Review of: "How Social Infrastructure Saves Lives: A Quantitative Analysis of Japan’s 3/11 Disasters"

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Potential competing interests: No potential competing interests to declare.

Your manuscript discussed the relationship between physical and social infrastructure and their effects on the mortality rate of older people in the 3/11 disaster. I understand that this is an important finding that shows the importance of social infrastructure, which is often ignored in disaster prevention and recovery. I am pleased to have been invited as a reviewer.

1. Why did you focus on the older people to examine the effects on the mortality rate of residents? Is it because the older people are one of the most vulnerable groups in society? Or is it because they have some other characteristic? In addition to the older people, other vulnerable groups that face great disadvantages during disasters include pregnant women, children, the disabled, and immigrants with different native languages. If you think that the role of social infrastructure also affects other vulnerable groups, please add it to the DISCUSSION.
2. The effects of social infrastructure were discussed based on the statistical significance of the regression analysis. The p-values are not sufficient to understand the extent of the effects of social infrastructure. Please add standardized regression coefficients, partial correlation coefficients, or other effect sizes to Table 3.
3. This comment is my opinion, please add if interested. Further discussion may be possible on the relationship between physical and social infrastructure in the infrastructure development of the recovery process. First, physical infrastructure can erode social infrastructure. High seawalls serve to protect people from tsunamis; however, they separate the sea from people's lives. Coastline and seaside parks are an important part of the social infrastructure for the society that has developed along the sea. The residents experience events, festivals, and play among friends in the seaside area. The construction of high seawalls may reduce such areas and the opportunities for people to interact with each other. In fact, in the Great East Japan Earthquake, the construction of large seawalls in the affected area resulted in the loss of familiar places for residents. On the other hand, physical infrastructure can affect social capital. After a disaster like a tsunami, there is a large difference in land prices between the seaside and the inland side. Affected people are likely economically affected and vulnerable to such land price fluctuations. As a result, they may be unable to choose where to live, and their original social networks may be disrupted. A well-developed physical infrastructure may alleviate this disparity in land costs and contribute to maintaining the original social network without limiting the choice of where to live after the disaster.

Thanks.