Reviewer’s report

Title: The impact of multimorbidity on foot health outcomes in podiatry patients with musculoskeletal foot pain: a prospective observational study

Version: 1 Date: 09 Jun 2019

Reviewer: Tom Walsh

Reviewer's report:

Thank you for the opportunity to review this revised manuscript. Again, it is well written and explores a topic that will be of interest to the JFAR readership. I have a few items that I would appreciate the authors (re)considering.

1. Regarding response rate. I appreciate your detailed answer to the query raised by both reviewers. I am still struggling to see how the original 1329 people targeted aren't relevant to your overall recruitment rate. I can understand if the letters were sent to the general public seeking involvement in the study, but this was a targeted group. As it reads, the target population were those referred with a new episode of foot pain. Once you apply the eligibility criteria, unless they are < 18 years old or don't want to participate, they are going to be eligible. I see this point may be frustrating, but have I missed something?

2. Regarding the between-group comparisons.

Given that the three month and six month scores are significantly different between groups in Table 5 (discrete scores), but not Table 6 (change scores), provides a good reason to adjust for baseline scores. I can't see the justification or the basis for comparing between-group scores without adjusting for baseline scores, particularly given the differences at baseline between the multimorbidity group and the other groups. Furthermore, using negative values to indicate improvement with the FHSQ may be confusing for the reader given higher scores mean improvement. I would recommend you reconsider these analyses. Indeed, I think that both of these Tables could be removed.

The new Table xx reports the regression analyses. To me, this is the most interesting and useful data. I assume that 'no conditions' is the referent in these models? I would recommend adding gender to the models and adding confidence intervals so the readers can see your precision. If
you are reporting change in foot pain and change in foot function it is not necessary to have the baseline pain and function variables listed in the model.

3. Regarding a primary outcome measure. Granted it wasn't explicitly stated that you have reported four primary outcome measures, but your primary outcome of interest was 'foot health', a measure that isn't defined beyond the four domains you have reported. It is important to have a primary outcome measure and this should be determined a priori, even in observational studies. One reason it is important to list a primary outcome measure, is that having multiple outcomes risks obtaining and reporting a false-positive result. Are you able to explain why this may not be relevant for your paper?

4. Regarding the use of p-values in text without context. Tables and in-text data should be able to be read in isolation. I would recommend that you (re)consider listing p-values in-text without contextualising them with the relevant data.

5. Regarding the heterogeneity of diagnoses and treatments provided to the participants. I appreciate your response, however, I do think it remains a limitation. Future studies would be best to test the significance of multimorbidity in a group of patients with at the very least the same diagnosis.

6. The use of IQR as both a single value and a range persists throughout the manuscript. I would recommend selecting one and making it consistent. For example, Table 1 has a fixed value, while on most occasions in-text it is listed as a range.

7. Tables should be able to be read in isolation and therefore I think it would be worth considered providing all initialisms in the relevant captions. A few other comments about your Tables
   * Table 1: a) can you report female/male ratios?, b) in the employment status these numbers would benefit from defining, I assume they are n (%)?
   * Table 3: a) The title could be made clearer that these are baseline characteristics, b) suggest change >1 conditions to >1 condition
* Table 4: a) The title could be made clearer. I suggest using the text similar to that in the first column as the title 'Podiatry treatments received over the previous six-months' b) Should be number of participants n (%)

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