Multidimensional Psychosocial issues in Fukushima: A mental health survey

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Features of a nuclear disaster

• What a nuclear disaster brings is
  – invisible
  – long-term, chronic
  – ambiguous
  – easy to induce public stigma
Nuclear accident in Fukushima

Close experience to explosion

PTSD/PTSR

Avoidant behavior

Fear for fallout

Anxiety in the public

Worries about labeling as being exposed to radiation

Alternation of self image: self-stigma

Loss reaction

Depression

Separation of family

Separation of community

Self-destructive behaviors
(alcohol abuse, suicide)

Identity crisis

Specific to nuclear disaster
Explosion at Fukushima Daiichi Power Plant (12 Mar)

Traffic jams escaping the city (12 Mar)

Evacuation by bus (13 Mar)
RATES OF PEOPLE AT RISK OF PTSD BASED ON RESULTS OF PCL SCORES

- Rescue personnel in 9.11 attack (Schlenger et al. 2002)

- Fukushima Health Management Survey

- 2012: 21.6%
- 2013: 17.4%
- Rescue personnel: 20.1%
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Specific to nuclear disaster
Chronic and generalized anxiety
floating anxiety

Many mothers with children have them
(Three Mile Island accident, Chelnobyl accident)
Anxiety and guilt among mothers

- Can I live here with my children? My husband said “don’t worry about that”, but my relatives are blaming me...

- I’ve been helping the nursery school in our hometown to open again. But I feel it’s a bad thing, because I might request mothers evacuated far from Fukushima to come back.
Children’s behavior and mothers’ hopes

• **Children**
  – run away from home
  – willingly fight others
  – said that they were tired with numerous news about the accident on TV
  – have low ability to move due to restriction on playing in the open air
  – Easily regress to childhood (ex. Sucking their fingers)

• **Mothers**
  – hope to move to other low affected areas, if possible 85.1%
  – have some actual evacuation plan 23.8%

Kitajo 2011
Mothers’ anxiety and children’s reaction

Mothers’ hypersensitivity

Mothers’ reaction

Children’s reaction

Children’s hypersensitivity
- Fukushima Health Management Survey -

CHILDREN HAVING BEHAVIORAL PROBLEMS
BASED ON RESULTS OF SDQ SCORES

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>4-6 y/o</td>
<td>24.4</td>
<td>16.5</td>
</tr>
<tr>
<td>7-12 y/o</td>
<td>22.0</td>
<td>16.3</td>
</tr>
<tr>
<td>13-15 y/o</td>
<td>16.2</td>
<td>12.3</td>
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<tr>
<td>control</td>
<td></td>
<td>9.5</td>
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Fukushima Health Management Survey -
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Ambiguous loss situation

Community exists physically but not do psychologically

Odaka, Minamisoma (Apr. 2012)
Separated and broken-up community

• Intra-familial friction
• Inter-familial friction
• Friction between evacuees and original community members

*127,000 evacuees (Sep, 2014)

Bonds and resilience of community
Difficulties of evacuees

- Poor prospect for their future
- Difficulties to have relationship with new community members
- Poor opportunity to get job
- Separation of family members
- Financial problems etc.

Identity crisis
RATES OF PEOPLE AT RISK OF DEPRESSION
BASED ON RESULTS OF K6 SCORES

Kawakami et al., 2004

General population

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>2012</td>
<td>14.6</td>
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<tr>
<td>2013</td>
<td>11.7</td>
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<tr>
<td>General population</td>
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Fukushima Health Management Survey
Nuclear accident in Fukushima

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Specific to nuclear disaster
Examples of public stereotypes against Fukushima’s people

- The belief that radioactive contamination infecting others
- Vague but uncomfortable feelings towards the Fukushima people
- Worries about reproduction traits of women of Fukushima
- The belief that many people can hardly survive in Fukushima
Stigma among young women

• There are still people who believe that radioactive contamination could infect others. **Many young women in Fukushima, are afraid of how people may look down on them** due to assumptions regarding the influence of radiation on pregnancy or on genetic inheritance.

  Los Angeles Times, 2012

• Some also believe that the women exposed to radiation should not be allowed to marry or reproduce. Unfortunately, due to these misconceptions, **many evacuees are hiding the fact that they lived in Fukushima** after moving to other prefectures.

  Save the Children report 2012
Similarity to “Hibakusha”

- People, especially young women who were exposed to the atomic bombing in Hiroshima and Nagasaki hesitated to talk about the event. They have been strongly afraid that such their experiences might be widely known.

Yamada and Izumi, 2002
To dispel stigma and self-stigma

• Promoting of an adequate risk communication
• Providing information about psychological distress of Fukushima people as well as physical risks of radioactive exposure
• Acknowledging the fact that we may have some stigma towards Fukushima people and that harms them.
Our support team and network

- **FMU Support Team**
  - 10-15 telephone counselors (clinical psychologists, social workers, nurses)

- **Local health care centers**

- **Other medical resources**

- **Fukushima Center for Disaster Mental Health (Kokoro no Kea Center)**
Thank you!