Author’s response to reviews

Title: Is consumer behaviour towards footwear predisposing for lower extremity injuries in runners and walkers? A prospective study

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Version: 2 Date: 26 Jul 2019

Author’s response to reviews:

We would like to thank the editor and the reviewer for the valuable feedback. The comments that were made are appreciated and we addressed them separately below. The manuscript has been updated and the changes made are highlighted in the text in yellow.

Reviewer 1: This is an interesting paper that explores an interesting and important topic. Overall, the paper is well written and the abstract is informative and provides the key message for the reader. The introduction section sets the scene well by providing the relevant background making reference to the 'running boom', however it may be worth the authors adding a sentence or two on the increase of participation of walking - albeit not a 'walking boom' but there is now evidence which suggests a range of benefits from this less impactful activity, and given that the authors have explored both running and walking in this paper, this should be acknowledged.

Answer authors:

We thank the reviewer for his/her constructive remark. To highlight the positive effects of walking and the increase of participation of walking, we have added the following highlighted sentences in the manuscript in the first paragraph in the introduction:

Running is one of the most popular and accessible physical activities. For whom running puts too high demands on the cardiovascular or musculoskeletal system, walking is a good alternative with the same positive health benefits (1). The simplicity of walking, associated with little cost, makes it economically accessible and thus one of the best ways to achieve recommended daily amounts of physical activity by the World Health Organization (WHO) (2). Many countries added these recommendations in their own guidelines, which resulted in a small increase in the
participation of walking (3). However, running and walking also generate a non-trivial amount of running and walking related injuries.

In the reference list, the following references were added:


Reviewer 1: On page 5, lines 33 - 35 - spelling, wording and sentence structure (i.e. advise, 'that' and 'a') needs to be reviewed.

Answer authors:

The request of the reviewer is not exactly clear. Therefore the following sentence ‘At the moment, our capacity to prevent running and walking injuries is limited, with training advise and footwear prescription forming the mainstays’ has been revised in the current version to ‘At the moment, our capacity to prevent running and walking injuries is limited; training advise and footwear prescription form the mainstays (15).

Reviewer 1: Information on the methods section was appropriate, along with the presentation of the findings. The discussion section highlights some salient facts, the authors mention about the increased risk of injury - what about the awareness of injury from the baseline questionnaire to follow-up (after 24 weeks)?

Answer authors:

We indeed agree with the reviewer that it would have been more appropriate to have questions concerning previous injuries in the baseline questionnaire. Unfortunately, this information was not captured.

Reviewer 1: The authors also stated the role of 'gait analysis' and it would have been useful to have explored and discussed the variability of this information such analysis offers, given that it appears to have an increased risk of lower extremity injury. Previous injuries does exposes a risk rather than a gait analysis - or does the analysis assist understanding of injury and awareness?
Articulation of the impact of gait analysis and how it contributes to the surmised reduction in risk (when it is not) of injury needs to be explored further.

Answer authors:

We agree with the reviewer that the variability of the information of gait analysis is lacking in the previous version and the stress should be put on future research as well. Therefore, we have added the highlighted sentences in the following paragraph:

Although that we cannot prove that this injury history or incautiousness was the reason for the increased risk, we neither can demonstrate that the gait analysis was not performed well nor that the shoes were not selected properly. The way the gait analyses was performed may vary between subjects. Some subjects might have had a 2D/3D analysis while others might have undergone static and/or dynamic foot pressure measurements. The information such analysis offers is very variable and might be interpreted in a different way by the sellers. Next to that, it may also assist in awareness and understanding of previous injuries. So, perhaps the prescribed shoes did change the running/walking pattern to unload certain structures but simultaneously increased the load on other structures. However, the fact that there was a similar increase in the odds for injuries when subjects underwent a gait analysis but did not buy the prescribed shoes adapted to the result, lets us presume to believe that especially those with an increased risk because of an injury history undergo a gait analysis. Future research should however explore those hypotheses further and might give more insight in the articulation of the impact of gait analysis and the effect of it on the injury risk.

Reviewer 1: The conclusion section is useful but an absolute key message is needed - for example the final sentence in the conclusion needs to have added content.

Answer authors:

We agree with the reviewer that the key messages were lacking in the previous version. Therefore, we have added 2 sentences in the conclusion section which are highlighted in yellow in the paragraph below.

Caring for right fitting during the purchase of footwear is protective against developing injuries.

Therefore, it is of utmost importance to buy appropriately sized footwear. Participants who had bought their footwear after a gait analysis had an increased risk of a lower extremity injury. This is possibly due to the fact that runners/walkers with a history of previous injuries are the ones who choose to undergo a gait analysis. People might think that after a gait analysis, they are protected against injuries but this seems not to be true. Therefore, runners or walkers who buy
prescribed footwear after a gait analysis, should still be aware that this footwear does not prevent injuries from occurring.