

Peer Review Report

Review Report on Assessing the health benefits of physical activity due to active commuting in a French energy transition scenario

Original Article, Int J Public Health

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EVALUATION

Q 1 Please summarize the main findings of the study.

Main goal of the study is to project potential health benefits of future energy transition, whereby the authors focus on the health benefits of physical activity as a result of higher ratios of active transportation. Active transportation is quantified by ratios of walking, cycling and e-biking. Based on data from France and the negaWatt scenario, the authors calculate health benefits and assume, that in a future France (2045) up to almost 10,000 annual premature deaths could be prevented. Moreover, the authors attribute the health impact of active transportation to a 3-month increase in life expectancy by 2045 and a 34 billion € economic benefit.

Q 2 Please highlight the limitations and strengths.

Strengths of the manuscript:

The authors are able to calculate on a sound basis the potential health effects of transformation processes in transportation, thereby quantifying health benefits on different levels. The scenarios used are realistic, as they do not project too optimistic transformations in a future France but use the experience in other countries (e.g. Denmark) as references and keep in mind, that structures in Denmark are much more favorable for mobility transformation. The health benefit of active transportation is two-fold: on the one hand the population health benefits from healthier lifestyles (more activity), on the other hand population health benefits indirectly from changes in living environments and from mitigating effects on climate change.

Limitations:

Main limitation of the manuscript is its predictive character, that is based on selected predictors. The results of the forecast are somewhat vague (e.g. range of premature deaths prevented from 5,000 to 13,000). It remains unclear, which other potential social or structural changes could play an important role in transforming transportation modes in future France. This should be discussed by the authors (aspects of social inequality and public transportation, the divide in public transportation modes in rural and urban areas especially in France).

The authors state that this is not the first forecast on health benefits by higher ratios of active transportation. The authors should emphasize more clearly what their manuscript offers in terms of new insights, especially in the context of previously published work. Only the reference to another data source does not seem sufficient here.

And one must state that the results of the analysis are somewhat unsurprising and expectable - if people live a more active lifestyle, they tend to live longer (on the average). The authors should discuss more openly, why the results of their analysis are interesting for publication.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Major comments:

- Discuss other potential effects on public active transportation modes (social structure, urban vs rural areas in France)
- Emphasize the new insights of this manuscript, beyond different modes of data used. For example, it can be used as an argument for higher ratios of public and active transportation in a political context.
- Predictions are somewhat vague and can better be interpreted in the context of other developments. In the discussion, the authors discuss their results in the context of developments in other countries. This remains vague and should be extended.

Minor comments:

- The manuscript needs to be revised for linguistic errors.
- If possible, another form of transportation should be included in the graphs (e.g. Figure 1) where a decrease is expected (car).

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

The manuscript should be revised in terms of language and reviewed by native speakers.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Yes, as far as I can tell literature is sound and complete.

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Minor revisions.