Author's response to reviews

Title: The effects of the Mulligan Sustained Natural Apophyseal Glide (SNAG) mobilisation in the lumbar flexion range of asymptomatic subjects as measured by the Zebris CMS20 3-D motion analysis system.

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Author's response to reviews: see over
Dear Dr. Hodgkinsson,

We would like to thank you as well as both reviewers for the constructive feedback concerning our submitted manuscript. All comments have been taken into account and all changes have been incorporated in the manuscript.

Regarding Reviewer 1, who has kindly provided very analytical corrections and comments on the manuscript in pdf format, all English language/grammar mistakes have been corrected as indicated (thank you). Regarding the comments made in the pdf, these have been addressed (thank you). However, some specific points which needed further explanation have been addressed below:

- Page 3, last 2 sentences – further explanation (as advised) has been given re. the fact that SNAGs reported statistically but not clinically significant results in a study
- Page 5, re. sample size – our sample (n=49) allowed us to make the sample size calculations reported in manuscript. As the sample size was estimated retrospectively we are happy to report/amend this in the manuscript (should you think it is appropriate).
- Page 6, ‘Equipment’ section – we added the trademark of the Zebris equipment
- Page 7, section on ‘Measurements of lumbar flexion’ - have added that knees were kept straight during the flexion measurements
- Page 8, section on ‘Application of the manual interventions’ – have further explained how direction and force were specified in sham technique
- Page 10, ‘Results’ section – randomization was performed for allocating each participant on either the SNAG or sham group (have explained this on 1st sentence of page) and not for equal gender allocation within each group.
- Re. angular scores and reliability indices (p. 10, 15) – we have corrected the reliability indices and we have used 1 decimal point for SEM & SDD. We agree with your comment that it is not meaningful to express such precision with non-invasive equipment (measurement accuracy of the zebris equipment as indicated by the manufacturers is 0.5). However, by using SPSS/Excel files, 2 decimal points were created by mistake (sorry for this confusion). We have corrected this throughout the text
- Page 14, ‘Discussion’ - forces exerted during mobilization have been discussed further in this paragraph (as suggested)
- Page 14, ‘Discussion’ – highlighted clearly that measurement error (despite being small) is a further limitation of this study

Regarding Reviewer 2, comments have been addressed as follows:
1. Page 12, 1st paragraph – the final sentence has been re-worded (as suggested).
2. All commas to signify decimal points in tables have been amended as advised.
3. Tables 2 and 4 have been corrected in terms of defining measurements

We are looking forward to hearing from you.

Kind Regards

_Evdokia Billis_

_(corresponding author, on behalf of all the authors in the manuscript)_