Author's response to reviews

Title: Impact of behavioural risk factors on death within 10 years for women and men in their 70s: absolute risk charts

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Author's response to reviews: see over
24 May 2012.

Dr Padmini Murthy  
Editor  
BMC Public Health  

Dear Dr Murthy,

RE: Manuscript 2073191265646558, Impact of behavioural risk factors on death within 10 years for women and men in their 70s: absolute risk charts.

Thank you for the opportunity to revise this manuscript. The reviewers’ comments were very helpful and we have addressed them, as well as your comments, as outlined below and highlighted changes within the text of the manuscript.

Associate Editor and Reviewer 1  
Comments to the Authors

The article includes gender as a variable in assessing mortality. However, as the methods for data collection were different based on gender, one cannot use gender as a variable. For example, data points for females were self-reported whereas males data was checked by a nurse. The questions/questionnaires were not the same between genders either. This shows a lack of uniformity.

Response: The men’s surveys were reviewed by a nurse, however the only variables that were affected were BMI and smoking, leading to less missing data for the men. While the physical activity questions had slightly different wording, our derivation of a MET value is consistent with the literature and with previous analyses that we have done in these cohorts. We have also undertaken extensive sensitivity analyses which are now mentioned in the text. The data for the men and women were analysed separately so gender was not included in the analyses. The large number of participants makes these analyses robust and the current paper reports results that are consistent with previous publications from these datasets.
Asking about one's physical activity level for the past week is different than asking about it for a general or average week. Even if this information is dropped it is important to note the difference of data collection methods between genders in the limitation paragraph.

Response: We have added the following statements to the limitations:

*Third, there were small differences in wording in the physical activity variable, however it is unlikely that these would have substantively impacted on the calculation of MET.minutes.*

*Fourth, post-survey review of data relating to BMI and smoking resulted in fewer missing data for the men and differences in age ranges between men and women meant that not all data could be used for this analysis, although the overall pattern of estimates is consistent with hazard ratios we have reported previously.*

*If the information is available, it is important to look at cause of death and do separate analyses for accidental vs. non-accidental.*

Response: Unfortunately, these data are not available, however we acknowledge that there may be different risk factors for accidental or non-accidental deaths. The aim of this paper however, was to provide information on behavioural factors associated with fact of death, rather than to examine the contribution of these risk factors to differing causes of death.

**Reviewer 2**

**Comments to the Authors**

*The authors appear to have overlooked the opportunity to convert the logistic regression constant coefficients into absolute risks among baseline risk-factor cohort members of the two genders.*

Response: We thank this reviewer for this suggestion which has now been included in the text and Table 2.

*Another remarkable observation is that overweight septagenarians have less absolute mortality risk than those of either normal BMI or obese BMI categories.*

Response: This finding is consistent with previous analyses we have published and with a limited number of recent papers which have also reported that, for older adults, BMI in the overweight category is protective of mortality.

Once again, thank you for the opportunity to revise this paper. Please let me know if you need any further information.
Yours faithfully

Professor Annette Dobson