

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.

Review report on “**How Social Infrastructure Saves Lives: A Quantitative Analysis of Japan's 3/11 Disasters**” by **Daniel Aldrich**

This manuscript is a good quantitative presentation of Japan's devastating disasters in three prefectures on 11 March 2011 due to a 9.0 magnitude earthquake. The 2011 Tohoku earthquake and tsunami, as well as Fukushima Daiichi nuclear disaster, is the strongest earthquake in Japan and one of the world's strongest and most devastating disasters in human history. It is sometimes known in Japan as the “Great East Japan Earthquake” or simply 3/11. Japan government statistics showed that the 3/11 disasters confirmed about 20,000 dead and more than 2,500 were missing. Moreover, ages over 60 account for 65.8% of all deaths, and this study tries to identify factors responsible for why these elderly people have died. This study argued that not the infrastructure, mostly the gray infrastructures but social infrastructures can reduce the mortality of over aged (65 year) people during disasters. However, my comments on this manuscript are given below:

Introduction: The Introduction should be rewritten based on some explanation of similar disasters. I have not found any description of the effects of natural disasters like earthquakes and tsunami as well as nuclear disasters. There are also missing linkages between disasters and the importance of infrastructures mostly the social infrastructure. Moreover, the Introduction section is based on United States, not the focus of Japan and other disaster-prone countries.

At the end of Introduction section, I am suggesting for writing a section about the overview of the 3/11 disasters in Japan.

Methodology: This section is missing. Please give a Methodology section about Japan and natural disasters, how the data were collected, and how these collected data were analyzed.

Results: I am confused about the Results sections. There is no indication on the manuscript about from where the results started and where the results were finished. I think the results/findings were presented in two broad sections “Defining Infrastructure” and “Defining Mortality”. But, under two sections author used several references, so I am confused about whether it is Results or Discussion. Please rewrite the Results section with a clear indication of results/findings without any comparison with previous studies. Moreover, Appendices 2 & 3 should be located in the Results section, not as an Appendix.

Discussion: This section should be more descriptive as I have not found the situational discussion in Japan and other countries in case of disaster management. This section has no discussion about the limitations and challenges of 3/11

disasters management by the Japanese government as well as other countries with similar types of disaster management. Moreover, similar to the Introduction section, Discussion section is based on the United States, not focusing on Japan and other disaster-prone countries.

Conclusions: In the current form, this is not a form of writing a conclusion for a research article. All the current paragraphs should be moved to the Discussion section. After that, write a paragraph about the overall findings from the study as well as future research direction and policy implications for Japan and for other disaster-prone countries. The conclusion should avoid of sub-paragraphs, and should be finished within 250-300 words in a paragraph.