Reviewer's report

Title: Effects of spinal manipulative therapy biomechanical parameters on clinical and biomechanical outcomes of participants with chronic thoracic pain: a randomized controlled experimental trial

Version: 0 Date: 02 Nov 2018

Reviewer: Michele Maiers

Reviewer's report:

Thank you for the opportunity to review the paper, 'Effects of spinal manipulative therapy doses on clinical and biomechanical outcomes of participants with chronic thoracic pain: a randomized controlled experimental study'. This randomized controlled trial investigated three varying doses of instrument-delivered manual therapy on the clinical and biomechanical outcomes experienced by individuals with chronic thoracic pain. The background section clearly outlines the state of the evidence, identifies a gap, and articulates this study's purpose.

Materials and Methods

1. Please provide a description of sample size determination.

2. SMT was applied to T7 for the entire sample, regardless of symptoms of pain provocation or motion restriction at that segment. The methods would be enhanced with an explanation of treatment level selection, and an exploration in the discussion section of whether/how this may have influenced the lack of response in the majority of the sample.

3. P7 Ln 127: A score of 97 is indicated as the anchor for extreme pain. I could not access the Scrimshaw reference, but want to verify that this was not an error?

4. P10 Ln 182: please provide a reference for "common dosages used by manual therapists".

Discussion

Your discussion of spinal stiffness MCID is illustrative, and makes me wonder why you did not dichotomize your sample by degree of stiffness at baseline, as opposed to BL pain (which appears to have given you a floor effect, with only mild-moderate baseline pain levels as noted in the limitations section). This floor effect may also explain the unexpected finding of higher SBST scores associated with improvement. Please provide a rationale for your selection.
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

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

Acceptable

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