

Interactive comment on “Discovering the differential and gendered consequences of natural disasters on the gender gap in life expectancy in Southeast Asia” by Marshal Q. Murillo and Shukui Tan

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We would like to thank the reviewer for her remarks and comments. We have addressed the following points and they are all well taken.

Attached the revised copy of the article, for reference and further scrutiny.

POINT No. 1: "The paper is based on the data collected in EM-DAT, particularly on the number of fatalities caused by natural disasters. I think that there is a basic question to point out. EM-DAT collects all types of natural disasters, no matter their triggering

C1

causes. The authors mentioned the climate change in different parts of the paper and talks about the possible modifications of risk for human life related to the increasing impacts of natural disasters due to the climate change.

The "Hypothesis 3: Natural disasters reduce the life expectancy of women relatively more than that of men and this is more likely to increase in countries that are highly vulnerable to the impacts of climate change" as formulated, implies that "all" the natural disasters can be affected by climate change.

Nevertheless, several natural disasters collected in EM-DAT are not related to climate, thus cannot be affected by climate change. Earthquakes and volcanic disasters have an endogenous trigger, while mass movements (landslides is a type of mass movements) (Page 8 line 14) can be either related to climatic features or linked to earthquakes. Thus, some natural disasters are not connected to climate and cannot be directly related to climate change. Then I think that this basic point must be clarified. The disasters cannot be considered all together."

REPLY: Point noted. The third hypothesis is rephrased to "natural disasters reduce the life expectancy of women relatively more than that of men, and this is more likely to increase in countries that are highly vulnerable and exposed to nature-induced shocks."

The measures for the "country's level of vulnerability and exposure to climate- and nature-induced shocks" are collected in Notre Dame Global Adaptation Initiative (ND-GAIN). This collected data measures the country's overall exposure, sensitivity, and vulnerability regarding "six life-supporting sectors - food, water, health, ecosystem service, human habitat, and infrastructure." We believe that the ND-GAIN data represents the country's vulnerability and exposure to nature-induced shocks, regardless if a natural disaster is climatological (e.g. drought, wildfire, etc.), hydrological (e.g., flood, landslide, etc.), or geophysical (e.g., earthquake, mass movement, etc.). The cross-national data is also a comprehensive index that measures the country's capacity to address not only the impacts of climate change but also "other global challenges."

C2

POINT NO. 2: "I understand that the paper concerns a specific area (Southeast Asia), but I think that the Authors should also mention studies carried out in developed countries where the vulnerability is larger for males than for females. I think that the Authors should give visibility to these opposite findings obtained in different countries. Otherwise, a generic reader can believe that the findings of this paper are verified in all the countries."

– Point noted. The revised study provides an opposing view on the matter. That is to say; we find no significant evidence to support that the study's two determinants (i.e., women's socio-economic and political rights and the country's level of vulnerability to natural catastrophic events) exacerbate the life expectancy of both women and men in the face of natural disaster.

Also, as suggested, we added few literature and studies that showcased men's vulnerability to the impacts of natural disaster. See page 6, line 10-15.

We thank the reviewer for her time and as well as her careful review of our article.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-370/nhess-2017-370-AC1-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-370>, 2017.