Reviewer's report

Title: Classification of the midfoot: normal, low or high arched feet.

Version: 4 Date: 2 December 2011

Reviewer: George S Murley

REVIEWER'S REPORT
Title: Classification of the foot; neutral, low arched or high arched
Version: 2 Date: 8th June 2011
Reviewer: George Murley

This study collected foot posture measurements from a relatively large cohort of adults. This data would then allow the investigators to quantify and objectively classify the distribution of foot posture among working adults in Central and Northern Denmark. A secondary aim was to investigate the relationship between hours worked, age and other anthropometric characteristics compared with the foot posture measurements obtained.

While the English and grammatical errors have improved significantly over the last two revisions, there are still several large sections of text where the writing style is difficult to follow. The paper would require further revision before it reached a publishable standard.

1. Is the question posed by the authors new and well defined?
   Yes

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
   Yes

3. Are the data sound and well controlled?
   Partially

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   Partially
6. Do the title and abstract accurately convey what has been found?
Yes

7. Is the writing acceptable?
Partially

MAJOR COMPULSORY REVISIONS
(which the author must respond to before a decision on publication can be reached)

Abstract
Methods section. Please re-word ‘...detect influencing factors’.

Abstract/methods/discussion. With respect to the regression analysis, the authors shouldn’t use the term ‘influence of...factors’, rather the ‘association’ or ‘correlation’ or ‘relationship’ is the appropriate phrase. That is, you cannot prove from this data that these factors are influencing foot posture (i.e. cause and effect cannot be inferred)

Background
1st paragraph – most of the opening paragraph seems superfluous

2nd paragraph – ‘proposed to investigate’...but haven’t they already investigated?

2nd paragraph, 2nd sentence — ‘therefore, participants must be categorized’...this sentence requires re-wording/revision

2nd paragraph, 4th sentence — ‘Thus, reporting such cut-off values is important’. This sentence doesn’t link well with the 3rd sentence. From what is stated above, I don’t think the authors have explained clearly why cut off values are important.

Start of page 5. Please re-word ‘to determine a relationship of foot type...’

End of page 5. Replace ‘influence’ with ‘association between...’

Methods
Page 6 – replace ‘sex’ with ‘gender’

The authors acknowledge on page 7 that no one has yet determined the reliability (or validity?) if the FL test. Taking into account that these issues also affect the technique used to assess subtalar joint motion, it is worrying to think there may be some significant measurement issues with this study.

The authors have not clearly stated/defined what tests were use to determine ‘arch posture’ versus ‘arch flexibility’ (i.e. table 3)

Please state which type of linear regression model was used?
Results
Multivariate linear regression — page 9. Please change ‘influence’ to ‘association’

Some information from the regression analysis is missing (i.e. F statistic, df

Final paragraph — Page 11. Please revise ‘…standing work were found on the results from the…’

Page 12 – Item 5 of the FPI relates to ‘height and congruence’ of the MLA, not just height as the authors have discussed.

Some sections of the discussion contain whole pages as a single paragraph

Table 4. Foot length is spelt incorrectly in all of the tables under heading table 4

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**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'