Author’s response to reviews

Title: Periodized resistance training for persistent non-specific low back pain: A mixed methods feasibility study

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Author’s response to reviews:

Dear Editor,

Regarding manuscript SSMR-D-19-00149R1 Periodized resistance training for persistent non-specific low back pain: A mixed methods feasibility study

Thank you very much for your comments. Please see a point by point response below. We look forward to hearing from you.

REVIEWER’S COMMENT:

Reviewer reports:

Chi Ching Gary Chow, PhD (Reviewer 1): Basically, I found this article that is easy to follow. I enjoy to learn from this reading. The outcomes either the quantitative or qualitative measurements are clear, though the periodized resistance training is not a new method, but it is interesting to know the perspective of participants on the weight training programme.

AUTHORS’ REPLY: Thank you very much for reading the manuscript and for your useful comments.

REVIEWER’S COMMENT:

I have some comments on the article and would like to have the authors helping to clarify. First, I am not quite sure if the purpose of the study had been clearly identified. The terminology of "feasibility" is too board to me. Is the study look for the effect of periodized resistance training on health outcomes and the participants' perception of the training protocol?
AUTHORS` REPLY:
We agree that feasibility is a broad term that could mean several different things. However, we still find it useful to describe what the study is about. We have included the following sentence at the end of the Introduction to clarify this: Feasibility was assessed through quantitative changes in pain and functioning, and through their qualitative experiences with the programme.”

REVIEWER`S COMMENT:
In the methods (page 4), please mention if the participants received the information of voluntary participation and the right of dropping out at any time they wanted.

AUTHORS` REPLY:
The following sentence has been included in Methods/paragraph 2: “The participants were informed verbally and in writing about their right to withdraw from the study at any time without stating any reasons to do so.”

REVIEWER`S COMMENT:
In page 5, line 45, should “7. cervical vertebrae” replace by “7th cervical vertebrae”?

AUTHORS` REPLY:
Amended, as suggested. All changes are marked by a yellow color.

REVIEWER`S COMMENT:
In page 8, "After 15 weeks, semi-structured focus group interviews were conducted with three of the training groups (10 participants)", Why do you select the 3 groups from the original 6 training groups (page 4)? How do you handle the selection bias?

AUTHORS` REPLY:
This was a random selection as stated in Methods/Qualitative focus group interviews: “The three groups were chosen randomly by drawing lots.” Thus, although we cannot be sure that the views of the three groups were representative of all six, there should be no selection bias.

REVIEWER`S COMMENT:
In page 10, "The drop-out rate from baseline to 8 weeks was 4.2% and from baseline to 16 weeks it was 12.5%." Do you think the drop out rate is high and how do you think the drop out rate related to the feasibility of the periodized resistance training?

AUTHORS` REPLY:
In our opinion, this is quite a low drop-out rate considering the duration and nature of the study, and the time-commitment required by the participants. We have added the following sentence in the Discussion/paragraph 2: “This might also explain the low dropout rate in the study.”

REVIEWER`S COMMENT:
In page 4, one of the inclusion criteria is "persistent non-specific LBP with a duration &gt;3 months, but in page 11, table 2, the table showed ">&gt;12 months duration of current LBP is
What is the purpose of reporting 12 months instead of 3 months? The inconsistency may need to standardize to minimize the confusion.

AUTHORS’ REPLY:
We agree and have removed the following sentence from table 2: “12 months duration of current LBP, % 95.8”

REVIEWER’S COMMENT:
In this study, numerical pain rating scale (NPRS) (0-10 scale) was used to report the intensity of LBP, according to table 3 and 4, the current LBP (NPRS; 0-10) were 3.1 and 2.9 respectively during the baseline measurement, what is the meaning of 3.1 and 2.9 in the scale? I wonder if the participants really reduced the pain intensity by the treatment or just a placebo effect.

AUTHORS’ REPLY:
The meaning of these scores are described in Methods/Questionnaires: “Numerical Pain Rating Scale (NPRS; current pain, pain the last two weeks and pain the last four weeks), scale from 0-10 were 0 equals no pain and 10 equals the worst pain imaginable (19). A minimum detectable change of 2 points were considered a clinically meaningful change (19).”
The limitation regarding the lack of a randomized control group is highlighted in Discussion/Paragraph 2: “Some limitations must be acknowledged. The lack of a randomized control group prevents us from distinguishing between the effects of periodized resistance training and the attention and reassurance provided by the instructor.” Furthermore, throughout the manuscript we refer to “changes” rather than “effects”.

REVIEWER’S COMMENT:
The discussion seems to discuss more relying on the focus group interview, but lack of in-depth discussion on the health outcomes. Because this article is a mixed method study design, it is necessary to make a balance on the discussion on the methods applied.

AUTHORS’ REPLY:
We see that the interviews are given more words than the quantitative results in the Discussion. However, when comparing purely qualitative versus quantitative papers – it is almost always the case that qualitative papers are much more verbose than quantitative papers. In our view, this is logical, as it simply takes more space to appropriately describe and discuss qualitative findings. In contrast, quantitative results are easily and effectively communicated through tables, which are not included for qualitative results. It would indeed be possible to speculate more extensively about possible mechanisms for the quantitatively measured changes (or lack thereof). However, given the limitations of the design (this being a feasibility study rather than an RCT – which is logical to follow-up with - considering these promising results), it would make little sense to us, especially considering that this is already quite a long paper. Finally, the qualitative results are also used to expand and gain insight into the quantitative results in the Discussion.

Sajad Bagherian, PhD (Reviewer 2).
AUTHORS’ REPLY: Thank you for reading and finding our manuscript worthy of publication without amendments.