Reviewer's report

Title: The impact of a healthy lifestyle on Disability-Adjusted Life Years: a prospective cohort study

Version: 1
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Reviewer: frank hu

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Minor Essential Revisions

This study examined the combined effects of several lifestyle factors including non-smoking, low BMI, being physically active and adherence to a Mediterranean diet on DALYs. The authors found that people adhering to all four healthy lifestyle characteristics lived a minimum of two years longer in good health (DALYs: -2.13; 95%-CI: -2.65; -1.62) than persons with none. Overall the paper is well written. The statistical analysis appears to be sound. The findings have important public health implications. I have only a few minor comments.

1. The authors stated that "Continuous analysis showed an on average 7 more months in good health per additional healthy behaviour (DALYs: -0.57; 95%-CI: -0.67; -0.47)." Because the four lifestyle factors have different effects on chronic disease risk and DALYs, it is questionable to conduct continuous analysis, which assumes the same effect for each factor.

2. The authors stated "Due to our non-extinct cohort, true health benefits of a healthy lifestyle will be even larger." This statement is unclear and needs to be explained.

3. It would be interesting to look at the impact of "other lifestyle factors" on DALYs among individual with one risk factor (e.g. overweight/obesity).

4. It would be also interesting to look at the impact of these factors among individual with high blood pressure or high cholesterol.

5. Is there any gender difference in the estimates?

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

none