**Reviewer’s report**

**Title:** Effectiveness of internet-delivered education and home exercise supported by behaviour change SMS on pain and function for people with knee osteoarthritis: A randomised controlled trial protocol.

**Version:** 0  **Date:** 29 Apr 2019

**Reviewer:** Paul Jarle Mork

**Reviewer’s report:**

BMSD-D-19-00447

**General comment:**

This manuscript is a protocol for a randomised controlled trial (RCT). The RCT will investigate the effectiveness of an internet-delivered combined intervention (education, physical activity guidance and a 24-week strengthening exercise program supported by short message service) versus internet-delivered education alone in people with knee osteoarthritis (OA). Overall, the manuscript is well-written and clear, but the authors may consider clarifying some issues.

**Major points**

1. Previous similar RCTs referred to in the introduction have only found a short-term effect or now effect. I would recommend that you include (at least) a follow-up at 12 months to facilitate comparison with previous similar studies.

2. The authors claim that the 24-week program is 'evidence-based' (p. 6, line 101). I suggest that you provide more details (from reference 41) to underpin the claim that the program is evidence-based.

3. The description of the intervention is not entirely clear, i.e., the description of 'My Knee Education' is not consistent for the intervention group (p. 11) and the control group (p. 14). Will the control group have access to 'My Knee Education' and nothing more?

4. Is the SMS linked to the webpage, i.e., is the SMS conditioned/timed by the activity on the webpage? Is there any tailoring of the intervention?

5. Can users progress without reporting back via SMS? If yes, they may adhere to the exercise program but not to the reporting via SMS.

6. The description of the sample size calculation is very sparse. You plan to report two primary outcomes. What outcome was used for the calculation? What is the difference
you expect between the intervention and control group? Will you use a mixed-model ANCOVA? A drop-out rate of 15% may seem low. How did you estimate this number?

7. I suggest that the authors also consider reporting the RCT according to the CONSORT-EHEALTH guidelines (see paper by Eysenbach and co-workers 'CONSORT-EHEALTH: Improving and Standardizing Evaluation Reports of Web-based and Mobile Health Interventions').

Minor points

1. P. 4, line 38. Remove period before reference

2. P. 4, line 39. Abbreviation 'OA' already introduced in line 37

3. P. 6, line 90, space after reference 36

4. P. 6, line 108, COM-B not defined (and not included in list of abbreviations)

5. P. 12, line 49, period before 'and'

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

Yes

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

Yes

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.

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