Reviewer’s report

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

Version: 0 Date: 25 Nov 2019

Reviewer: Mari Lundberg

Reviewer's report:

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Dear Authors,

General comments

I have now completed my review of the manuscript BMSD-D-19-01422 with the title Does disease perception influence functional outcome among patients with low back pain? A prospective cohort study with 52 weeks follow-up.

My recommendation is to recommend major revision of this paper based on the argumentation below.

I like the idea, but the paper suffers from methodological inconsistencies that needs to be clarified and elaborated on. My major concern is the use of one single question as the primary outcome without having strong enough support for its validity.

My major concerns are the following.

The rationale for the study

Conceptual definitions vs operational definitions

1) Central concepts. The central concepts need to be clearly defined. As for now it reads "disease perception" in the title, but in the purpose the primary question is about "believing that staying active is beneficial despite having LBP", and in the methods it is measured by question 9 in the Örebro musculoskeletal short form. So what is it that you want to measure? I do not consider it correct that the question you have chosen reflects "disease perception". Please clarify.
2) Valid measures. In relation to the conceptual definition, you also need to clarify the validity of that one question in the Örebro questionnaire. That is, is that only question valid to measure the concept you want to measure? In the discussion you write to have tested with a face validity procedure, and that it did not gave any more information to apply cut-off points. How was that tested, and based on what arguments did you come to that conclusion?

Data management and statistical management

3) Dichotomizing. You have chosen to dichotomize the rating on the Örebro scale according to the following; Scores of 0-5 were coded as 'disagree' and scores of 6-10 were coded as 'agree'. In for example the use of an NRS scale for pain, one chooses to divide the responses according to the picture presented below. What are your arguments for choosing to do so, and what is the risk with dichotomizing?

4) Logical reasoning. How did you come to the conclusion that 33% would respond "If pain is increasing they should stop with their physical activities", that is what are your arguments for that number?

5) Missing. What are the consequences of your high rate of external missing, that is the number who did not respond to the questionnaire at all? That needs to be responded to and also accounted for in your discussion and conclusion.

Formatting and structure

6) Language. Your language needs to be revised in accordance with scientific writing. In the conclusion you write "patients classified as high risk according to the STarT Back Tool appeared to indeed be at higher risk of a poor outcome after 52 weeks". Indeed needs to be taken away.

7) Tables and Figures. All tables and figures need to be revised both in formatting and content. For example, the columns should have the same width and the text should be consistently presented (either indented to the right, left or centred). The abbreviations of sd etc should preferable be moved to the presentation of the variable and not in the result itself. The Tables and Figures have duplicate headings, which needs to be adjusted. These are just some examples. Read the instructions thoroughly.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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