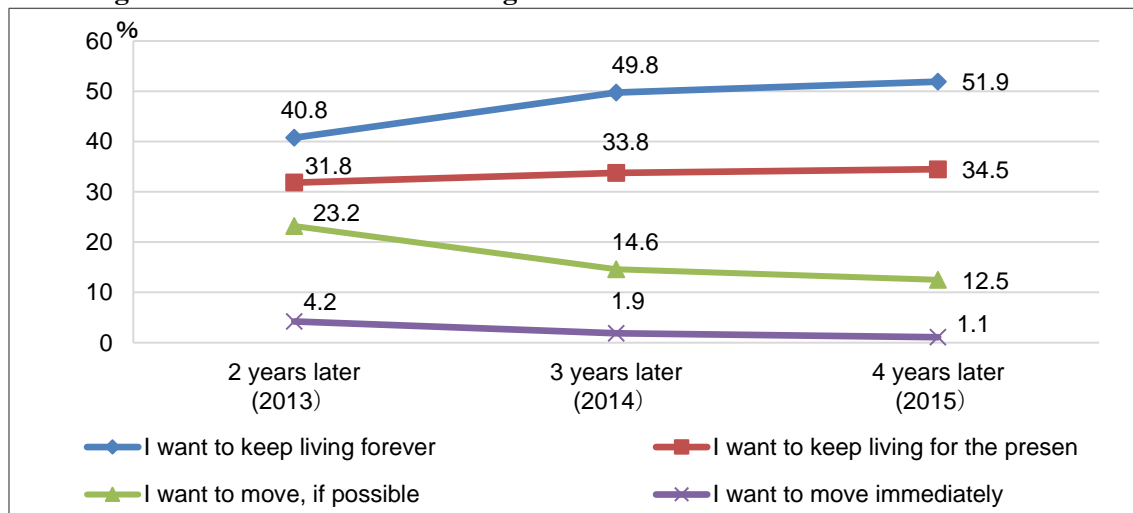


Figure 6-2: Intention to continue living in the area

The result of responses to the question of whether people want to continue living in the area, or not, was nearly identical between 2014 and 2015. The percentage of those that “want to continue living in this area forever” slightly increased to 51.9%.

7. Evaluation of Authorities

7.1 Evaluation of municipalities and Fukushima prefecture slightly improved

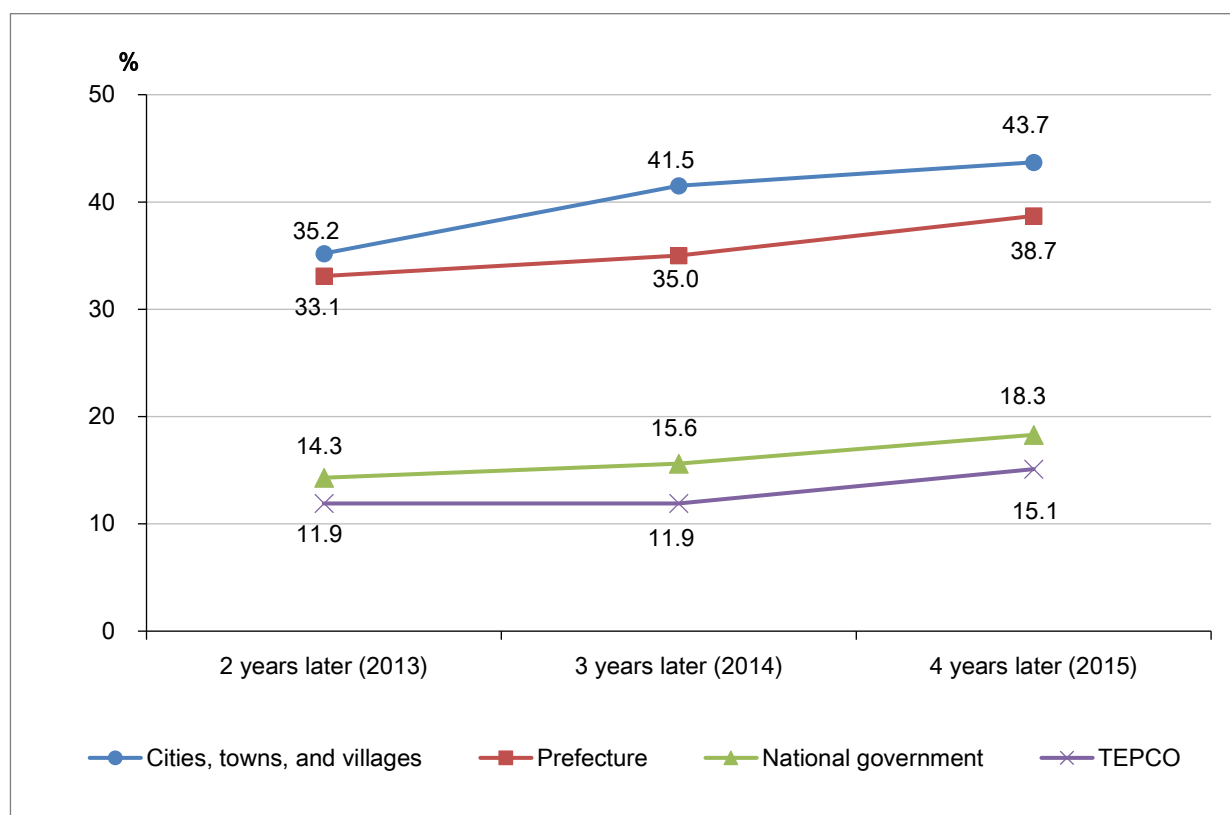


Figure 7-1: Evaluation of authorities

Figure 7-1 shows the percentage of people that responded that they highly evaluated countermeasures taken by municipalities, Fukushima prefecture, Japanese national government, and Tokyo Electric Power Co. (TEPCO). The values show the total percentage of “highly evaluate” and “rather highly evaluate.” Each rating slightly increased from 2013 to 2015. The organization that received the lowest rating was TEPCO. The evaluation regarding Japanese national government was as low as TEPCO. On the other hand, relatively many participants gave higher evaluation to Fukushima prefecture, and municipalities: the former was at 38.7% and the latter was at 43.7% in 2015.

8. Free descriptions of a questionnaire

Many opinions were collected in the free description column. Of the participants, 45.8% (1st survey), 44.1% (2nd survey) and 61.7% (3rd survey) made free descriptions. These comments were classified into eight categories. Values in the brackets below show the number of opinions in the 1st, 2nd, and 3rd survey respectively (including duplicate responses).

1. Residential preferences (evacuation, recuperation, decontamination)

Evacuation (155,66,78)	Evacuation (49,16,26)	<ul style="list-style-type: none"> • No anxiety about children playing outside, or living a mentally stable life • Feeling anxious about continuing as an evacuee • Feeling guilty when watching news about people staying on in Fukushima • Economically hard because of the double life • Feeling uncertain when someone in my family wants to return to Fukushima where our grandparents live • Not sure whether it was right or not to have moved out • Hoping to return to Fukushima in the future • No friends to play with • Not sure about how to move • No clear ideas about safety, and cannot help but continue with life as an evacuee
	Evacuated and returned (35, 9, 7)	<ul style="list-style-type: none"> • Worried about how other people think of me because I evacuated and returned • Had a hard time during the evacuation • Anxiety gradually disappeared as a result of interactions with fellow moms • Hoping to live in the place where I was evacuated • Decided to return because living separately from my family was unbearable • Children cannot become familiar with people and community
	Hoping to evacuate, but cannot evacuate (68, 37, 23)	<ul style="list-style-type: none"> • Because of work • Differences in perception • Houses (housing loans) • Elder child's entrance examination • Economically impossible • Children like Fukushima • Children's relationship with friends • Children's injuries • Feeling sad when being criticized for staying in Fukushima without considering about children
	Not evacuating (3, 4, 22)	<ul style="list-style-type: none"> • Hoping to live in Fukushima (it is a good place), attachment to Fukushima • Because of living in an area with relatively low radiation • Because of work

		<ul style="list-style-type: none"> • Following parents' decision, but being worried • Hoping people that have evacuated would return to Fukushima • Giving up everything, cannot do anything
Recuperation activities (37, 40, 19)	Request for improvements in recuperation programs (33, 33, 6)	<u>Targets:</u> pre-school children, elementary school children, parents and children (wide range) <u>Content:</u> studying abroad <u>Period:</u> long term (summer vacation, etc.) <u>Conditions:</u> not expensive <u>Problems:</u> (1) decrease in the number of programs, (2) lack of information, (3) the number of applicants is small
	Difficulties in recuperation activities (3, 6, 4)	<ul style="list-style-type: none"> • Economic problems • Mismatch of conditions • Because of work • Disagreement between parents' and children's feelings
	Satisfied with recuperation activities (1, 1, 9)	<ul style="list-style-type: none"> • Information exchange through recuperation programs • Feeling grateful for donations • Supporters of recreation programs listen to our stories empathically
Decontamination (41, 108, 151)	Rather satisfied with decontamination (2, 9, 28)	<ul style="list-style-type: none"> • Feeling relieved • Children can play outside • Decontamination of school zone has finished.
	Dissatisfied with decontamination (10, 16, 60)	<ul style="list-style-type: none"> • Radiation doses have not decreased much. • Decontamination measures are not reliable (just once, careless work) • Slow • Dissatisfaction with disposal procedures of contaminated waste (deterioration of bags) • Distrust and complaints about decontamination workers (crime, speaking to children, bad manners, trucks are dangerous, among others) • I prefer receiving money for buying instruments for regular decontamination at home.
	Demands for decontamination (24, 74, 32)	<ul style="list-style-type: none"> • Quick decontamination is required. • The order of priority seems wrong. • Areas with low radiation doses should also be decontaminated. • Around my house, school zone, and schools should be all decontaminated. • Regular decontamination is required,
	Doubt about the effects of decontamination (5, 9, 33)	<ul style="list-style-type: none"> • Decontamination is not effective, it is just for peace of mind • Radiation doses will increase again after a while. • When decontaminating a neighbor's house, walls of my house and laundry were caught in the spray. • It is a waste of money
2. Eating habits, and washing		
Eating habits	Not using locally	<ul style="list-style-type: none"> • Buying foodstuff and water from other prefectures

(66, 45, 46)	produced foodstuff and tap-water as much as possible (44, 32, 20)	<ul style="list-style-type: none"> • Even products from neighboring prefectures might not be safe. • Not using locally produced foodstuff • Disposing of locally produced gifts • Burden on family finances • Anxious about stopping inspections of all rice bags
	Cannot help using locally produced foodstuff and tap-water (10, 2, 21)	<ul style="list-style-type: none"> • Might be safe because of inspections • Eating vegetables grown by grandparents after inspection • Prices of Fukushima products are low. • Children and adults should eat fresh local products having a high nutritive value. • Parents living together use locally produced foodstuff and cannot stop it. • Worried about the effect on health
	Complaints about schools (nursery schools) lunch (12, 11, 3)	<ul style="list-style-type: none"> • Locally produced foodstuff and tap-water are used for school lunch.
Washing (6, 4, 1)	Not hanging out laundry (6, 4, 1)	<ul style="list-style-type: none"> • After the accident, I never hang out my laundry or quilts

3. Household finance

Income (10, 4, 5)	Decreased income (10, 4, 5)	<ul style="list-style-type: none"> • Losing a job • Having difficulty because of the low rice price (farmers) • Income does not increase
Expenses (29, 49, 36)	Expenses for evacuation/double life (1, 1, 2)	<ul style="list-style-type: none"> • Moving costs • Increase in the overall living expenses
	Expenses for taking measures against radiation (4, 3, 3)	<ul style="list-style-type: none"> • Transportation cost for having thyroid tests
	Compensation paid for not being able to play outside (6, 4, 1)	<ul style="list-style-type: none"> • Recuperation cost (transportation and accommodation expenses)
	Expenses for buying foodstuff and water from other prefectures (12, 30, 13)	<ul style="list-style-type: none"> • Expenses for buying foodstuff • Expenses for buying water
	Tax, cost of public	<ul style="list-style-type: none"> • Increase in consumption tax

	utilities (3, 8, 13)	<ul style="list-style-type: none"> · Increase in power rates · Price compensation for farm products · Consumption tax has increased.
	Housing cost (0, 2, 2)	<ul style="list-style-type: none"> · Cost of building a new house (buying up land by evacuees) · Cost of repairing one's house
Others	Economic instability	<ul style="list-style-type: none"> · Anxiety about the future · Feelings of resignation · Economic anxieties · Anxiety about cutting off compensation

4. Child wellbeing (play, coping against radiation, childbirth, etc.)

Play (171, 97, 83)	Letting children play outside (29, 15, 28)	<ul style="list-style-type: none"> · Letting children play outside without hesitation · I played in the snow. · Children have become healthy because of playing outside. · Playing with children in parks and gardens reduced my stress. · Compared to before, radiation doses are decreasing to a level that we need not worry about too much.
	Restricting children from playing outside (74, 39, 51)	<p><u>Reasons</u></p> <ul style="list-style-type: none"> · High radiation doses, delay in decontamination · Cannot help being worried about radiation contamination · Contaminated soil is kept in parks. <p><u>Effects</u></p> <ul style="list-style-type: none"> · Children cannot play freely (cannot touch insects or nature). · Children usually watch TV, or play games inside the house. · Decline in physical strength (athletic abilities) and immunity · Children have got into the habit of being driven around. · My child cannot ride on a bicycle anymore. · Lack of communication is a problem. · Rather overweight <p><u>Stress</u></p> <ul style="list-style-type: none"> · Parents are stressed because they have to warn or scold children for playing outside. · Children are stressed because they cannot play outside. <p><u>Countermeasures</u></p> <ul style="list-style-type: none"> · Places to play outside are required. · Taking lessons after school
	Indoor playground (68, 43, 9)	<p><u>Requests</u></p> <ul style="list-style-type: none"> · Places where children in a wide age range (infants, elementary children, junior high school children) can play together are required. · As soon as possible <p><u>Complaints</u></p> <ul style="list-style-type: none"> · Hygiene management

		<ul style="list-style-type: none"> •Crowded
Measures against radiation (55, 23, 30)	Testing with children (52, 18, 28)	<ul style="list-style-type: none"> •Insufficient (just once in two years, etc.) •Distrust in the testing process (ultrasonographic images are not shown, no explanations are given about results, comparison with children in other prefectures is not done, causal relationships with the nuclear accident are denied) •Continuous testing is required. •It is troublesome because of living far away from test places (have to miss work, transportation expenses) •Consideration for children with disabilities is required. •Troublesome •Until when must this testing continue?
	Integrators (glass dosimeters) (3, 5, 3)	<ul style="list-style-type: none"> •It is meaningless to make children have glass dosimeters. Dosimeters that produce a sound, or some signal in response to high radiation doses are necessary for children.
Childbirth (11, 8, 4)	Pregnancy (10, 6, 1)	<ul style="list-style-type: none"> •I got pregnant in Fukushima, and am worried about giving birth. •I need testing because of having lived in Fukushima during my pregnancy. •The number of people giving birth is increasing around me.
	Abortions (1, 2, 3)	<ul style="list-style-type: none"> •I have twice had abortions; I am wondering if there are any problems because my husband stayed in Fukushima from just after the disaster.
Other issues related to child rearing (30, 8, 24)		<ul style="list-style-type: none"> •Anxious about bringing up children in Fukushima •I intend to live positively. •Restrictions on everything is troublesome. •I am worried about my children's future, and living together with parents without a job. •There is no place where I can leave my children.
5. Human relationships (differences in perceptions, discrimination/prejudice)		
Married couples, relatives (9, 9, 5)	Differences in perceptions	<ul style="list-style-type: none"> •Disagreement with parents in law, parents, and husband's relatives about using locally produced foodstuff is stressful. •There are few people to talk to about problems.
Neighbors, acquaintances (16, 13, 19)	Differences in perceptions	<ul style="list-style-type: none"> •I might be considered too sensitive because I eat food from other prefectures. •I try not to talk too much about radiation related issues. •I cannot talk about radiation related issues with people around me and cannot hear their opinions.
Outsiders (79, 29, 72)	Bullying, discrimination, prejudice	<ul style="list-style-type: none"> •Anxiety about children being bullied when going out of Fukushima •Anxiety about children suffering disadvantages in the future, e.g. in marriage, employment, etc. •I want to know what people in other prefectures think of Fukushima. •Harmful rumors •I do not want to be considered same as residents in the evacuation zone.

6. Information (collection, transmission)

Collection of information (82, 24, 194)	Distrust of information (62, 10, 46)	<ul style="list-style-type: none"> Information (viewpoints) are diversified (including that of specialists). Information is not unified (organized). Individuals cannot get information easily. Correct information is not provided in a timely and appropriate way (might have been destroyed) I cannot trust the government and TEPCO. I don't know who to trust.
	Decrease in interest (20, 14, 153)	<ul style="list-style-type: none"> Interest in information has decreased and people have become insensitive. The amount of news has decreased. Life is returning to the life before the disaster. I have already given up.
Transmission of information (20, 14, 29)	Understanding conditions in Fukushima	<ul style="list-style-type: none"> I want people to know more about Fukushima. Teachers should provide more information to children at school. Fukushima has been forgotten. Only bad news about Fukushima has been transmitted. Correct knowledge about nuclear power plants and radiation should be transmitted.

7. Compensation

TEPCO	Compensation	<ul style="list-style-type: none"> Compensation is totally insufficient. TEPCO should make compensation for everything, including mental damage. There is unfairness in compensation between people inside and outside the evacuation zone. Compensation for people that have not evacuated is too small. Compensation for children is needed.
	General countermeasures	<ul style="list-style-type: none"> Slow Unreliable Treatment of contaminated water has to be conducted appropriately. A quick solution is required.
Administration	Social compensation	<ul style="list-style-type: none"> Some compensation for the household financial burden is expected. Compensation for health Reduction of medical expenses Compensation for children
	Tax	<ul style="list-style-type: none"> Reduction of residents' tax Why must people in Fukushima pay reconstruction tax? I want people that have evacuated from Fukushima to bear their own medical expenses and tax.
	General countermeasures	<ul style="list-style-type: none"> Slow. Reconstruction should be speeded up. This is not the time for holding an election. Priority should be given to reconstruction, not the Olympics.
Others	Nuclear power plants	<ul style="list-style-type: none"> Restarting nuclear power plants is questionable, considering the condition of Fukushima. Natural energy should be promoted.

		<ul style="list-style-type: none"> · Nuclear power plants should be restarted.
	Consciousness	<ul style="list-style-type: none"> · I cannot trust the government or TEPCO.
	Donations	<ul style="list-style-type: none"> · It is not clear how donations were spent.
8. Health		
At present	Children	<ul style="list-style-type: none"> · My child seems slightly smaller. · My child became nervous and have panic attacks after the earthquake. · My child was diagnosed as A2 by thyroid testing.
	Parents	<ul style="list-style-type: none"> · Anxiety about the ground shaking and associated squeaking sounds · Insomnia, stress · Strong anxiety (panic disorder, etc.) · Depression
Future	Children	<ul style="list-style-type: none"> · Worried about mental and physical health in the future · Anxiety about developing cancer · Worried about if they can have healthy children in the future · Future compensation is expected
	Parents	<ul style="list-style-type: none"> · Most of the parents are worried about their children's future, and not their own future · Anxiety about the effects of radiation on health
	Thyroid	<ul style="list-style-type: none"> · Anxiety about developing thyroid cancer (hearing news about an increase in thyroid cancer) · Tumors were found by testing, and worry about future developments.

9. Conclusions

The analysis of the results of this survey are summarized as follows:

1. Children have started playing outside for a longer time with the passage of time since the disaster. However, nearly 30% of the participants' responded in 2015 that they played "within 30 minutes". There are certain people who are careful about playing outside even now. On the other hand, time watching TV and other indoor activities have become longer than in other prefectures.
2. Until last year, children's adaptation and mental health required more support than in other prefectures, although the results of the current survey indicated that support needs have become nearly similar to those of other prefectures.
3. Children's current health conditions are generally positive and subjective symptoms are decreasing. However, the frequency of only "headaches" have slightly increased.
4. Mothers' health conditions are generally positive. Their subjective symptoms are similar to symptoms that are found across the country.
5. Mental conditions of mothers have become stable with the passage of time. However, nearly half the participants still feel "nervous," "so sad nothing could cheer you up," and "that everything was an effort."
6. People that regard local radiation contamination as serious are decreasing. The frequency of recuperation activities has also been decreasing, although about half the participants sometimes took part in recreation activities.
7. Three tendencies were observed in lifestyle changes after the nuclear accident, similar to previous surveys. People "not eating locally produced foodstuff" and "not hanging out the laundry" have decreased rapidly, however, more than half the participants still seem to feel "a sense of unfairness regarding compensation" and "anxiety about the effects of radiation on their health." Even now, a certain number of participants are feeling "differences in perceptions with people close to them".
8. Attachment to the local communities and desire to continue to live in local communities have not changed from the previous survey. Most of the people seem to be attached to their local communities and want to continue living there.
9. Evaluation of the government and TEPCO regarding countermeasures taken by them after the accident has improved slightly. However, it still remains low.

[General overviews]

Today, the health conditions of children and mothers are generally positive and the mental condition of mothers have stabilized. However, anxieties about the long-term effects of the nuclear accident on life and health have not decreased. Individuals, as well as local communities, are experiencing various problems, including problems about insufficient compensation and countermeasures taken by the government, among others. Fukushima Child Health Project will continue this survey and will proceed with contributions to solving these problems. Thank you for your cooperation.