Reviewer's report

Title: C-reactive protein mediates the association between leisure-time physical activity and lung function in middle-aged and older adults

Version: 0 Date: 10 Jul 2019

Reviewer: Nancy Mangemba

Reviewer's report:

Overall a well written and well executed study. Mediation Analyses require much background support to back the hypothesis.

Abstract: Well done and concise.

Background: A note differentiating mediation vs moderating effect of CRP would be good.

Methods: Well described. Happy to see the use of Directed Acyclic Graph (DAG). I noted that those with lung and or cardiovascular disease were included and adjusted for. I wonder if separating the groups would provide different results. For instance participants with lung disease or who smoke, they have a different biochemistry to those who do not; and are likely to have more CRP and other inflammatory markers in their serum. Are these measures truly accounted for just by adjusting for them? Those with such illnesses are also more likely to have reduced PA. Later you mention that you excluded those who have lung disease as a strength. Were they excluded or they were adjusted for?

Results: Presented well and clearly.

Discussion: Solid argument put forward and limitations well discussed.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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