Author's response to reviews

Title: Adherence to physiotherapy clinical guideline acute ankle injury and determinants of adherence: a cohort study

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

Herewith I submit our second revision of the manuscript ‘Adherence to physiotherapy clinical guideline acute ankle injury and determinants of adherence: a cohort study’ (MS: 1201254681130904). I would like to thank you for the opportunity to address the remaining concerns of the reviewers, and I have listed the changes in a point-by-point response in this letter. The literal changes in the manuscript are added in the annex to this letter.

1. Extraction of data
Reviewer PD asked our response to the potential bias introduced by the fact that the outcomes were extracted by those who were responsible for the intervention. This is an important issue which I briefly addressed in our response to the first reviewer’s report, and requires further explanation.

The data were collected by the physiotherapists using a registration form. They were requested to register details about diagnosis and treatment, and they were unaware of the way these data would be used for analysis by the researchers. The registration forms were collected by the researchers (PW and MJ), who extracted the data for further analysis using SPSS. The researchers were blinded for both the identity of patients and physiotherapists. By extracting data independent of the physiotherapists, bias was avoided.

2. Physiotherapist effect
The second concern of reviewer PD concerns the potential ‘physiotherapist effect’: potential bias caused by physiotherapist characteristics. The reviewer addresses an important issue which we did not include in our first revision, due to limited methodological possibilities. We have done further analysis on the data and thanks to the suggestions of the reviewer, we were able to include physiotherapist characteristics in the regression model to correct for physiotherapist characteristics, and to identify physiotherapist characteristics that influence adherence to the number of treatment sessions.

The procedure was similar as for the initial analysis for patient characteristics:
- Correlation between physiotherapist characteristics and number of treatment sessions was investigated using univariate logistic regression. We included years of experience (at least three years), specialisation (sports physiotherapy, manual therapy) in the analysis.
- Significant characteristics (p<0.10) were included in multivariate logistic regression, which resulted in the inclusion of ‘years of experience’ and ‘specialised in manual therapy’, in addition to the patient characteristics.
- The multivariate regression model shows that physiotherapists with at least three years of experience in treating ankle injuries, reduced the odds to receive more than six treatment sessions. Odds Ratio: 0.2 (95%CI: 0.06 to 0.77); p-value: 0.02. In other words: experienced physiotherapists use less treatment sessions. The explained variance increased from 40% to 45%.
- The multivariate regression model, with the inclusion of physiotherapist characteristics, still showed that the odds to receive more than six treatment sessions were statistically significant for three patient characteristics: females, recurrent injury, co-morbidity.

We added the outcome of the additional analysis in the results section and discussed the relevance of this. We conclude that the number of years of experience of the physiotherapist in treating ankle injury, does influence the number of treatment session and interferes with the patient characteristics as prognostic factors.

In conclusion we would like to express our sincere gratitude to the reviewer’s comments, because the additional analysis resulted in significant added value to the manuscript. The manuscript is revised in concordance with the response in this letter. We also used the formatting checklist to ensure that the manuscript conforms to BMC manuscript format.

Yours sincerely,

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Annex: Changes in revision 2
ANNEX

Changes in revision 2 ‘Adherence to physiotherapy clinical guideline acute ankle injury and determinants of adherence: a cohort study’
27 April 2007

In this annex the additional changes for the 2nd revision of the manuscript are shown. These changes are literally taken from the manuscript.

Abstract
Results:
Inclusion of physiotherapist characteristics in the regression model showed that work-experience reduced the odds to receive more than six sessions (OR: 0.2; 95%CI: 0.06 – 0.77), and increased explained variance to 45%.
Conclusion:
Experience of the physiotherapist reduced the number of treatment sessions.

Data analysis
To correct for potential bias, relevant physiotherapist characteristics were added in the regression model: years of experience in treating ankle injuries (≥ 3 years), specialisation (sports physiotherapy, manual therapy).

Results
Inclusion of physiotherapist characteristics in the regression model
Based on univariate regression, experience of the physiotherapist and specialisation in manual therapy were associated with less than six treatment sessions. Inclusion of these characteristics in multivariate logistic regression showed that physiotherapists with at least three years of experience in treating ankle injury, reduced the odds to receive more than six treatment sessions (OR: 0.2; 95%CI: 0.06 – 0.77).
It still showed statistically significant results for the odds to receive more than six treatment sessions for three patient characteristics: females, recurrent injury, co-morbidity. By including the physiotherapist characteristics in the model, the explained variance increased to 45%.

Discussion
Determinants for adherence
A limited number of patient characteristics (female, recurrent injury, co-morbidity) were identified as determinants for adherence to the guideline, also when corrected for physiotherapist characteristics.

Adherence to the guideline is also influenced by physiotherapist characteristics. Experience of the physiotherapist increased adherence to the number or treatment sessions, which also increased the explained variance. Unfortunately, due to lack of sufficient data, it was impossible to further investigate the interaction between patient and physiotherapist characteristics in multi-level analysis.

Conclusion
Experience of the physiotherapist reduced the number of treatment sessions.