Reviewer's report

Title: Joint predictability of health related quality of life and leisure time physical activity on mortality risk in people with diabetes

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Reviewer: Nanne Kleefstra

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Major
1. from reading the methods section I'm not informed enough to be able to confirm the conclusion of the sample being representattive, at least not for the patient with diabetes.

The 797 pts is 3.6% out of the 22121 pts, whereas the prevalence of diabetes in your country is as far as I know between 6.5 and 7%. That would be an enormous difference. Can you explain that and also the impat on generalizability?

2. 93 out of 797 were exluded because of missing values. I would like to know what kind of patients have missing values and the authors could perform cox analyses on missing vs non-missing to have an idea on the impact of results.

3. mortality was FU until 2008. We live in 2012 now. Is the register, which is computerized not updated in a way data of 2010 or 2011 could be used? That would also reduce the problem the authors explain of not finding a relation between MCS and mortality (besides the sample size).

4. It puzzles me why "up to" 3 activities could be selected and that these activities could be selected from a very limited number of activities. That would mean that somebody who performs specific sports for more than 150 minutes a week can be classified as inactive?

5. I'm not familiar with the typical leisure activities in your country. But is mountain climbing typical? Especially when only so few activities can be selected. Is walking up stairs also a tipical leisure activity?

6. The classification process into 3 categories based on LTPAs is not entirely clear to me. I would like to know especially the difference between regular and inactive. Does inactive mean 0 minutes/week of any activity. And does that mean that 305 out of 701 patients are totally inactive?

7. major problem is the combination of self-reporting and missing of several essential confounders:
   -blood pressure value (treatment)
   -LDL and/or chol/hdl values
   -HbA1c
   -urinary albumin!
In my view, the omission of these variables makes it impossible to get relevant results.

8. The HRs in model 2 compared to 1 do not change. Does that not mean that Qol and LTPA do not change the relationship in addition to the variables in model 1, adding nothing to the prediction? To make this clearer, at least C-statistic should be used, for example.

Minor

1. In the introduction it is stated that qol could be used to identify pts who are at higher risk of 'outcomes' and require intervention. Firstly, It is still not known that interventions lead to improved outcome by means of improving/aiming to improve qol. Secondly, it is af course not necesary to improve qol of pts at the moment is related (causal) to mortality/outcome. Qol on its own is very important (for Patients and health care providers)

2. were the proportinal hazard assumptions met?

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'