Reviewer’s report

Title: Coordination among the rearfoot, midfoot, and forefoot during walking

Version: 1 Date: 07 Jun 2017

Reviewer: Alexander Izod

Reviewer's report:

Thank you for giving me the opportunity to review the amendments made to this transcript. The authors have responded positively to my previous feedback and have endeavoured to address the points raised in my review of the first draft.

Regarding the content of the amendments made, the authors have mostly addressed the comments that I made in my previous feedback. However, I still find the sole use of the "too many toes sign" an overly simplistic screening tool for the presence of pes planus, bearing in mind the structural features normally associated with this pathology.

Regarding the presentation of the amended transcript, my overall impressions are now that to allow publication, additional work is required to make the narrative of the transcript more affective in communicating the key elements of why this study was undertaken and its contribution to the wider body of evidence. This in part arises from the amendments that have been made in response to the feedback from the last review process. The insertion of extra sentences and paragraphs within the existing transcript have resulted in a loss of consistency in the presentation of the work. Whilst most of the text is clear, some parts of the background and discussion are sometimes confusing and difficult to read. For example, the following exerts lacks clarity and can be difficult to follow:

"Dubbeldam et al. [3] investigated kinematic coupling between the hallux and rearfoot during walking. While the midfoot and forefoot are present between the rearfoot and hallux, they did not include midfoot and forefoot in kinematic coupling [3]. Hence, because midfoot and forefoot motion have not been understood, the mechanism with which the kinematic coupling between hallux and rearfoot occurs has not been understood".

"Second, while subject numbers in this study determined in reference to previous studies [17, 28] quantifying intersegmental coordination in healthy subjects, the sample size is likely to be small. Actually, the CAV in the transverse plane obtained in the present study especially showed high values throughout the stance phase, and this result may be due to the influence of the sample size".
The level of written English communication is variable with lapses in grammar and construction being evident in parts of the document. This is an important consideration in making this document accessible, particularly to readers unfamiliar with this topic. For example:

"...all foot of participants is not symptomatic…"

"While leardini foot model…"

"These limitations will need to address in future studies"

"However, because this range of motion assigns a single value for the whole stance same as the method of ratio, angular amplitude in time series cannot be understood"

To improve the readability of the work and to strengthen the overall consistency of the narrative it would be advisable to have the transcript externally proof read.

**Level of interest**

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**Quality of written English**

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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