

Reflections on the Mental Health consequences of Nuclear Power Plant Disasters and Implications for Epidemiologic Research in Northeast Japan

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Disasters involving radiation exposure are particularly pernicious and have long-lasting psychological consequences. This paper reviews evidence regarding the specific consequences after the Three Mile Island and Chernobyl nuclear power plant accidents and shows the important association of risk perceptions with poor subjective health and emotional distress. The two groups used to illustrate the findings about the mental health aftermath are mothers of young children and clean-up workers. The importance of unbiased epidemiologic data for designing appropriate and needed mental health services and of integrating these services within a general medical framework are also discussed. Specific recommendations for enhancing the quality and hence utility of epidemiologic research are provided, which include (1) consensus building with the affected community and full partnership in all steps in the design and execution of the research; (2) if a random sample is the intended target, allowing unselected residents to participate if they wish; (3) providing incentives to participation, including giving results of blood tests, thyroid tests, and physical examinations in a timely manner and training interview staff in motivational interviewing techniques; (4) communicating the professional, scientific nature of the research and the consenting process, as well as the partnership with the community; and (5) directly sharing the findings together with local partners to the respondents and interviewers prior to publishing the results elsewhere and allowing a time and place for feedback from the community. Given that mental health may be the largest public health problem unleashed by Fukushima, as was the case after Three Mile Island and Chernobyl, and knowing that poor mental health is a leading cause of disability, physical morbidity, and mortality, it is important that comprehensive health monitoring involve clinically sensitive measures of emotional well-being, particularly with regard to depression, post-traumatic stress, other forms of anxiety, and subjective health concerns. Since most individuals seek help from non-psychiatrist medical providers for physical as well as emotional conditions, it is imperative that these providers are able to detect and manage common mental health problems that arise and will no doubt persist in the aftermath of the triple catastrophe in Northeast Japan.

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