Title: Comparison of foot orthoses made by podiatrists, pedorthists and orthotists regarding plantar pressure reduction.

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Author's response to reviews: see over
Dear Dr. Pemberton,

Again we would like to thank the editorial board and the referees for the helpful comments on our manuscript "Comparison of foot orthoses made by podiatrists, pedorthists and orthotists regarding plantar pressure reduction".

We have considered the comments of the reviewers and we have changed the manuscript accordingly. Please find the list of the comments and changes below.

The changes made in the manuscript are in yellow highlighted. We hope that the revised manuscript is now appropriate for application in the BMC Journal: 'Musculoskeletal Disorders'.

We thank you for your interest in our article.

Yours sincerely,

Nick Guldemond, clinical researcher
On behalf of the fellow authors

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Encl.
- Revised manuscript
- List of the changes in the manuscript.
Our reply to the issues the reviewers have raised together with the changes made in the manuscript are listed below.

Comments Dr. Dieter Rosenbaum

1. In general: The unit for pressure is kPa not kPa/cm²! Please correct throughout the text.

Apparently because we used to the unit Newtons/cm², we failed to notice the incorrect notation of Kilopascal (kPa). We corrected the text.

2. P. 2, 3rd paragraph: It should read ‘960, 1020 an 750 kPa’ (not 102)

We corrected the text.

3. P. 3, 2nd paragraph: Please correct 1. ‘… have separate vocational training which DIFFERS…’, 2. ‘… an orthotist TAKES care of more severe disorders …’, 3. ‘… for the EXTENT of pressure reduction…’

We changed the text as follows: ‘These disciplines have separate vocational training. They differ regarding diagnostic procedures, construction of orthoses and therapeutic approach e.g.: pedorthists are specialized in foot orthosis therapy for orthopaedic shoe wear, whereas podiatrists and orthotists mainly provide foot orthoses for non-orthopaedic shoe wear. In general, orthotists take care of more severe disorders than podiatrists[14].’

4. P. 4, 3rd paragraph: Please specify the term ‘elevated foot pressure’ in terms of the pressure value! Furthermore, the description of the patients with ‘structural defects leading to functional anomalies’ is a bit vague. Could you please be more specific?

We supplemented the text as follows: ‘e.g. higher than 700 kPa’.

This is the report of the orthopaedic surgeon who examined the patients prior to the study and is according to the formal classification of metatarsalgia of Bardelli et al.: Foot and Ankle Surgery 9 (2003) 79–85. We can not be more specific without speculating about the specific nature of the pertaining foot problems. We added a reference to table 1 to the text, where the reader can see which structural defects are involved.

5. P. 5, 1st paragraph: Please explain how the orthoses were ‘evaluated for adequacy’. What the evaluation performed before or after the pressure measurements and were the results used for the evaluation?

For clarification, we changed the text as follows: ‘During the second session, before final delivery, the therapists had an opportunity to check the constructed orthoses for adequacy. If deemed necessary, accommodations of orthoses were made.’

6. P. 5, 2nd paragraph: The term ‘on-plantar pressure’ is new to me, why not use ‘plantar pressure’?

A part of the sentence was missing. We supplemented the sentence with the following text: ‘such as a possible effect of fatigue on plantar pressures’

7. P. 7, 2nd paragraph: I am still not happy with the mere mentioning of the ‘Root style’ orthoses. It is a bit cumbersome to go back to other publications to find out how they are designed. Why don’t you briefly describe their main characteristics?

Even though we do not want to make this a matter of dispute, we think it is better to give an informative reference, than give a necessarily incomplete description of the concerned issue. In addition, we are convinced that most readers with an interest in orthosis therapy or foot care, are familiar with the ‘Root principles’ of biomechanics and orthosis construction.

8. P. 8, 1st-4th paragraph: Please provide p-values for the differences in the results or state that they were not significant.
We changed the text.

9. P. 9, 1st paragraph: Please change ‘statistically significant greater’ to ‘significantly greater’. Furthermore, please don’t forget the units after giving numbers.

We supplemented the text as follows: ‘The maximal reduction of peak pressure calculated for the whole plantar surface over all forefeet was greater with orthoses of pedorthists (p = .005) and orthotists (p < .001) than orthoses of podiatrists: -96 and -102 versus -75 kPa respectively.’ We supplemented the numbers with kPa units.

10. P. 9, 2nd paragraph: Please add after ‘…68, 65 and 81 out of 100…’

We adopted the suggestion of the reviewer and we changed the text.

11. P. 10, 1st paragraph: Please add ‘… years OF professional experience …’ and change ‘pedorthists DID not differ…’

We corrected the text.

12. P. 10, 3rd paragraph: Shouldn’t it be 93 pairs = 186 orthoses (instead of 31 pairs). Suggest replacing ‘as a mean’ by ‘on average’

We corrected the text.

13. P. 11, 3rd paragraph: a word is missing after ‘However, there was no RELATIONSHIP for podiatrists…’

We corrected the text.

14. P. 12, 1st paragraph: ‘… AN important aim of…’

We corrected the text.

15. P. 13, 1st paragraph: Please use the official citation for the EMED abstract. It has been published in Clinical Biomechanics (Bristol, Avon). 2005;20(8)

We corrected the text: ‘Clinical Biomechanics (Bristol, Avon). 2005;20(9)’.

16. In the whole text: I would still prefer ‘forefoot’ as one word (as opposed to ‘fore foot’ which is not wrong but less commonly used if you check for example medline). However you decide to use it please be consistent. (on page 11 you use it as one word)

We agree with the argument of the reviewer and changed the text.

17. Tables Please correct the units in tables 2 and 3. Further more, in table 2 I do not understand why two values are marked in ‘B right’ and ‘C left’ as highest pressures.

We changed the text as follows: ‘Highest baseline inshoe peak pressures for mt regions are bold printed. For patient B & C, BT regions were added because of high local peak pressures.’
Comments Dr. Keith Rome

18. Page 4: median experience can just have the years without the range

We changed the text.

19. Page 9: remove all the r, b, f and p-values from the 'importance of pressure reduction.'

We changed the text, with exception of the p-values.

*Table 4: Label should read: Mean effect of orthoses on walking convenience (mm)*

Patients scored walking convenience on a ten-point scale, accordingly we supplemented ‘(10-point scale)’ to the text of table 4.