

# **The Emotional Status Among Evacuees From Fukushima Nuclear Accident (1): Analysis of The Feelings of Information Shortage By Qualitative Approach**

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**Abstract :** Five years have passed since the Great East Japan Earthquake, but seriously affected areas, still have not been revived yet. Along with life in evacuation sites being extended, evacuees have complained about the lack of information on their lives. In this paper, we analyzed survey results and derived tentative theories as to the issue for a feeling of information shortage by the evacuated townspeople. The Author would like to consider the regulation factor, focusing on the concern for insufficient information that Fukushima's refugees have.

**Keywords -** Fukushima nuclear accident, inadequate supply of information, information shortage, evacuated townspeople, interview survey

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## **I. INTRODUCTION**

As of March 2016, it has been 5 years since the Great East Japan Earthquake. However, the affected areas are still facing tough conditions and the road to recovery is still far and steep. While they live as evacuees, victims in the affected areas face extraordinary conditions that are utterly different from their pre-disaster situations and they are frustrated at the slow progress of reconstruction, as well as feeling apprehensive about the fading interest among the public. In particular, residents of the depopulating and aging agricultural, mountain, and fishing villages and the areas affected by the radioactive contamination from the accident at the Tokyo Electric Power Company's Fukushima No.1 nuclear power plant face uncertainty as to whether the local communities themselves can survive to begin with, let alone restoring them.

In terms of managing the cycle of disasters such as earthquakes, the recovery process after a disaster is described in four phases: emergency, response, recovery and reconstruction, and prevention [1]. The first phase, the emergency phase, is the period in which actions such as evacuation and lifesaving are undertaken in response to the direct and extended damages from the disaster. The emergency phase lasts from several days to several weeks and ends when the rescue of survivors is discontinued. The next phase, response, is a phase in which a variety of services—water and food, daily necessities, midwifery and medical care, etc.—are provided in order to secure provisional life. Next, in the recovery and reconstruction phase, lives and industries are rebuilt, and the people and various social functions are restored to their pre-disaster states. Finally, in the prevention phase, disaster-resistant community development and disaster prevention measures are taken. Based on this cycle, the situations in Japan's affected areas after three years correspond to the recovery and reconstruction phase. However, this phase has been protracted due to the magnitude of the earthquake damage. From the viewpoint of the community recovery process, it is currently in a very difficult period called the "disillusionment period," in which physical and psychological health problems become evident because victims have reached the limits of their patience and become driven by a sense of frustration and anger that cannot be directed anywhere [2].

All townspeople of Namie, Fukushima have been refuge in discretely throughout Japan due to the Fukushima nuclear power plant accident. In order to respond to the opinion of the dearth of information from the town people, the Namie town office is distributing information to town people under refuge to every place positively using various means, including public relations magazines, internet websites, and data distribution by digital photo frame, and so on. However, according to questionnaire surveys conducted every year by the public office, the percentage of the people who feel "shortage of information about daily life" has reached 20 percent [3-4]. There is fear that the dearth of information will lead to the aversion of the town, and it may interfere with the revival of the town [5-6]. It is necessary to clarify the factors for a feeling of dearth of information, and to consider the relief policy.

This study focused on the issue of the sense of inadequate supply of information felt by the evacuated townspeople of Namie, Fukushima, and will examine its regulation factor. The aim is to contribute toward improving and resolving issues surrounding Namie and other disaster struck municipalities. To grasp the level of frustration on "inadequate supply of information regarding living conditions" held by the evacuated

townspeople of Namie, the results of previous surveys by the public office of Namie town were analyzed. Then the author conducted surveys by qualitative and quantitative approaches concerning the receiving of information on living conditions to these evacuated townspeople. In this paper, the analysis of the previous surveys results were more deeply, analyzed interview surveys were conducted, and theories were derived based on the information gathered from them.

## II. ANALYSIS OF THE PREVIOUS SURVEYS RESULTS

Analysis on the “townspeople survey on reconstruction” was conducted twice in the past by the public office of Namie town (conducted on November 2011 and June 2012) [3-4]. The townspeople surveys were conducted to grasp the living conditions and townspeople’s desire for returning back to their hometown and their opinions concerning future reconstruction etc.

The surveys were conducted by targeting townspeople who are living at evacuation sites due to the Fukushima No. 1 nuclear power plant accident, and who are high school students and older. The survey was distributed and collected through mail, and the collection rate was 59.6% (collection number 11,001 / distribution number 18,448) the first time, and 57.6% (collection number 10,512 / distribution number 18,258) the second time. Cross tabulation was conducted based on the attributes and conditions (age, living arrangement, evacuation site, reason of concern, etc.) of townspeople who responded (first time: 16.6%, second time: 16.7%) with “there is inadequate supply of information concerning the living condition” regarding the question “distressed or inconvenienced circumstances surrounding the current living condition at evacuation site”.

First, it became apparent in the per-age-group cross tabulation that a large sense of inadequate supply of living-condition-information was felt by the townspeople in the age group of 60’s and 70’s (20.4%, 20.3%), and about 14% townspeople between the ages of 20-59 also felt there was an inadequate supply of living-condition-information. Furthermore, regarding living arrangements, the finding showed that the ratio of evacuated townspeople living at temporary housing who felt an inadequate supply of living information was low (9.8%), and we obtained the result in which there is a high sense of inadequacy (19.3%) among public housing residents with maximum parameters. For the analysis of per evacuation regions, the finding showed that there was a high ratio of people who felt an inadequate supply of living-condition-information among townspeople who evacuated to Koriyama city with no temporary housing and outside of prefecture (19.6%, 18.3%).

Aside from these, examples of townspeople who felt there is an inadequate supply of information concerning their living condition on Table 1 were gathered, based on the result of cross tabulation and response to questions asking them whether they have a job / children, and complaints in other areas of living conditions.

**Table 1. Example of Townspeople Who Feel There is an Inadequate Supply of Information Concerning Their Living Conditions**

Typical example of inadequate supply of information felt by people	Typical example of people less affected by inadequate supply of information
<ul style="list-style-type: none"> <li>-Residents at public housings</li> <li>-The elderly over 60</li> <li>-People with no children</li> <li>-People who evacuated outside of the prefecture</li> <li>-People who evacuated to Koriyama city within the prefecture</li> <li>-People who do not have any acquaintances in their immediate surroundings</li> <li>-Private business operators/ unemployed people</li> </ul>	<ul style="list-style-type: none"> <li>-Residents of temporary housings</li> <li>-People under 50</li> <li>-People with children (excluding family with pre-school child/children)</li> <li>-People who evacuated within the prefecture (especially people who evacuated to Nihonmatsu city, Honmiya city, Koori town)</li> <li>-Full time workers/students</li> </ul>

## III. INTERVIEW SURVEY WITH TOWNSPEOPLE OF NAMIE

Based on the collection of survey data analysis mentioned above, interview surveys were conducted targeting 55 townspeople, by selecting evacuated townspeople of Namie based on typical examples of townspeople who feel there is an inadequate supply of information concerning their living conditions. The description of the interview surveys entailed questions about themselves such as their housing environment and family members living together, their desire for returning back to their hometown, etc., and it also included questions about receiving information and communication. On Table 2, implementation of interviews was summarized. The results from this interview surveys are as follows:

**Table 2. Summary of Interview Surveys**

	Date	Location	Details	Number of informants
1st	Feb. 8, 2012	Nihonmatsu, Fukushima	<ul style="list-style-type: none"> <li>- Interviewed workers etc. related to public office of Namie town who are handling the situation of townspeople</li> <li>- Conducted individual interviews regarding townspeople's state of receiving of information, worries, frustrations, etc., by targeting a total of 4 persons: life support consultant, nurse, family care worker, and receptionist at the Namie municipal office</li> </ul>	4
2nd	Feb. 17, 2012	Sendai, Miyagi	<ul style="list-style-type: none"> <li>- Interviewed townspeople who participated in the Namie exchange event (shaberiba)</li> <li>- After the exchange event program, conducted group interviews by targeting townspeople between the age of 40-60's who evacuated to Sendai city</li> </ul>	16
3rd	Feb. 22, 2012	Iwaki, Fukushima	<ul style="list-style-type: none"> <li>- Conducted group interviews by targeting townspeople who participated in Namie exchange event (shaberiba)</li> <li>- After the exchange event program, conducted group interviews by targeting townspeople between the age of 40-60's who evacuated within Fukushima prefecture (22 persons in Iwaki city, 3 persons in Fukushima city)</li> </ul>	25
4th	Mar. 2, 2012	Sendai, Miyagi	<ul style="list-style-type: none"> <li>- Recruited subjects for interview among participants of the exchange event (shaberiba) held on February 17, and conducted 2.5 hours of group interviews</li> <li>- 8 people who accepted interview are people who have created an intimate community and have been involved with exchange on regular basis after evacuating to Sendai, although their age varied with wide range of 30-60's</li> </ul>	8
5th	Mar. 3, 2012	Omiya, Saitama	<ul style="list-style-type: none"> <li>- Interviewed townspeople who participated in Namie exchange event (shaberiba)</li> <li>- After the end of exchange event program, conducted group interviews by targeting townspeople between the age of 40-70's who evacuated to Saitama prefecture</li> </ul>	15
6th	Mar. 20, 2012	Kashiwazaki, Niigata	<ul style="list-style-type: none"> <li>- Conducted a group interview by targeting young people between the age of 20-40's who evacuated to Sendai city, and their families with young children</li> <li>- The interview was conducted at "Salon Mugen" which is a store operated by Ms. Masuda who is supporting evacuees from Fukushima in Kashiwazaki city, Niigata</li> <li>- The salon is being used as the venue for exchange event of evacuees from Fukushima prefecture</li> </ul>	5
<b>Total</b>				73

### 3.1 Desire for Returning Back to Hometown

The finding showed that there is a high level of desire for returning back to their hometown for townspeople who have evacuated within Fukushima prefecture, and a low level of such desire for townspeople who have evacuated outside the prefecture, indicating a large gap of desire between the two groups. On the other hand, some people who have evacuated outside the prefecture also expressed a desire to go back to their hometowns due to reasons such as housing, child education, and the feeling of isolation in the local community, etc., despite their concerns about the radiation.

### **3.2 Receiving Information**

Although information is being distributed smoothly between evacuees living in temporary housing, and residents who are living in public housing have to actively acquire information, the finding showed a large gap between the two when it comes to access of information. For this reason, it was believed that placing “Photo Vision” can bring a certain level of effect to the elderly, especially to those living in public housing. The “Photo Vision” was distributed freely for all townspeople of Namie, and used to provide information from the public office of Namie town.

Furthermore, in regard to the access of information, it can be divided into three categories; young people (20-30's), middle-aged people (40-50's), and the elderly (age over 60). The finding showed that young people are able to obtain necessary information by using the internet, but they possess a characteristic of being mainly interested in finding out about compensation and not much else. Middle-aged people showed a characteristic of actively collecting information through the combined use of public relations magazines, e-Newsletter and photo vision. The elderly are heavily reliant on public relations magazines, local newspapers and TV, and they showed a low level of e-Newsletter usage. The finding also showed that middle-aged people are providing support to the elderly (their parent's generation) in making sure the elderly are receiving information.

### **3.3 Communication**

There is a large gap between individuals and regions (when it comes to the condition of communication), and evacuees (who are living in public housing tend to have a difficult time communicating with others). The reason can be attributed to the fact that there are many townspeople are still unable to contact their friends and acquaintances from the time they were living in Namie. The reason behind this is largely due to factors such as cases where family members have evacuated to separate sites due to work, housing, health/education of children, and have difficulty in disclosing public office due to concern for personal information.

The finding further showed that a large number of townspeople are unable to fit into their new environment since they feel a sense of discrimination from the residents of the evacuation destination. It also became clear that there is a gap between men and women, with men depending more heavily on family, and women feeling a burden of having to deal with such dependence etc.

## **IV. FIGURES AND TABLES DERIVING THE THEORIES BASED ON THE RESULTS OF THE INTERVIEWS**

Based on the result of the above-mentioned interviews, the following can be given as the reasons behind the current situation surrounding the inadequate supply of information depending living on conditions experienced by the townspeople of Namie.

- (1). Since there is a gap between the quality and speed in obtaining the information depending on the situation, they feel like there are some information that they either were unable to obtain or simply not given.
- (2). Out of frustration from feeling that the situation is being handled differently from the surrounding towns, difference in treatment and condition depending on the region and living arrangement of evacuation destination, etc., they feel worried and frustrated that they might be losing out on some things.
- (3). Since there is no available information source that comes in a comprehensive way and townspeople have to obtain individual information through various media sources, they are worried that they might be missing out on some information.
- (4). Since the discussion process of various decided matters are not open to the public, they are worried that perhaps important information regarding matters is being withheld from them.
- (5). Young people are especially worried about the lack of transparency surrounding the compensation issue, which for them is a vital aspect in planning their future life.
- (6). Elderly people are especially frustrated about not being able to obtain information at the same level as they would under normal living conditions.

The result of the surveys conducted by the public office of Namie revealed that there are various interpretations among people, showing a large gap between individuals of their interpretation of “information concerning their living conditions”. Based on the results of the interview surveys, we were able to derive the following 9 theories as the issue for a sense of “inadequate supply of information concerning their living conditions”.

- (a). There is no shortage of information on supply upon people’s daily living situation.
- (b). There is a lack of information needed to help people construct their future life plan.
- (c). The stronger the people’s “desire to return back to their hometown”, the more active they are in gathering information and therefore, their satisfaction level regarding information is higher
- (d). Evacuees within the prefecture tend to have a higher level of satisfaction with information than evacuees outside of the prefecture (evacuees outside of the prefecture have a low level of interest).
- (e). The level of satisfaction with information is different depending on the living arrangement (temporary housing, public housing, rented house, owned house)
- (f). The level of satisfaction with information is higher for younger people due to their IT savviness (younger they are, the higher the satisfaction)
- (g). People who participate in town exchange events do not feel much shortage of information since they are able to obtain information face-to-face.
- (h). Since the information provided by the local governing body only comes in the form of results, there is a sense of a lack of information regarding the process behind arriving at such a result.
- (i). The desire for returning back to their hometowns is decreasing.

## V. CONCLUSION

To describe the feelings of evacuees for information shortage, the surveys were conducted for 8 months between February and September of 2013 using qualitative and quantitative approaches. It targeted the entire townspeople of Namie, Fukushima, who evacuated to other towns or cities. This research was conducted to discuss the root cause analysis and solution strategy regarding the “inadequate supply of living-condition-information” felt by the townspeople.

This paper analyzed the existing data obtained through the questionnaire surveys in the past and interviews results that were conducted with the townspeople. The results showed that the real issue is not so much about the fact that people are receiving inadequate supply of information, but it rather stems from people’s worry and frustration about their future that causes them to feel this way. The results of the interview surveys derived 9 theories as the issue for the information shortage.

The author would like to analyze the results of the questionnaire survey for all townspeople of Namie to evaluate the tentative theories for the next research paper.

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