

A Study on Harmful Rumor about Fukushima Daiichi Nuclear Power Plant Accident in Newspaper

Sachiyo KAMIMURA* and Yoshimi KAWAMOTO*

(Received February 10, 2012)

Harmful rumor have repeated by nuclear power plant accidents. But harmful rumor is not understood by general public. Moreover, literature review on harmful rumor can't grasp the actual condition in detail. In this paper we intend to conduct surveys on the actual conditions of harmful rumor by Fukushima No.1 nuclear power accident. And we have propose subject, situation, and feature of countermeasure against harmful rumor. From the results of content analysis, there are summarized in 13 subjects. It is grasped that 13 subjects have variety of harmful rumor not only goods but also human-rights issue by the accident from Asahi newspaper. Common points of countermeasure are supply of information. These are performed by government and victim.

Key Words: Harmful Rumor, Countermeasure Against Harmful Rumor, Subject of Harmful Rumor, Newspaper, Understanding of Harmful Rumor

1. Introduction

Academic journal and newspaper made several important statements on the lessons and reflections from Fukushima No.1 nuclear power plant accident occurred in March 11, 2011. Yamaguchi ^[1] says that ensuring nuclear safety is thought of universal standard. There are five important affair about defense in depth. Two of them are risk management and emergency response. In detail, the universal standard is promised to doing accident management and emergency response if nuclear accident get above design dimension or radioactive material away in nuclear plant. He says that Japan have an absence of understanding and knowledge of important affair.

Harmful rumor is also similar to lack of understanding and knowledge of those two. Because harmful rumor have repeated by nuclear power plant accidents. And harmful rumor have greater impact in society and hard to understand. Literature review on harmful rumor can't grasp the actual condition in detail.

In this paper, we intend to conduct surveys on the

actual conditions of harmful rumor by the accident. Moreover, we have propose subject, situation, and feature of countermeasure against harmful rumor.

2. Research Content

We clarify the details of accident harmful rumor in newspaper. Meantime, the survey used newspaper because it has strong influence and credible data ^[2]. Also the survey extract article about harmful rumor from newspaper and magazine search service in Nifty.

First, we had count the number and percent of the article about harmful rumor. And we select the article to analyze.

Next, we had content the analysis based on, subject content, opinion and countermeasure against harmful rumor.

Lastly, we have proposed that subject, content and feature of countermeasure by the accident.

3. Feature of Harmful Rumor by Fukushima No.1 Nuclear Power Plant Accident in Newspaper

* Nuclear Power and Energy Safety Engineering Course,
Graduate School of Engineering

3.1 Analytical Subject and Method

Utilization procedure of searching service is configure for word of search, newspaper company and period.

Word of search specifies "Fukushima No.1 nuclear power " and " harmful rumor". Newspaper specifies Asahi newspaper and period is from March 11, 2011 to November 31 (the analysis time). Also search condition specifies article included headline or text.

Articles were found 358 from result of search and organized by each month. Numbers and percent of article show Table 1. In this survey we treat number of search as number of article ¹⁾.

Table 1 show that the number of article are concentrated in two month after the accident and slowly decreased afterward. Although number of article vary each month, but it is relatively stable. Also, articles from March to May are much more large number of article than other period when viewed on three month basis. Moreover analytical subject is 148 articles from March to May to learn about situation and countermeasure against harmful rumor in this period.

Next, we did content analysis in order to grasp situation and countermeasure against harmful rumor by the accident article of newspaper. Table 2 shows the subject of harmful rumor and number of article. And table 3 and table 4 show the content sand countermeasure against harmful rumor.

Table 1 Number and percent of article

Month	Number of Article (Particular)	Percent of Article (%)	Subtotal (%)
March	16	4	41
April	80	22	
May	52	15	
June	44	12	30
July	40	11	
August	24	7	
September	38	11	29
October	29	8	
November	35	10	
Total	358	100	100

3.2 Subject of Harmful Rumor

As shown table 2, there are 13 subjects of harmful rumor by the accident from Asahi newspaper. Contents of 5 are (No.1) Agriculture, Forestry and Fisheries, Food industry, (No.2) Manufacture, (No.3) Export business, (No.4) Tourist business, and (No.5) Service business. In the 5 subjects guiding principle of midterm in committee for disputes concerning nuclear power damage have determine extent of restitution ^[3]. The remaining 8 subjects are (No.6) Human rights, (No.7) Schooling, (No.8) Local resident, (No.9) Nuclear power stations are located, (No.10) Event · Convention, (No.11) Japan, (No.12) Music and (No.13) Sea bathing · Pool. These are positioned in this paper. By the look number of article,

Table 2 Subject of harmful rumor and number of article

No	Subject	Damage situation (Particular)		Countermeasure (Particular)		
		Content	Opinion	Execute	Inquests	Requirement
1	Agriculture, Forestry and Fisheries · Food industry	20	14	29	8	20
2	Tourist business	10	0	3	2	4
3	Manufacture	6	2	6	0	1
4	Service business	5	0	0	0	0
5	Export business	7	2	8	1	1
6	Human rights	1	0	0	0	0
7	Schooling	1	0	1	0	1
8	Local resident	1	1	1	0	0
9	Nuclear power stations are located	0	1	0	0	0
10	Event · Convention	4	1	0	0	0
11	Japan	3	2	0	0	0
12	Music	1	1	0	0	0
13	Sea bathing · Pool	1	1	1	0	0
14	Others	1	5	8	2	18

※Although worded differently as price decline and rapid fall in price the same contents is one count.
Exempli gratia) Price decline, Rapid fall in price → Total 1 count

we were found that Agriculture, Forestry and Fisheries and Food industry are affected most severely by harmful rumor.

Thus we have clarified subject of harmful rumor by the accident. Next section, we clarify content and countermeasure against damage.

3. 3 Content and Countermeasure against Harmful Rumor

As shown Table 3 consumers tend to abstain from buying the products of disaster area and Japan.

Somewhere else there are price decline, refusal to deal, demand a certificate showing safety, denial of

transportation business, cancellation of lodging and a decline in tourists (in the heart of foreign citizen, elderly adult and groups). Also there are anxiety that statement like discrimination or bullying, decrease of kids and direct a cool look toward local where nuclear power stations are located.

As shown Table 4 countermeasure against harmful rumor are issuances of certificate showing safety, back up of sale, PR, survey and all that. Common points of countermeasure are supply of information and conduct more countermeasure for Agriculture, Forestry and Fisheries and Food industry.

Table 3 Contents of harmful rumor

No	Subject	Goods is clean	Production in the same prefecture* Produce of Japan	Toggleable	Limited	Price decline	Get turned down* Cessation of business	Safety (Certificate)	Hold off	Come down	Stop	News* Speech
1	Agriculture, Forestry and Fisheries* Food industry	○	○	○	○	○	○	○	○		○	
2	Tourist business				○					○	○	
3	Manufacture	○	○		○		○	○	○	○		
4	Service business			○			○			○	○	
5	Export business	○	○		○		○	○	○		○	
6	Human rights											○
7	Schooling									○		
8	Local resident						○					
9	Nuclear power stations are located											
10	Event* Convention						○			○	○	
11	Japan											○
12	Music										○	
13	Sea bathing* Pool									○		
14	Others											○

※If applicable ○

Table 4 Countermeasure of harmful rumor

No	Subject	Emergency temporary standard	Recompense	Support	Check	Survey	Sell goods at low prices	Work adjustment	PR* Statement	Mull measures	Pause in one's task	Certificate	Briefing session* Study session
1	Agriculture, Forestry and Fisheries* Food industry	○	○	○	○	○	○	○	○	○	○	○	
2	Tourist business						○		○				
3	Manufacture								○				○
4	Service business												
5	Export business								○			○	
6	Human rights												
7	Schooling												○
8	Local resident												
9	Nuclear power stations are located								○				
10	Event* Convention												
11	Japan												
12	Music												
13	Sea bathing* Pool					○							
14	Others		○			○			○				

※If applicable ○

In conclusion, we are grasped that 13 subjects have variety of harmful rumor not only goods but also human-rights issue by the accident from Asahi newspaper.

Harmful rumor based on nuclear power different from harmful rumor that genesis in food-related like BSE or avian influenza and disaster like Great Hanshin Earthquake^{[4], [5]}. Because nuclear power harmful rumor have enormous influence of subject and content.

In fact we have studied to assess what state harmful rumor. In July 2007 author had worked out hearing survey to one Power Company about receive question and complaint of harmful rumor by the accident.

The power company say that inquiry and complain can't still in order. In reality, they didn't say about harmful rumor understanding.

4. Results

In this paper we intend to actual conditions survey of harmful rumor by the accident of Asahi newspaper article from March to May. In the result, we clarify, subject content and feature of countermeasure against harmful rumor by the accident. Here is a study result.

From the results of this survey, there are 13 subjects of harmful rumor by the accident article of Asahi newspaper. In the 5 subjects guiding principle of midterm in committee for disputes concerning nuclear power damages have determine extent of restitution. And the remaining 8 subjects are positioned in this paper. It is grasped that 13 subjects have variety of harmful rumor not only goods but also human-rights issue by the accident from Asahi newspaper. Countermeasure against harmful rumor is issuance of certificate showing safety, back up of sale, PR, survey and all that. Common points of countermeasure are supply of information. These are performed by government and Victim. But wounded party and all say that we ask new countermeasure of government.

Thus we have clarified, subject, content and countermeasure against harmful rumor by the accident.

Notes

1) We can check the research and analysis of amount of media reporting by article of nuclear power.

For example, search specifies article included headline or text. They're doing quantify the amount of article from

search result^{[6], [7]}. Also They're doing quantify the amount of article from space of article^{[8], [9]}.

This way, quantitative research method of article is not constant.

We had checked number and percent of the article about harmful rumor. In this survey we treat number of search as number of article.

References

- [1] A. Yamaguchi: Fukushima genshiryoku-hatudensyo jiko no keii to kongo, Fukui Shinbun, 2011.12.18, (2011).
- [2] Japan Newspaper Publishers and Editors Association: Besu-media to seikatsu-sya, Atarashii hyouka-jiku wo kangaeru, 3-26 (2009).
- [3] Genshiryoku-Songai-Baisyuu-Funsou-Iinkai: Tokyodenryoku-kabushiki-kaisha Fukushima daiichi daini genshiryoku-hatsudensyo-jiko ni yoru genshiryoku-songai no hani nado ni kansuru Chukan shishin, Agency for Natural Resources and Energy, 2011.8.5 (2011).
- [4] N. Ueno: Syokuhin no fuhyou-higai to risk-communication, The Japan Society for Science Policy and Research Management, Nenji-Gakujyutu-Taikai-Kouen-Youshi-syuu 22, 675-677 (2007).
- [5] A. Hokugo and S. Kimoto: A study on business continuance plan at disaster of hotels located in sightseeing area, Study Report of Research Center for Urban Safety and Security, Kobe University, 10, 159-167 (2006), [in Japanese].
- [6] J. Kitada: Impact of the TEPCO incident on the public's attitude to nuclear power generation - Periodic survey No.3 -, INSS Journal, 10, 44-62 (2003), [in Japanese].
- [7] K. Okamoto and S. Miyamoto: JCO rinkai jiko-go no genshiryoku yoron, Nakanishiya (2004).
- [8] K. Ohnishi: Variation of public opinion regarding nuclear energy with the change of nuclear information by the media, Journal of the Atomic Energy Society of Japan, 40-7, 563-571 (1998), [in Japanese].
- [9] T. Tsuchida and H. Kimura: Research of the way of communicating information to the mass media by comparison with the media coverage about nuclear accidents, Journal of the Atomic Energy Society of Japan, 10-2, 132-143 (2011), [in Japanese].