Proceedings of 2022 Asian Conference on Crisisonomy
(20 ~ 23 July, 2022; Jeju National University; Asian Association for Crisisonomy)

Public and Community Concerns Disabilities for Eco-Friendly Recovery from Mega Natural Disasters -For The hazard and Climate Resiliency in Case of Japan

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A B S T R A C T

Pacific coastal area and Tokyo areas are trough earthquakes and direct earthquake under the grounds are predicted to occur with a probability of 70-80% within the next 30 years in Japan. On super aged society in Japan, disaster vulnerabilities and community peoples who nominated rescue /volunteer at a time of disaster are going to aging. Sooner or later community peoples are turned rescue side to rescue-needed side, especially in rural areas. The middle-aged and young-old people who will become age and sooner be unusable as a social capital to rescue. We insist that (1) How to manage the decreasing peoples who can be rescued and increasing in need of rescue people in rural areas, it means isolated small population area, (2) How to arrange the recovery and reconstruction plans for vulnerabilities like the disabled, who are the most difficult peoples to reconstruct and recovery by them-selves after disasters, even 90% of whom live in the community. Our question is that it must be optimized for the recovery and reconstruction are considering their living and natural environment, i.e., shifting to the Society 5.0, and We must realize the SDGs.

Key words: reconstruction & recovery, disability, social capital, society 5.0&SDGs

1. Introduction

In Japan, the Pacific coastline is expected to be hit by a NankaiTrough earthquake or an earthquake directly under the Tokyo area within the next 30 years with a probability of 70-80%.within the next 30 years, which calls for urgent disaster countermeasures.(Cabinet Office,JP 2015)

Japan is “Disaster-Prone Country”, and in order to minimize damage, disaster preparedness plans have been developed with the goal of "leaving no one behind.The concept is "self-help, mutual aid, and public assistance." However, we would like to ask whether the concept of "self-help, mutual aid, and public assistance" is being applied to disaster recovery and reconstruction that truly focuses on those who are weak to disasters, and disaster recovery plans for only disaster victims but environment or eco-friendly community are sufficient. Our ultimate proposal is to achieve "zero (0) victims".

1.2. Theoretical Review

Japan's Basic Law on Disaster Countermeasures defines the vulnerable to disasters as the elderly, the disabled, and infants and pregnant and ecpecting mothers.(Basic Act on Disaster Countermeasures,2013, as amended)

One of the features of the law is that it obliges the government to prepare a list of persons who require special consideration in disaster prevention measures (persons requiring special consideration), such as the elderly, persons with disabilities, and infants, and who need special support in evacuation, etc. in the event of a disaster (list of persons requiring support for evacuation actions). It is published as "Guidelines for Support Evacuation Actions of Persons Requiring Assistance for Evacuation Actions“.

2. Research Methods

This study utilized an online questionnaire in We have conducted the Survey on Independent Early Evacuation of Persons with Disabilities。

Number of facilities: 13 facilities for self-reliance support for persons with disabilities

Subject of survey: 13 managers in charge of disaster

prevention management at facility for self-reli ance support for persons with disabilities

Survey method: Online interview survey

Survey period: February-March 2022

Survey contents: As follows

Six categorized interview questions were asked of the facility's fire and disaster prevention managers at facility for self-reliance support for persons with disabilities.

(1)Social capital elements:As a staff member of facility for self-reli ance support for persons with disabilities, do you actively interact with people in the community? Please tell us the situation (scope of the community, number of people, frequency, etc.).

(2)Emergency of Evacuation:Do you confirm the safety of evacuation behavior of persons with disabilities living in the community and the safety of the community in the event of a disaster when persons with disabilities residing in in the event of a disaster when they residing at home?

(3)Emergency evacuation planning guide: Do you inform persons with disabilities of appropriate evacuation routes and evacuation methods for persons with disabilities so that they can evacuate independently in the event of a disaster?

(4)Prepared to evacuation supporters: Do you have local supporters in case of evacuation of persons with disabilities in the event of a disaster? How do local supporters view people with disabilities? Are they able to appropriately support the evacuation of persons with disabilities?

(5) Facility Location and Evacuate tool:If your facility is located in a mountainous area, how should the staff support persons with disabilities during evacuation?Are there any evacuation difficulties?

(6) Expecting Community peoples evacuation support: Describe your expectations for community supporters during evacuation as the social capital of the community.

Above questions by online interview which was easy to access among researchers and subjects' persons.

3. Research Results

The survey results described here are a summary of the responses of fire protection managers to the six categories.

Social capital elements&(2)Emergency of Evacuation:

We asked to what extent employees of facilities for the self-support of persons with disabilities are involved within community activities. It was expected that they were involved in some community activities. However, all of the staff at the 13 facilities do little involvement in community activities.

This is because the work of teaching production skills to people with disabilities at the facilities is hard work. They are responsible for various education to help people with disabilities get trained and become independent by doing productive work to earn some income. People with disabilities are working at the facility from 10:00 am to 4:00 pm. The staff, however, work from 9:00 to 17:00. Even after the disabled leave the facility, the staffs work hard to figure out the work records of the disabled, record each support and teaching task, prepare for the next day's work, and check the teaching curriculum everyday. They must be tired when they return home. On weekends, they need time to relax at home with their families. Some younger staffs also devote themselves to their hobbies, shopping and dating.

Furthermore, we asked the same question about persons with disabilities who live with their families and persons with disabilities who live alone.

Staffs were aware of the community life of people with disabilities and answered that people with disabilities stay home after work (when they leave the facility from Monday to Friday) and on weekends.

People with disabilities, especially those living alone, are isolated from the community. It is a serious question how they can survive if they get health problems or hazards occur.

From this situation, we must recognize the importance of social inclusion.

(3)Emergency evacuation planning guidance：

We asked that do you inform people with disabilities of appropriate evacuation routes and evacuation methods so that they can evacuate independently in the event of a disaster?

The response of 13 facilities to this question was yes. Persons with disabilities working in these facilities are physically, intellectually, or mentally disabled. Of those three categories of disabled persons, those who are able to work are those with mild disabilities. Therefore, most of the disabled people who are working are able to evacuate independently. However, the physically challenged are wheelchair users, which limits their ability to evacuate on their own. In addition, some people with mental disabilities may have difficulty evacuating in the event of an extraordinary event because they are unable to perform their daily activities, so not all of them can necessarily evacuate on their own. It is clear that people with mental disabilities are often able to evacuate on their own when an extraordinary event occurs if they are routinely trained to evacuate.

All 13 facilities have BCP plans in place, but the fact that they were unaware of their facilities' BCPs despite being in charge of firefighting and disaster prevention is a major problem.

(4) Prepared to evacuation supporters:

The presence or absence of community supporters and their number is essential for facilities where many people with disabilities congregate and work in one place to ensure the safety of people with disabilities in the event of a disaster.

Every prefecture in Japan has a local voluntary firefighting& disaster response organization called “Sho-bo-dan”. Their functions are very different from those of volunteers relief. Volunteers provide support to victims after a disaster, whereas Sho-bo-dans are able to provide relief efforts from the onset of a disaster. Therefore, the existence of Sho-bo-dan is very significant for the disabled facilities. However, the members of Sho-bo-dan in local cities are gradually aging. In addition, the number of disabled people working at facilities in local cities is also aging. Therefore, the expectations of the staff for Sho-bo-dans are not as important as their concerns that they will not be able to receive support from those organization nor volunteers due to their aging. Two thirds of the staff at the 13 facilities expressed their concerns.

Staff also indicated that local residents, despite working disabilities in the facilities, have certain prejudices and do not seem to believe that they would be able to evacuate on their own in the event of a disaster. The responses indicated that many normalcy biases toward "disability" among local residents remain in the local city.

(5) Facility Location and Evacuate tool:

For facilities located in mountainous areas, how can we support people with disabilities, it is a serious issue. If visualization of disaster risk and warning area and for real-time information should be done, visual-ization of evacuation sitesshould be done, how to communicate the nearest evacuation site from the current location to persons with disabilities, those are immediate resolving issues.

The wave of DX is also coming to peoples with disabilities and facilities. Many people with disabilities have access to mobile devices. Moreover, they are not aging yet. Therefore, if this infor-mation can be conveyed to people with disabilities in an easy-to-understand form, independent evacu-ation will be realized sooner.

(6) Expecting Community peoples’ evacuation support

Expectations for the community people evacuation assistance is to serve as social capital in the community to assist in the evacuation of people with disabilities in the event of a disaster. In response to this, as mentioned above, all respondents captured the concern that the people who are already considered capable of supporting the community are aging, and that the population will further aged. 1/13 respondent indicated that the greatest need is to dispel the normalcy bias of people with disabilities. She also said that in order to do so, it is necessary to work with the community to prepare meals in shelters, using the experience in food processing/production that people with disabilities have as their job at the facility. This is very important awareness. It means that it is possible to realize mutual cooperation "mutual aid," in which people with disabilities can utilize their abilities and contribute to the benefit of local peoples.

4.Conclusions

What we can say from the survey results that we have not yet figured out the concept and methods of crisis management that take advantage of the abilities of people with disabilities because of normalcy bias toward them.The survey results also revealed that disaster response in the DX era can be actively incorporated into the field of people with disabilities. The following 4 points can be said from the Japanese disaster response studies.

(1) Eliminate the exhaustion of disaster response in local cities due to aging and declining population.

(2) Disaster damage can be visualized.

(3) DX in disaster response has become easier, because the spread of remote work has changed rural areas due to the pandemic of Covid-19.

(4) Increased migration of young people from urban area to rural area, will make it possible to ensure safety from disasters.

(5) Solving issues of people with disabilities will promote environmental protection and health (SDGs).

Acknowledgement: This work was sponsored by Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research”KAKENHI, (MEXT), 20K02068.

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He received his B.A., M.A., Ph.D. from Yonsei University, Korea in 2000. He is a Professor of the Department of Public Administration at Chungbuk National University, in which he has taught since 2000. His interesting subject and area of research and education is crsis & emergency management, organizational studies, and policy implementation. He has published 203 articles in journals and written 16 books, including 10 co-author books.

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