Reviewer’s report

Title: Neuromuscular exercise reduces low back pain intensity and improves physical functioning in nursing duties among female healthcare workers; secondary analysis of a randomised controlled trial

Version: 0 Date: 29 Mar 2019

Reviewer: Gijs Lemmers

Reviewer's report:

Well written, interesting research. I have a few remarks/questions.

The NME-group had a statistically significant higher BMI in comparison to the controls (Table 2). It is not completely clear to me how you addressed this problem.

Did you perform a subanalysis of the group with a higher compliance? Were these the more healthy people at baseline?

On line 79 on page 5 you state: "...., has been suggested to play a key role in maintaining a healthy spine [24]." The reference study concludes about absence from work and not about a healthy spine.

How did you cope with the fact that people had sub-acute LBP at inclusion, but in a short time frame they recovered from their LBP or they developed chronic LBP?

Concerning the participants: was there a cross-over of people who were supposed to exercise > 1 time a week in the NME-group, but in fact exercised < 1 time a week, to the control group?

In the results, especially those of the Fitness Components, you speak about (almost) statistically significant differences. I'm having doubts about the clinical relevance of these differences. For example: what does a Pearson correlation of -0.17 (p=0.03) possibly mean for future people with sub-acute LBP? Please explain

On page 18: lines 368-370, you state: "Thus, the result can be explained by either the reduction of pain or increased hip and/or thoracic spine mobility (which were practiced in the exercise group, but not measured in the study)." Could this also be explained by other factors? What's your opinion about residual confounding?

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

Yes
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.

Yes

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 am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Acceptable

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