Author's response to reviews

Title: Can cancer patients assess the influence of pain on functions? A randomised, controlled study of the pain interference items in the Brief Pain Inventory.

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Author’s response to reviews: see over
Assistant Editor Liz Hoffman  
BMC Palliative Medicine

Madam

We appreciate the comments to our paper “Can cancer patients assess the influence from pain on functions? A randomised, controlled study of the pain interference items in the Brief Pain Inventory” and would like to submit a revised manuscript. We hope that this revised manuscript is acceptable.

Our specific comments to each issue raised by the referees are:

Referee no. 1 (Andersson)

- The BPI does as the referee point out not measure HRQOL. The paper is revised accordingly at page 3 and page 10 as advised.
- “the instruction seems awkward”. We agree with the referee in that the instructions of how “these functions are interferenced” seems awkward. This is due to difficulties in translation of the corresponding Norwegian term. In the revised version we have corrected the translation of the Norwegian term to “these functions are disturbed”.
- The referee is concerned about that inference items are obtained after the pain intensity items. We have now included in the discussion that the BPI interference items are presented in the context of the BPI pain intensities items. However, as stated in our discussion, we believe that the psychometric properties of the BPI interference items should be studied in the true context of the standard BPI questionnaire design.
- We did not register the number of patients needing to have their answers recorded by the research staff.
- How was missing data handled? The BPI has no validated method for handling missing data. Therefore, we did not perform any procedure for handling missing data. The summed scores are only calculated for patients without missing values. This point is now specified in the methods section.
- We report that 26 vs 19 patient had the highest summed interference scores in the modified and original BPI, respectively. We choice to present this results as numbers without any more statistical work up. The finding of interest is not if there are statistical differences between these two numbers. The important observation is that a significant proportion of patients report higher summed interference score in the original BPI questionnaire.
- Due to the low pain ratings both this referee and referee no 3 questions the generalizibility of the findings. We have in the discussion further emphasized that the findings in this study can not be generalized to all cancer pain patients including those with more intense pain.
- As pointed by the referee the BPI standard deviations indicate that some patients suffer from moderate or severe pain. We chose in order to not add length to the paper to not give the detailed distribution of all BPI scores. However we agree with the author that the sentence “These observations show
that the patients included in this study did not suffer from severe pain” is not correct and have changed the sentence to ”These observations show that the majority of patients included in this study did not suffer from severe pain”. If you as the editor advice so, we can of course add a detailed table of distribution of scores.

- The last sentence in the discussion is deleted.
- We appreciate the advices for improvements in language.
- Due to the small sample size we wanted to not extend the analyses beyond what was planned before the study. Therefore we have not given any specific analyses on gender differences or EORTC scores relation to BPI scores.
- We have included in the text that all patients were naive to the BPI questionnaire.

Referee no. 2 (Mystidiakao)
No critical comment to the paper.

Referee no. 3 (Zelman)
- The referee very nicely sums up this research questions in her introductionary comments. We have changed some of the introduction accordingly.
- The referee is negative of the small sample size. We agree that the sample size is not large but have provided a formal sample size analyses in the paper. This sample size calculation support the number of patients included in the study.
- About more extensive EORTC analyses, see comment above.
- We agree with the referee that with a larger sample size we could have done more extensive analyses including the relations of BPI interference items to a broader complex symptom picture. Also, a more extensive study could do as the referee suggest check out if any other wording of questions would make the questions maximum pain specific. However, this was not the aim of this present investigation. We certainly agree that these are good ideas for further research, but we did not do such examinations in this study.
- As we state in our discussion we agree that a similar studies should also be performed in a patient population with more symptoms and pain. In the revised version of the manuscript this point have been emphasized.
- The referee is negative to this study. It seems like she would have wanted a more extensive study with the aim to elucidate a more comprehensive overview of the BPI psychometric abilities. This was not the aim with this study, but we are surely happy if our study can raise such research questions. We have also added this suggestion into the discussion.

Yours

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