Reviewer's report

Title: The influence of knee osteoarthritis on the quality of life and lower extremity function in elderly Koreans: a cross-sectional community study

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Reviewer: Margreet Kloppenburg

Reviewer's report:

This is an interesting manuscript on a descriptive cross-sectional study in a population-based cohort investigating quality of life and physical function in radiographic tibio-femoral OA.

I have some major compulsory revisions with regard to this manuscript.

1. It would be helpful to describe the design of the study more clearly in the abstract and methods section; a cross-sectional study.

With regard to the abstract: In the abstract “worst category of WOMAC and physical performance test” were used. Could you describe that more precisely? As I understand it correctly, you mean worst quartile? Further a regression analysis is done to compare OA to non-OA: how OA is defined? In the abstract the number of participants and a short description of the participants (age, sex) would be helpful; many readers only read the abstract. Could you give some results in the results section, so OR (95%CI) in numbers. This makes the abstract more informative and attractive to read. Your conclusion involves especially Korean elderly; is it in line with other Asian and non-Asian populations?

Page 6. Could you explain what is meant by 200 of 1,408 census tracts?

Page 10, line 3 and 4: the percentage men and women are difficult to understand? Could you also give absolute numbers? What is BMI, OA severity and mean/median WOMAC and SF-12 score in the total group?

Page 10 and Table 2. It is not quite clear how the means for OA and non-OA are calculated. Could you explain this more extensively in the methods section?

Discussion, page 12, line 3: For me the conclusion is not so clear. The authors state that “lower-extremity physical performance was also adversely affected”, however their data does not support this conclusion, since not difference was seen between OA and non-OA after adjustment. Please explain your statement. .The same as for line 5 and page 14, the conclusion.

I have some minor essential revisions.

Page 8: were all radiographs read twice or only a sample?

Page 9: normal radiograph (non-OA): is this K-L score 0 or 0 and 1? How OA
severity is defined? Concerning SF-12: it is not clear what is meant by combining worst scores (0 and 1 …?

Page 10: The method used to make a comparison between OA and non-OA can be described in the Methods section, not in the results section.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
I declare that I have no competing interests