Reviewer’s report

Title: Chronic Headache Education and Self-management Study (CHESS) - a mixed method feasibility study to inform the design of a randomised controlled trial

Version: 0 Date: 14 Sep 2018

Reviewer: Anabela G. Silva

Reviewer’s report:

Thank you for the opportunity to review an interesting study on a worthy topic. Overall, I felt that the study rationale and the reasons behind some methodological options could be clearer and that a more in-depth description of the procedures and results could be provided. Please see a detailed description below.

Abstract

In Table 1 you state that there were 131 participants, but in the abstract you refer 130?

It seems to me that neither the results or the conclusion of your abstract conveys the difficulties that you had, in particular, during recruitment. When I first read your abstract, it seemed that everything run smoothly but, for example, you ended up with a recruitment rate inferior to what was initially expected.

Background

- I found that this section does not adequately contextualizes the need for your study. You need to provide support for each of the 4 objectives. For example, you fail to strongly advocate for the need to design a new intervention (how does it differ from previously used interventions), or about the need to test the headache classification (is this a new classification? Has it been used previously?....), is there any evidence suggesting that commonly used PROMs may not be the most adequate? You need to provide a clear rationale for your study.

- Lines 96 to 99 of page 5 should be removed from the introduction and placed in the methods with a context, i.e., you need to state how did you use the information collected from reviewing the literature. For example, literature on headache classification tools was used to identify specific tools that meet a set of criteria…This is very clear in your study diagram. Was this a systematic literature search?

- Lines 100 and 101 should be in the methods section.

Methods
It would be easier to follow if you use headings that directly link each of your aims to the methods used.

There is also some repetition. See lines 124 to 126, you fail to state anything on the recruitment procedures, rather you repeat the aims.

How were inclusion and exclusion criteria ascertained?

Line 172 - which instruments were used at baseline? What was assessed?

175-176 - How did you ask for feedback? Did you interview GPs? Use questionnaires?...

You need a reference for the method you used to calculate sample size.

You state the sample size was revised during the study. Based on what?

Lines 192-193 - you state you needed 6 to 10 practices, but on lines 131-134 you state you used 14 (5+additional 9). These different statements have (apparently) different justifications. You need to combine them and state the number of practices and respective justification in one place only. I would suggest under the sample size sub-heading.

The heading "Feasibility of the headache classification interview" should not be under the heading "intervention".

Why did you chose to conduct a two-day intervention (as opposed to several sessions of shorter duration)?

Line 277 - Did you use any criteria to select those participants that tested the app?

Please include a section on data analysis (quantitative and qualitative data).

It is unclear to me whether the 85 participants contacted to receive the intervention were part of the 131 who were eligible and sent consent. If I exclude those that failed to respond and withdrew, I get 131 -44=87 and not 85.

Were participants that received the intervention assessed at baseline and post-intervention?

Were the interviews structured, semi-structured…not structured at all? If they were structured/semi-structured, can you provide a brief description of the interview questions?

Results

You are very descriptive in your results section and do not give data that support your statements. See these examples:
Lines 334-343 - it is unclear whether feedback was consensual or not. Can you tell how many patients found the time commitment too great; did lay facilitators fail the intervention sessions? How many and how many times? And the nurse facilitators?

You state that "Measurement data quality, reliability and validity for the headache-specific and generic measures was acceptable,…” please do provide data that supports this statement.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal