Author’s response to reviews

Title: The association between believing staying active is beneficial and achieving a clinically relevant functional improvement after 52 weeks: a prospective cohort study of patients with chronic low back pain in secondary care

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Author’s response to reviews:

Dear Dr. Kristin Archer,

Thank you for inviting a revision of the manuscript BMSD-D-19-01422 for publication in BMC Musculoskeletal Disorders. We have responded to the comments below and uploaded a clean version of the manuscript.

Comment 1

1. Please revise the purpose statement in the introduction (lines 87-92) and the aims section (lines 95-102) so that the information is consistent with secondary explanatory variables listed on page 8. A suggestion is to combine these two sections into 1 paragraph at the end of the introduction to improve clarity of the study’s objectives and avoid redundancy. 1a. The introduction states that the purpose is to study guideline concordant information/advice provided by health care professionals. However, only two of the secondary explanatory variables are about health care provider advice. The primary explanatory variable and #2 and #3 of the secondary explanatory variables (page 8) are patient beliefs. 1b. The #2 and #3 secondary explanator variables are discussed in the introduction (lines 89-90); however, these variables are not discussed under Aims on page 5.
Response 1a+1b: Thank you for pointing to this inconsistency. The final section of the introduction and the ‘Aim section’ from page 5, line 90 are changed to:

‘Consequently, the overall purpose was to study whether guideline-concordant beliefs among patients and guideline-concordant information and advice provided by health care professionals are associated with better patient outcomes. To the best of our knowledge, this has not been studied prospectively in a population of patients with LBP being referred from primary to secondary care.

Aims

The main aim of this study was to investigate whether believing staying active despite having pain is associated with better functional outcomes among patients referred from general practice to an outpatient spine clinic in a secondary care setting in Denmark. Additional aims were to study the association between having received advice from a health professional to stay active, patients’ pain intensity, pain duration, and the STarT Back Tool and functional recovery. We hypothesised that patients who believe that staying active will help them recover would have higher odds of a 30%-improvement in the Roland Morris Disability Questionnaire (RMDQ) score after 52 weeks compared to patients who do not believe that staying active will help them recover’

Comment 1c. The introduction states that one of the guidelines being studied is the following: “recommend to avoid referrals to specialist care (lines 90-91).” However, this is not listed in the aims section, under the secondary explanatory variables, or in Table 2.

Response 1c: The sentence on page 5, line 86 now reads: ‘clinical guidelines include advice to stay active, do not recommend performing x-rays and MR scans to rule in, and recommend informing patients that finding the cause is often not relevant for recovery’

Comment 2. Please consider placing all information on adjustment for confounders and post-hoc analysis in the statistical analysis section. (a) Information, rationale, and citations on a priori adjustment is in the primary outcome section on page 9 (lines 180, 183-185) and we recommend that this be moved to the statistical analysis section. (b) Information on post-hoc analysis is on page 14 (lines 300-302) and we recommend that this be moved to the statistical analysis section.

Response 2: Information on adjustment for confounders and the post-hoc analysis are now moved to the statistical analysis section from page 10, line 200: ‘All explanatory variables are reported as adjusted (age, gender, and educational level) and unadjusted odds ratios, supported by numbers of patients with clinically relevant improvements [28]. In addition, a post hoc analysis combining the adjustment for age, gender, and level of education with baseline RMDQ, pain duration, pain intensity, smoking, employment, and comorbidities was conducted’
Comment 3. Please, consider revising the heading of Table 2 to be consistent with the analysis of explanatory variables and the primary outcome. The use of “baseline characteristics” does not fully capture that this Table consists of the main study results.

Response 3: Thank you for pointing to this. The heading of Table 2 is changed to ‘Association between explanatory variables and a favourable functional improvement after 1 year’

Comment 4. Please revise the abstract to be consistent with major revisions to the manuscript that include the aims, results, discussion and conclusion sections.

Response 4: The abstract is revised.

Comment 5. Please carefully read the manuscript and address grammatical and sentence structure errors. Examples include line 65 (i.e., is expected be routinely), line 88 (i.e., Guideline guidelines), line 175-176 (close parenthesis), line 267 (changing one belief), and line 368 (guideline concordant believes).

Response 5: The complete manuscript has been proof-read and we have addressed the suggestions for grammatical and sentence structure edits in comment 5.

On behalf of all authors,

Allan Riis