12-Jun-2021 BMJ-2021-065492.R1

Terminal decline in objective and self-reported measures of motor function over 10-years before death: results from the Whitehall II cohort study

Dear Dr. Landré,

Thank you for sending us the revised version of your paper, which addressed many of the suggestions offered in the earlier round of the review. We have some additional suggestions for further clarity and improvement. If you are able to amend it in the light of our comments, we would be happy to consider it again.

We hope that you will be willing to revise your manuscript and submit it within 4-6 weeks. When submitting your revised manuscript please provide a point by point response to our comments and those of any reviewers.

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I hope you will find the comments useful. Please don't hesitate to contact me if you wish to discuss this further.

Yours sincerely, Nazrul Islam, MBBS, MSc, MPH, PhD Research Editor, The BMJ nislam@bmj.com

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Editor's Comments to Authors:

- The findings are often described as "associated" with an outcome. Based on how a motor function was defined, HRs were <1 or >1, indicating a lower and higher risk of mortality associated with the motor functions, respectively. Therefore, it it very important to describe the direction of the association with a qualitative description ((whether any motor function is associated with a higher or lower risk of mortality). Please clarify this throughout the manuscript.
- >> To this note, in the results section (p12), the HR for walking speed was <1 for most but >1 in the last paragraph (because the exposure variable was defined as a 'decline in walking speed'. Might you consider re-defining all the motor functions such that the HRs are in one direction (e.g., >1) for all the variables (for example, by reversing some of the motor function definitions). This should be accompanied by a clearer description of the exposure and outcome (for example, a decline in grip strength, or a decline in walking speed etc. was associated with a XX% higher risk of mortality (HR: 1.XX, 95% CI: pp to qq).
- Please add the interpretation of the HRs in the results (including in the abstract), rather than just copying the HRs from the Table (please see the example in the point above).
- The unit of the motor functions is missing from the interpretation. Therefore, it is not immediately clear how to interpret these findings. The results are currently presented as, for example, walking speed was associated with mortality. It is missing most of the important aspects of the findings. It should be described in terms of both the unit of the exposure (e.g., one SD, equivalent to YY cm/s, increase, or decrease, in walking speed was associated with a xx% higher or lower risk of mortality over tt months or years, if applicable).
- >> To this, the wording for "timed 5 chair-rises" is still a bit dry. Could you consider writing it in plane language, such as, an additional XX seconds (which is equivalent to 1 SD) needed to raise five chairs were associated with
- >> Please remove p-values from the Results section, except probably the first paragraph of the "Time to event analysis subsection". Please also replace the p-values with the estimates and their 95% CIs in the abstract.
- >> Table 2: if all the estimates had a p<0.05, might you consider taking all the asterisks off the table, and add a note that all the p-values were <0.05.
- >> Table 2: additional descriptions (such as "N mortality/N total = ...") are very important, but from visual perspectives, these would be better placed as Table legend/footnotes. Please consider moving them. Also, please describe them in the results section.
- >> Table 2: please add the unit of measurements for all the motor functions. Also, please add a note in the table saying that the HRs are for every one SD increase/decrease in the motor function along with the SD estimates for each of the motor functions (except Limitations in ADL/LADL?) This will allow easier interpretations, such as the HR is for every XX m/s change in the specific motor function. Please also add the estimates of SD in the results section.

- ** Comments from our PPI Editor ****
- The acknowledgment is clear and beautifully written. We need your dissemination plan and barriers to PPI. Participants are not the same as public involvement partners, they are people outside of the study that works with the research to complete the study. Please consider the Patient Reviewers comments in your revision
- PPI: Please add the reason(s) for not involving members of the public in your own words (e.g.) funding or training restrictions, access to software, COVID etc, also it may be that speaking to patients inspired this review if this was the case it is fine to add that although there was no direct PPI in this paper due to____we did speak to patients about the study and we asked a member of the public to read our manuscript after submission. Please place the PPI declaration at the end of the methods.
- DISSEMINATION: This is mandatory and where you tell the readers how you plan to share your work. Ideas, distribute to clinicians and advocacy groups, use to run a trial where there will be PPI, use to inform good clinical practice by_____ blog, press release, companion article written with a patient about the results. Social Media, plain-language summary on a web site etc.

Date Sent: 12-Jun-2021