Reviewer's report

Title: Television viewing, computer use, and mortality among adults in the United States: a prospective study

Version: 1 Date: 29 September 2011

Reviewer: Anders Grøntved

Reviewer's report:

Summary

The author has produced a prospective cohort study examining the association of screen time with the risk of mortality from all causes and from diseases in the circulatory system. The study is moderate in size and with a moderate registry linkage based follow-up period and included assessment of exposure and confounders at baseline. The study adds to the current pool of studies examining the independent health impact of too much screen time viewing. This evidence is important to gather as reducing sedentary behavior may be a future target for public recommendations for physical activity. The present study is generally well conducted; however, there are issues in the data analysis that needs to be attended.

Major Compulsory Revisions

The models excluding participants with chronic disease at baseline should be the primary models and not serve as sensitivity analysis. This is a standard feature of a cohort study. If diseased participants are not excluded at baseline the chance of reverse causation bias are likely to be greater, and characteristics related to history of disease and TV viewing and that are risk factors for premature mortality, serves as confounders. Such confounders can be unknown and both positive and negative. Excluding these individuals will reduce the chance of such biases.

The author must provide a quantitative assessment for a possible non-linear relationship between screen time and mortality risk.

Title: It would be more correct to have the title “Screen time and mortality among adults...” instead of Television viewing, computer use, and mortality...”. The ladder refer to that both components of screen time are being analyzed individually.

Minor Essential Revisions

Abstract: Last sentence in the results section: please indicate that the results with mortality from circulatory system diseases were multivariable adjusted.

Methods section
Please provide a minimum of details about the validity of the National Death Index.

Please provide details here that participants with disease at baseline (self-reported cancer, diabetes and cardiovascular disease) were excluded.

Description of leisure time PA and alcohol use: please provide details on how these variables were grouped, or alternatively if they were not grouped that they were ordinal/continuous variables. It is also unclear whether the time spent on physical activity was based on a minimum of intensity (i.e. at least moderate).

Please provide details on test of assumptions in proportional hazard models, especially the proportional hazard assumption.

Results section
First sentence: The author must provide details on why these 10 individuals were excluded.

Table 1: Please indicate the number of participants underlying the data presented.

Table 1: TV viewing is indicated, however, this should more correctly be named screen time.

Table 3: Please also indicate the person-years at risk for each group of screen time.

Discussion section
On page 11 third paragraph, the author state that only the present study fails to produce a significant association. The Aerobics Center Longitudinal Study mentioned on page 10 did not report a significant association either. Please revise this sentence.

Page 14 second paragraph, the median screen time reported from the present study may also be underestimated due to low number of categories and the infinite upper limit of the 5 hour category.

Discretionary Revisions
None

**Level of interest:** An article of outstanding merit and interest in its field

**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