

**WHAT TO DO WHEN FACING THE UNCERTAINTY:
IMPLICATIONS FROM THE SEVEN YEARS OF HEALTH
PROTECTION PRACTICES AT SCHOOLS
IN THE AFFECTED AREA OF FUKUSHIMA DAIICHI
NUCLEAR POWER PLANT ACCIDENT**

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Abstract

Radiation is not visible, and its effect may only occur in a longer term, which distinguishes nuclear disasters from other public health emergencies. Japan faced with Fukushima Daiichi nuclear power plant accident occurred in consequence with the East Japan Earthquake that took place on March 11, 2011. Immediately after the accident, questions about the safety of the living environment arose one after another among the residents in the area.

Nihonmatsu City in Fukushima Prefecture, placed 37-60km northwest of Fukushima Daiichi Nuclear Power Plant with the total population of 59,656 in 2011, had not been instructed for evacuation after the accident, but is next to the exclusion zone and presented relatively high air dose comparing to other non-evacuation municipalities. Our research team started to support the public health response of the city government from 2011, to provide the evidence to answer the questions from the residents and to determine what would be needed in the next step.

At the acute and mid-term phases of the disaster response, the major concern was the safety of the daily lives of children, who were one of the most vulnerable population to radiation exposure, thus priority of the public health response was set to protect health effects and promote radiation prevention of children in the city.

Investigations of the level of external and internal radiation among more than 8,000 children living in the city were started in September 2011 and the survey results were promptly analyzed and reported to the residents through debriefing sessions, individual reports, public relations magazine and website.

Accordingly, a system was set up in 2013 in collaboration with the local board of education to report the results of surveys to children in school classes. This practice aims to make children understood the purposes of the investigations and encourage them to think about and tackle the long-term issues on radiation by themselves. From 2014, this practice became a part of the municipal educational curriculum of elementary and junior high school students. Teachers, administrative members of schools and researchers worked together to publish a textbook for learning not only the radiation itself, but also the lives of people affected by the nuclear accident, such as farmers and evacuees, to understand and discuss the overall issues after the disaster. This textbook is now used at all elementary and junior high schools in Nihonmatsu City.

Throughout seven years of educational practice at schools, students gained the knowledge and self-efficacy for radiation protection. Besides, it was suggested that even if adults' interest in the nuclear accident and related health investigations diminished over time, children's learning at school would raise

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the awareness of their family members. This practice can also promote the communication between researchers and residents, and it contributes to the health protection behavior and establishment of preparedness of the community. We have learned that when facing the uncertain situation, it's important to repeat the process of investigating and sharing information with residents including children to enable thinking by themselves at the time and future.

Keywords: health protection, radiation, emergency response, school health