






# Health Impact of Household Waste Burning in Khartoum State, Sudan [Response to Letter]

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## Dear editor

We are thankful to the readers who shared their views on our publication. Their comments are for us a critical appraisal of an article titled “Health Impact of Household Waste Burning in Khartoum State, Sudan”, which disseminated at international and national levels the concerns of voiceless affected communities. We would like to address the comments, and we expect that the answers provided will be agreeable.

1. Not identifying the composition of household waste that is burned, we do not gain an in-depth understanding of the health risks caused by burning waste.

We agree with the comments of the authors as the survey was performed online and for a forthcoming study, the research tool should collect details of the household waste discharged and burnt as already performed elsewhere in the literature by Fadhullah W. et al<sup>15</sup> and Addo HO et al<sup>18</sup> who differentiated organic and inorganic household waste.

2. There is no direct measurement of pollutants, so detailed information about health impact specifications is not obtained

This comment is well taken and it emphasizes the importance to have passive and active measurement devices to quantify the various components of household waste (solid, liquid, gases) which results from the burning process and can fly as ash particulates (such as soot from engines and fly ashes in the air). The online survey is not a justification for not having performed those measurements, we fail to perform those measurements for two reasons. The data were collected in a given period of time through which our thesis should be submitted in addition to financial constraints for purchasing the appropriate devices and affording the cost of the specialized laboratories. Prior to the eruption of 15 April 2023 armed conflict in Sudan, we drafted a proposal to assess the health impact of an oil refinery on residents of Alobeid, North Kordofan. In this proposal a provision of a budget for purchasing measurement devices to quantify the components of air pollution was made.

3. This does not consider other factors that influence waste burning behavior such as: cultural, social and economic.

We take note of the contributions of the readers on this point. As they rightly stated, this will enable us to understand and explain in the context of Khartoum drivers of household burning.

In conclusion, we are grateful to the editorial board of the Journal Risk Management and Healthcare Policy and its readers (Elanda Fikri, Fahmi Hafid, Heru Santoso Wahito Nugroho) for the opportunity given to us to further discuss the limitations of our article.

## Disclosure

The authors report no conflicts of interest in this communication.

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