Author's response to reviews

Title: Comparison of AIMS2-SF, WOMAC, x-ray and a global physician assessment in order to approach quality of life of patients suffering from osteoarthritis.

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Author’s response to reviews: see over
Statement to reviewers’ comments

General comment to both reviewers: Both reviewers have published a lot in this field of research, and represent real experts and we appreciate very much that they agreed to review our paper. Interestingly, both mentioned the same weaknesses of our paper:

1. A regression analysis is necessary to reveal the influence of different aspects on GPs assessment of quality of life.

2. Data should be provided and analysed in correlation to the affected joint and not only to socio-demographic variables as age and gender.

3. Revealed correlations were often exaggerated and described as “high” or “low”. These conclusions should be made by the readers.

We followed point by point their recommendations. In order to satisfy the requirements of the reviewers, we involved Dr. G. Laux as a statistician to perform these calculations. He was added to the authors because of his substantial contribution.

Statement to Review 1, Dr. A. Escalante

1. Please see description above. A regression analysis was added in order to identify the weight of certain factors on GPs’ assessment.
2. Please see description above. According to the recommendations of the reviewer we separated hip scores from knee scores in table 2 - 4. (Please see also point 3.) We also added a boxplot to display the distribution of GP scores in relation to the x-ray grading, separated by affected joint.
3. We completely agree with the reviewer that OA of knee and hip occur in many cases completely separate. Obviously we did not correctly explain how the Kellgren-Lawrence scores were calculated: We did not calculate a (mean) score for each patient (which would have lead to the problem Dr. Escalante mentioned). The score
represents the score of the mainly affected joint and not an average score for the patient.

For example: if a patient had a score of 4 for the hip and 1 for the knee, he was classified as a hip patient and the score that was used for this patient was 4. (But in most cases patients’ visited their GP because of complaints in one specific joint, so that these cases did only rarely occur). We clarified this in the methods section as followed:

“If only one joint was affected the score for this joint was used. If different joints were affected, patients’ highest radiological score was used.”

Due to this the comparisons are already performed as demanded by the reviewer.

4. The German version of the AIMS2-SF has recently been validated by the corresponding author, T. Rosemann. The publication was mentioned as well as the validation study of the WOMAC.

5. A graph showing the distribution of GP scores was added (figure 1)

6. A boxplot was added (figure 2) in order to display the GP scores in relation to Kellgren scores, separated by joint

7. As mentioned above, descriptions as “high” or “weak” for correlations were skipped.

8. Acronyms were defined when first mentioned.

Statement to Reviewer 2: Dr. J.J. Rasker

General: A main point of critic referred to the statistics (please see also above)

1. We added a regression analysis.

2. Comparisons by means of ANOVA (ANCOVA) were adjusted for gender, age (table3) and a Bonferroni post hoc correction was performed in order to avoid overestimation of statistical significance. Due to the adjustment for age and sex the influences of these factors on the results could be excluded.

3. Data were separated by affected joint.

2. How were patients selected? We added this description of patient selection:

As described, patients were alphabetically put on a list, so that in our opinion the overrepresentation of women reflects two facts: 1. women suffer nearly two times more from OA then men and secondly: women visit their GP more often. The number of patients who refused was mentioned. Due to the fact that patients were
approached by their familiar GP and the possibility to return the questionnaire immediately in the practice by just putting it in a sealed box explains the high return rate.

3. The possible range of the different measures was added (now table 4).

4. As mentioned above, data were now provided according to the affected joint. (table 2, table 3, table 4)

5. As mentioned above, regression analysis was performed.

6. This analysis revealed what the reviewer has already assumed: x-rays are influencing GPs assessment very much. This point was discussed in the discussion section after providing the data in the results section.

7. Recommendations regarding discussion: It is correct that many studies (including many studies of the reviewer) assessed the influence of social and psychological factors. We were focused too much on the assessment of the GP and the fact that this has not yet been evaluated. We added some literature and expanded the discussion.