

Peer Review

Review of: "Assessing the Relationship Between Clean Cooking Fuels and Women's Cancer Mortality in the European Union: An Empirical Analysis"

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How does access to clean fuels translate into women cooking? In underdeveloped countries, many people cook using wood, charcoal, and other solid fuels, but what about in the EU? Does the study make sense in this context?

How do the authors address genetic inheritance and tobacco consumption in cancer prevention and treatment? How do they separate individuals with these risk factors from their sample?

"Approximately 3.1 billion people worldwide still rely on polluting energy sources for cooking, heating, and lighting." How many of these are in Europe? Among the top 10 or top 20, which European countries from the authors' sample appear?

"This hypothesis suggests that increasing access to clean cooking fuels significantly reduces cancer mortality among women by lowering indoor air pollution levels." The hypothesis should be more cautious—if we eliminate all sources of PM2.5 emissions from cooking, heating, and lighting, the effects of genetic factors and tobacco consumption will still contribute to a high cancer mortality rate. While a reduction may be observed, a significant reduction may not be confirmed. I suggest avoiding overstatement due to the unmeasured/unknown influence of genetic factors.

How much did authors 13, 14, 15, and 16 improve women's health? Please provide the values within the main text.

"The rationale behind selecting these 27 European countries..." should be included in the introduction. This issue does not reflect the reality of most of the European population, yet the justification only

appears in the data section. The significance of this study should be made clear to the reader as early as possible, including in the abstract, albeit concisely.

Table 2 – Why do the variables have different numbers of observations (243, 228, 225, and 242)?

Table 7 – Please justify (even in the notes) why “Dc_w” is not applicable.

The authors should also explain why the number of observations in the regressions was reduced to 209 instead of 225, as seen in the variable Ac_cfc.

Which results hold greater value/reliability—the OLS pooled or QREG estimates?

In the QREG robustness check, the statistical significance of some variables decreased, while others lost significance altogether. Therefore, in Figure 4, it would be more prudent to rely on the robustly checked results, especially when proposing policy recommendations, rather than on the OLS pooled estimates.

"The study primarily focused on identifying correlations." The authors went beyond this by conducting regressions and identifying impacts—this statement should be revised accordingly.

The limitations section does not mention that genetic characteristics associated with cancer were not considered in the study.

The authors need to justify why such a large number of references was necessary for this paper.

The average time to begin cancer treatment in the European Union (EU) varies significantly between countries and depends on multiple factors, including cancer type, case urgency, and the efficiency of healthcare systems. How do the authors perceive the influence of these factors on cancer mortality rates?

Declarations

Potential competing interests: No potential competing interests to declare.