Reviewer's report

Title: The reliability of three-dimensional scapular attitudes in healthy people and people with shoulder impingement syndrome.

Version: 3 Date: 3 May 2007

Reviewer: Paula M Ludewig

Reviewer's report:

General

The authors are to be commended for their efforts in addressing this reviewer’s comments from the initial review. In particular, the reanalysis of data using the ISB axis alignments required substantial effort. This change, however, largely increases the value of this data in the general scapular measurement literature.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

All of major compulsory revisions from the first review have been addressed satisfactorily.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

All of minor compulsory revisions from the first review have been adequately addressed.

A few additional minor points:

1) In the abstract, the abbreviation A-PT should be spelled out.
2) In the abstract conclusion, recommend replacing “should be used” with “can be” as there are other methods not tested in this manuscript.
3) In the two sections (intro and discussion) where the method is reported as valid, please very briefly clarify that this validity determination does not account for palpation error in locating the true bony landmarks lying beneath the skin.
4) In part of the responses to reviewers, it indicates all (SIS?) subjects had a shoulder x-ray, but I did not see this noted in the manuscript unless I overlooked it. Please add that information in the methods.
5) Again unless I missed it, I did not see any statements regarding how the trunk coordinate system was derived. If this also followed ISB landmarks and axis orientations, then please state that. If not, please clarify. Also please briefly clarify if the trunk axes were re-established (re-palpated) in each test position, or if this was done once and the “fixation” of the trunk was assumed rigid?
6) Please specify the type or model of ICC used in the manuscript data analysis section.
7) Please state in the same data analysis section that non-overlapping 95% confidence intervals were used to determine significance between varying ICC and SEM values (presuming this is correct in how you did this).
8) I believe “significant higher” in several locations of the manuscript should be stated as “significantly higher”.
9) Please double check you statement of significant L-MR differences in 90 deg abduction on pg. 13, based on the table, it looks like this difference was actually at rest?
10) Recommend more conservative wording on pg. 15, 1st sentence “which is most likely associated…” should be “which may be associated…” and next sentence “SIS shoulders can’t perform…” should be “SIS shoulders may not perform…” based on the current state of the associated literature.
11) Table 1, “1 Men” should be “1 Man”.
12) I remain somewhat concerned about the use of both shoulders of the healthy subjects in one analysis, but the authors have identified this limitation, thus I defer to the editor regarding any further consideration of this issue.

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Discretionary Revisions (which the author can choose to ignore)
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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.