Reviewer's report

Title: Effect of Head and Limb Orientation on Trunk Muscle Activation During Abdominal Hollowing in Chronic Low Back Pain

Version: 1 Date: 31 May 2013

Reviewer: Phil Page

Reviewer's report:

1. Is the question posed by the authors well defined? Yes. It's a very novel study.

2. Are the methods appropriate and well described? Somewhat. Suggest case-control design. I'm not aware of the validity/reliability of their assessment of patients with ATNR. Need to have more consistency with the use of 'supine' versus 'neutral'. Suggest not using "ATNR" as a testing position, but rather "Cervical Rotation with Arm extension" as an example. There is also little reference to the transverse abdominus, which is an important muscle activated during abdominal hollowing. Suggest not using "Exercises" as a heading, and include description of AHM earlier in methods.

3. Are the data sound? Using 'meaningful differences', it appears so. Recommend possibly adding inferential statistics to support future meta-analysis.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes. (See #3 comment)

5. Are the discussion and conclusions well balanced and adequately supported by the data? Somewhat. The discussion needs to be shortened a little and kept more relevant to the study.

6. Are limitations of the work clearly stated? Suggest more limitations discussed on the use of superficial EMG, only one examiner, and lack of V/R on assessment.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes.

8. Do the title and abstract accurately convey what has been found? Yes, but abstract should be revised based on comments above as well. Title is appropriate and should serve as the foundation for the entire paper.

9. Is the writing acceptable? There are some grammatical errors and copyediting, but the writing overall is good.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.