



2024 Fukushima Medical University International Symposium on the Fukushima Health Management Survey —3.11: Sharing Lessons of Fukushima with Japan and the World—

Rie Mizuki^{1,2)} and Seiji Yasumura³⁾

¹⁾Faculty of Psychology, Iryo Sosei University, ²⁾Department of Disaster Psychiatry, Fukushima Medical University, ³⁾Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University

(Received October 24, 2024, accepted November 13, 2024)

Abstract

Fukushima Medical University (FMU) organizes annual International Symposiums on the Fukushima Health Management Survey (FHMS) to share up-to-date Survey findings. In response to radiation released from the Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Plant after the Great East Japan Earthquake, the FHMS was established with the aim of providing long-term follow-up for the physical and mental health of Fukushima residents, and maintaining and improving their health into the future. This year, the sixth annual symposium was convened in Tokyo on Saturday, March 2, 2024, with the theme, "3.11 : Sharing Lessons of Fukushima with Japan and the World."

Key words : Fukushima Health Management Survey, International Symposium, Nuclear Disaster

Introduction

In the wake of the Fukushima Daiichi Nuclear Power Plant accident, the Radiation Medical Science Center for the Fukushima Health Management Survey (FHMS) at Fukushima Medical University (FMU) was established in September 2011 to conduct the FHMS, as commissioned by Fukushima Prefecture. The Center has been organizing International Symposiums on the FHMS every year since 2019 to present Survey results with expert interpretation, and provide an update on the current situation in Fukushima to prefectural residents and the rest of the world. This year, to inform a wider audience about the impact of the Great East Japan Earthquake and subsequent nuclear accident, and the current state of revitalization, using FHMS results and other information, the sixth International Symposium convened for the first time in Tokyo as its main venue on Saturday, March 2, 2024 under the theme "3.11 : Sharing lessons of Fukushima with Japan and the world" (symposium website is <https://fhms.jp/en/symposium/2024/index.html>). In addition to

public on-site and private online participation, live streaming of the symposium was made available to people in Fukushima on FMU's Fukushima Ekimae Campus. Discussion and Q&A from the audience followed symposium presentations. Simultaneous interpretation in Japanese and English was provided for the entire program. Symposium participants who are quoted or paraphrased in this report concur with the English-language rendering of their statements.

Program of the Sixth International Symposium

Opening Session

Dr. TAKENOSHITA Seiichi, FMU President, began by stating "The purpose of this symposium is to systematize and universalize the experience and knowledge gained in the process of recovery from the unprecedented complex disaster, and making it the shared knowledge of all humankind, with the hope that the researchers who have participated in

Corresponding author : Rie Mizuki E-mail : mizuki.rie@isu.ac.jp

©2024 The Fukushima Society of Medical Science. This article is licensed under a Creative Commons [Attribution-NonCommercial-ShareAlike 4.0 International] license.
<https://creativecommons.org/licenses/by-nc-sa/4.0/>

this conference from Japan and abroad will engage in lively discussions and offer their insights and opinions from their respective professional standpoints.”

Mr. UCHIBORI Masao, the Governor of Fukushima Prefecture, sent a video message that underscored close collaboration with FMU and the implementation of the FHMS to ensure safety and security for residents of Fukushima Prefecture.

Next, Dr. YASUMURA Seiji, a Vice President of FMU and Executive Director of the Radiation Medical Science Center for the Fukushima Health Management Survey, provided an overview of FHMS results that included the following major points : 1) no death as a direct result of radiation was found, 2) among 99.8% of the residents, external exposure during the first four months after the accident was less than 5 mSv, 3) no association between radiation dosage and thyroid cancer was found with data based on 4 rounds of examinations, 4) high-risk rates of mental health issues steadily declined over the decade for adults and children, 6) preterm delivery rates, low birth weight rates, and incidence of congenital anomalies did not differ from that of national data. Dr. YASUMURA's presentation was chaired by Dr. OHTO Hitoshi, another Vice President of FMU and General Vice Director of the Radiation Medical Science Center for the Fukushima Health Management Survey.

Session 1 : Insights—What We Have Learned from the People of Fukushima, chaired by Dr. SHIMURA Hiroki (FMU) and OHIRA Tetsuya (FMU)

1-1 : Basic Survey —Experience in Dose Estimation Involving Around Two Million People.

Dr. ISHIKAWA Tetsuo (FMU) presented results of the Basic Survey, which assessed personal doses of external radiation exposure from March 11 to July 1, 2011, based on a self-report questionnaire of activities sent to residents of Fukushima Prefecture. For over 99% of respondents, their radiation dose was less than 3 mSv, and similar doses were found in the majority of people in the Soso area, where the Fukushima Daiichi Nuclear Power Plant is located. According to the Prefectural Oversight Committee, these doses are evaluated as “unlikely to have health effects due to radiation.”

1-2 : The Current Status of the Thyroid Ultrasound Examination and Scientific Findings.

Dr. FURUYA Fumihiko (FMU) reported results of the Thyroid Ultrasound Examination (TUE) program, designed for approximately 380,000 prefectural residents who were 18 years old or younger at the

time of the earthquake and those born in the following year. Of these participants, 328 have been diagnosed as having thyroid nodules with cancer or suspected of having cancer by cytological examination, but no dose-response relationship was found in a case-control study using Basic Survey results and cancer registries.

1-3 : Lessons from the 12 years of the Comprehensive Health Check

Dr. SHIMABUKURO Michio (FMU) reported that increased hypertension, diabetes, dyslipidemia, hyperuricemia, liver dysfunction, and polycythemia vera were found among those with an estimated dose of 2 mSv/year or more. However, the associations disappeared after adjusting for evacuation status and lifestyle-related factors, indicating that evacuees were likely to have increased health problems related to obesity or non-obesity/emaciation due to lifestyle changes and emotional stress.

1-4 : Current Issues of Mental Health among Affected People after the Fukushima Disaster : The Importance of Human Bonds in Society

Dr. HORIKOSHI Naoko (FMU) reported that 11% of all respondents answered that they had no people or institutions to which they could turn for help with mental or physical problems. Even with someone to consult, the overall risk of mental health problems was found to be 1.33 times higher for those who did not consult family members. Assessing whether or not they can share health issues with their family members is key to identifying high-risk individuals.

1-5 : Pregnancy and Birth Survey in Fukushima Prefecture

Dr. FUJIMORI Keiya (FMU) reported that incidence rates of preterm delivery, low birth weight, and congenital anomalies did not differ from national data. No association was found between maternal external radiation dose and Fukushima's rates of preterm delivery, low birth weight birth, or congenital anomalies in 2011. Furthermore, while the rate of postpartum depression was high in 2011, it has been decreasing steadily since then, reaching almost the same level as the national rate by 2020.

Keynote Lecture : Collaboration with International Organization—Lessons from Fukushima, chaired by Dr. TAMAKI Tomoaki (FMU).

Dr. May ABDEL-WAHAB (International Atomic Energy Agency ; IAEA) presented key points for

communicating a general overview of radiation exposure, based on how humans process and understand information and evaluate risks. Attention needs to be paid to the level of a person's health literacy, since it affects medical care access and interaction between patients and medical professionals. Furthermore, it is important to be aware that risk communication is a cycle that expands from private communication within a family to more public communication within a community and society at large. Through collaboration with FMU and other Japanese universities, IAEA continues its endeavors in Fukushima and addresses health issues, including radiation risks.

Session 2: Bridges—To the Future, For the People, chaired by Dr. TSUBOKURA Masaharu (FMU) and Dr. MIZUKI Rie (FMU)

2-1 : Psychological Effect on Children in Fukushima and Their Care : Findings from a Longitudinal Survey

Dr. UCHIYAMA Tokio (Fukushima College) reported an increased number of children with characteristics such as hyperactivity in a group of 1.5- and 3.5-year-old children who experienced the earthquake in their infancy. Also, another survey conducted with parents of elementary school-aged children revealed that a low overall sense of health among parents, long periods of displacement after the birth of their children, and lack of support, were related to the child's mental health outcomes.

2-2 : Support for Wide-Area Evacuees of the 3.11 Great East Japan Earthquake and Nuclear Disaster

Mr. KATAHIRA Yoshinori (Fukushima Collaborative Revitalization Center) described the Center's functions to support those who evacuated from Fukushima Prefecture to other regions of Japan. The evacuees increasingly shared their mental health issues and financial problems with the Center. Their increase in mental health issues and financial problems as well as isolation have become conspicuous over time.

2-3 : Risk Communication and Support Activities of the Radiation Medical Science Center for the Fukushima Health Management Survey for Affected Municipalities

Dr. TAMAKI Tomoaki (FMU) described various activities for risk communication and support currently implemented by the Center, such as providing feedback on health check results, mailing health pro-

motion leaflets, organizing peer support groups for youth with thyroid cancer, and offering telephone counseling for survey respondents with mental and physical health issues. Throughout the year, teams from the Center support local residents by visiting municipalities in the evacuation area and attending Municipal Liaison Meetings to strengthen cooperation among residents and service providers.

Closing Session

Dr. HAZAMA Akihiro, Vice President of FMU, closed the symposium with the following remarks : "It was a great pleasure to have thought-provoking discussions from a wide range of perspectives and to have gained many meaningful insights. FMU will continue to contribute to the reconstruction of Fukushima and the creation of the future by deepening cooperation with the world at large, and will also continue to support the health of the people of Fukushima Prefecture by staying close to each and every one of them through the Prefectural Health Survey."



Fig. 1. The cover page of the program and abstracts of 2024 Fukushima Medical University International Symposium on the Fukushima Health Management Survey—3.11 : Sharing Lessons of Fukushima with Japan and the World—

Program of the Seventh International Symposium

The Seventh International Symposium on the Fukushima Health Management Survey will convene February 20, 2025, at Fukushima Medical University's Ekimae Campus. Details of current and prior symposiums can be found at <https://fhms.jp/en/symposium/>.

Conflicts of interest

The authors declare no conflicts of interest pertaining to this manuscript.

Disclosure Summary

The authors have no disclosures pertinent to this manuscript.

References

1. The Radiation Medical Science Center for the Fukushima Health Management Survey, International Symposiums (2019–present). <https://fhms.jp/en/symposium/2024/index.html>
2. Documentation of Prefectural Oversight Committee Meetings (2012–present). <https://fhms.jp/en/fhms/outline/materials/>