Reviewer's report

**Title:** ChrOnic pain self-ManagementMent support with pain science EducatioN and exerCisE (COMMENCE): A randomized controlled trial protocol

**Version:** 1  **Date:** 14 August 2015

**Reviewer:** Jan Hartvigsen

**Reviewer's report:**

It was a pleasure to read this protocol paper describing the design of a randomized clinical trial investigating the hypothesis that participants with chronic pain experience greater change in function when compared to wait-list controls. The paper is well written and in general describes the rationale and methodology adequately so that the methodology is transparent and reproducible. The statistical analysis as described is state-of-the-art and adequately described in detail.

I do however have reservations regarding the discussion section where the authors fail to discuss the limitations of their design. I therefore encourage them to expand the discussion and consider the following points (1-3 are considered major):

1) In a RCT cross-over design without blinding such as this one there is an inbuilt bias because the control group knows that they are not getting anything and in fact are waiting for the “real treatment”. Would you expect them to improve over the treatment and follow-up period or not? Probably this bias is attenuated in this design because the primary end-point and the basis for the eventual conclusions is before the cross-over. This should be acknowledged and the implications discussed.

2) Further, normally in a cross-over design the comparison is within subject but here it is between subject. There are good reasons for this, but it is natural to discuss this in the discussion section also.

3) I am not sure that the control group is a proper waiting list control group. Normally waiting list controls are people who are waiting for some intervention other than the one being tested in the trial, see comment about bias above. This trial is more of a step-wise introduction of the treatment. Again please discuss this.

4) Finally regarding the flowchart, is the “Analysis box” in the right place? Your primary analysis is after the 18 weeks, so I really suggest you delete it.

**Level of interest:** An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests