Reviewer’s report

Title: Regional differences in lumbar spinal posture and the influence of low back pain

Version: 3 Date: 2 September 2008

Reviewer: Julie Fritz

Reviewer’s report:

The authors of this manuscript have made substantial improvements to the credibility and clarity of paper in their revisions. I have only two remaining concerns:

Major Compulsory Revisions:

1. The choice of ICC model and the manner in which the reliability results are presented require clarification. First, justification for the use of a model 3.1 is needed. Using a model 3 seems appropriate, but using a form 1, does not seem appropriate. Form 1 indicates a single measure was used, but it seems that for most reliability calculations in this study it was a mean of three measures that was used. Please clarify this issue and provide justification for the ICC form that was selected.

2. My second concern regarding the reliability results is the apparent averaging of all ICC and SEM values computed for various measures involving the upper lumbar, lower lumbar or lumbo-thoracic regions. The authors should report the ICC and SEM values for each measurement procedure used instead of averaging the values for each spinal region. A table for these results may be the most efficient way to present these results.

Minor Essential Revisions:

1. Discussion section - page 19, The results of this study relative to the second aim of the study did not support a relationship between regional differences lumbar postures or ROM during functional tasks and the presence/severity of LBP. In discussing the possible explanations for this lack of a relationship, the authors seem to imply that their sample likely lacked sufficient diversity of LBP postural sub-groups. An alternative explanation that seems to be suggested by the results of this study is that posture and ROM variables are not important variables for sub-grouping patients with LBP.

It seems that the authors fail to consider the possibility that

Level of interest: An article of limited interest

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.