

論文の内容の要旨

論文題目 Social Capital and Mental Health among Displaced Residents from Fukushima

(福島県避難者のソーシャルキャピタルとメンタルヘルス)

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More than six years have passed since the 11 March 2011 Great East Japan Earthquake and the resulting tsunami and nuclear reactor meltdowns. Nevertheless, there are thousands of people remain displaced from their homes in Fukushima prefecture because of radioactive fallout from the Fukushima Dai-ichi nuclear plant. Evacuees from the disaster face various challenges such as uncertainty about their livelihoods and health, a loss of normalcy, and the evacuation of their homes and towns. To cope with these problems and to improve the recovery policies, social capital is one of the important concepts currently gaining great attention as a key notion for maintaining good health in disaster affected areas. However, we still lack a clear understanding of the role of social capital in maintaining mental health among evacuees from Fukushima.

To bridge the gaps in the literature, we measure and analyze the levels of social capital and mental health of displaced residents from a town of Futaba in Fukushima prefecture through

multiple survey research. For analysis, first, we compare mental health status of Futaba residents with that of overall Japan and other disaster affected areas and tracked the change of social capital before and after the disaster. Second, we analyze association between social capital and mental health. Third, using natural experimental situation provided by the disaster, we test canonical version of the prospect theory for better understanding of social determinants of mental health status among Futaba residents.

We uncover four important findings. First, the average level of mental stress among displaced Futaba residents is unusually high compared with all Japanese citizens. Their psychological distress scores are high even compared to individuals living in areas of Tohoku affected by the earthquake and tsunami but not directly affected by the nuclear catastrophe. In addition, we find serious deterioration of mental health status among residents living in temporally prehab shelters after the disaster. Second, social capital has substantially declined among Futaba residents after the disaster and it would take long time for recovery. Third, high levels of social capital captured by the number of neighbors from Futaba, participation in volunteer work and engagement in social events act as a shield against unusually poor mental health. Fourth, we find that house size change caused by the disaster and mental health status show loss aversion relationship.

This dissertation makes several contributions to the literature and brings important policy implications. First, it is the first study to quantitatively investigate the nexus between mental health and social capital among the displaced population from Fukushima and demonstrate a positive association with social ties. Furthermore, this is the first study that measured social capital before and after the disaster and that continuously measured change of social capital after the disaster among Fukushima residents. Moreover, we find that influence of a nuclear power plant accident on mental health is more serious than that of other natural disasters. The results bring important policy implications for disaster managers, vulnerable communities, and

decision makers because we need different toolkits for improving mental health in a nuclear crisis. As social capital acts as a shield against psychological distress, we also suggest that decision makers implement evacuation plans which ensure – as much as possible – continuity among social networks through techniques such as keeping evacuees from the same original community together in temporary shelters. Also, disaster managers should support local community activities such as volunteer work opportunities and social activities. Moreover, we test the prospect theory using natural experimental situation and find that change of house size caused by the disaster and mental health have loss aversion relationship, which is new empirical evidence of the prospect theory. In addition, our results imply that there is a possibility of reference point revision in dimension of income change, which can provide important policy implication about compensation for disaster affected residents.

This dissertation is organized as follows. Chapter 1 covers literature review and explains our study purpose in detail. Chapter 2 discusses the data collected exclusively for this study and overviews our method of analysis. Chapter 3 shows our first analysis on the impact of disaster on mental health and social capital among Futaba residents. Chapter 4 presents our main result of analysis on association between social capital and mental health among Futaba residents. Chapter 5 presents another main body of analysis which is testing prospect theory using our unique dataset. Finally, Chapter 6 concludes our findings.