Reviewer's report

Title: A prospective cohort study of health behavior profiles after age 50 and mortality risk

Version: 2 Date: 2 June 2012

Reviewer: Jack Tsai

Reviewer's report:

The authors were generally responsive to this Reviewer's suggestions and comments. However, I still have two main concerns. One is that there have been various other studies that have looked at the interactive effects of alcohol use, physical inactivity, and smoking, which the authors don't seem to mention at all. The authors should briefly describe these studies and discuss their results in relation to those studies.

My other concern is that because this is a public health journal, some more discussion is needed about the public health implications of the study that follows appropriately from the results. I am struggling with what exactly the study contributes besides the main findings that using alcohol and smoking is really bad, especially when done together, and is worsened by physical inactivity although in actuality these behaviors are correlated, especially smoking and inactivity. Moreover, I don't think the last sentence that older adults who drink heavily but don't smoke and are physically inactive would benefit more from increasing their physical activity than reducing their drinking is warranted given the design of the study.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests