

Review of: "Tobacco Smoking-Attributable Mortality in Kenya: 2012 –2021"

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Potential competing interests: No potential competing interests to declare.

The methodology used by the authors is sound and, for the most part, the paper is well written. However, methodological limitations of the study should be addressed in more detail.

Major points

1. Was the joinpoint model taken into account at all when estimating the attributable fractions? Didn't the authors just take the sum of all reported deaths in a given category across the observation period? If not, they should describe how they used the results of the joinpoint model.
2. In any case, a model with just one joinpoint would probably not be sufficient, as the strike of the health personnel in 2017 would likely have required one joinpoint before and one after the strike. Moreover, it is hard to believe that the low death counts in the three following years were not somehow related either to this strike or to the Covid-19 pandemic.
3. It is unclear how "crude rate" is defined in figure 2.
4. Table 3:
 - a) In the method section, the authors should write that they used gender-specific but not age-specific estimates of smoking-related relative risks.
 - b) The authors report age-specific death counts only for some of the diseases. While age-specific death counts for rare diseases might overload the table, they should be reported for more frequent diseases (e.g., neck of the uterus, pneumonia, diabetes mellitus, and tuberculosis).
5. The text following table 3 should be placed at the end of the Discussion.
6. Smoking attributable mortality refers to deaths from diseases that are known to be influenced by smoking, not to total deaths or deaths from natural causes. This is not always clearly stated. For instance, in the Abstract or in the first sentence of the Discussion, one gets the impression that the fraction of 16.5% refers to all-cause mortality. What fraction of deaths is caused by smoking-related diseases in Kenya? Multiplying the SAM estimate of 16.5% by this fraction would give the corresponding estimate for all-cause mortality. It seems that the lower fraction reported in the study from Morocco

refers to total mortality. Therefore, their SAM estimate might actually be comparable to yours.

7. Death data used in this study seem to have been collected in health facilities. This system might not cover all deaths, and the coverage might vary by cause category. The authors should discuss this.

Minor points

8. In the method section, the part on generalizability should be removed from the sentence Thirdly, it facilitates meaningful comparisons..., as your findings are specific to Kenya.

9. It was not the causes of death that were stratified into two age groups but the cause-specific death counts.

10. ... RR1 and RR2 denoted the relative (!) risks of dying ...

11. I suggest using “never-smoker” instead of “non-smoker” because former smokers were also non-smokers at the time of the survey.