Author's response to reviews

Title: Reliability of two goniometric methods of measuring active inversion and eversion range of motion at the ankle

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Author's response to reviews: see over
Dear Editor,

We wish to thank the reviewer for further consideration of our manuscript. We have addressed each point and our responses to the comments are contained in this letter and the manuscript has been revised accordingly. We are happy to provide further information if required.

Yours sincerely,

Kathryn Refshauge
Reviewer

Major Revisions

1. The authors have now presented statistical tests to support their claims. Details on how these tests were performed are lacking. It is necessary to give more details on how the analysis of variance was done.

We have included the following paragraph in the Data Analysis section:
A 3-way analysis of variance was used to determine whether there was a significant difference in reliability among position, direction and measurement occasions for inter-observer and intra-observer ICC score. The within-subject factors were position (sitting or prone), direction (inversion or eversion) and measurement occasion (session 1 or 2).

2. “...the authors have not followed my suggestion to take into account the interdependence of the measures of the left and right ankle. This issue is not discussed in the paper. I find it necessary that the authors acknowledge the interdependence and mention this as a possible limitation.

We have included the following paragraph (2nd paragraph in the Discussion) to address the issue of interdependence:

Measurements were made on both ankles, despite potential interdependence of the leg measurements. We believed the impact of interdependence to be small because more than one third of participants had a unilateral injury or bilateral injuries of various types, and therefore range of motion was likely to be independent in these participants. It is also likely that measurement of right and left feet is independent, eg, depending on hand dominance of the observer. We thus retained the measurements as independent measures, although pairs of measurements were taken from each subject.

3. The first sentence of the final conclusion in the discussion is unclear. This should be clarified.

We have removed the final phrase of the first sentence. It now reads as:
“Overall, reliability of standardized measurement of ankle inversion and eversion range of motion was very variable within observers, between observers and between sessions.”

Minor Revisions

‘…to gain valid measures…’ omit ‘valid’.

This has been done.