Reviewer’s report

Title: A comparison of treatment effectiveness between clear aligner and fixed appliance therapies

Version: 0 Date: 27 Sep 2018

Reviewer: Mikael Sonesson

Reviewer's report:

Below you can find general comments (A), in line with the journals suggestions. The specific questions/comments (B) are then added in relation to page and line (not all comments).

(A)
1. Is the question posed by the authors well defined?
   This has to be clarified. In what way differs this study to previous study?

2. Are the methods appropriate and well described?
   Yes

3. Are the data sound?
   Yes

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
   Yes

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

6. Are the discussion and conclusions well balanced and adequately supported by the data?
   Yes

7. Are limitations of the work clearly stated? Could be expanded. For example information about where the retrieved studies were performed, private clinics or universities? Was the treatments performed by general practitioners or specialists?
   Concerning the quality assessments of the included studies; it should be discussed that CCT with low risk of bias has lower scientific evidence compared to RCTs.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Uncertain

9. Do the title and abstract accurately convey what has been found?
10. Is the writing acceptable?
Yes, acceptable

(B) Line Comments

Abstract
Please add number and type of study (RCT, CCT)

Keywords -

Background

1 Title; please remove "s" and ":".
48 Please define "effectiveness"

Methods
59 Below "Search strategies": why did the authors not use effectiveness as a search term?
42 Below "Study selection and data extraction": why was not gender included?
45 Below "Data analysis"; please add a reference after the sentence that ends with … assess publication bias.

Results
28 Minor comment. Below "Treatment efficiency", please read the sentence through, the authors have to add "that" after found

Discussion
A major concern is that the authors did not discuss possible weaknesses. It is necessary to add some sentences about rating a CCT and RCT respectively. Is a moderate quality of a RCT stronger or weaker regarding scientific evidence compared to a CCT with low risk of bias and high quality???

It was just 2 RCT, one a prospectively Clinical comparative study, but 5 retrospective studies, how will this influence the results? Please add a comment about this.

In addition: I think also that the authors should mention where the investigations were performed and by whom. Private practice/university; general practitioner/specialists? If it is mentioned in the included studies. Otherwise the authors should discuss it.

The authors should also discuss the present study in relation to the systematic review by Zeng et al. 2017
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.

Unable to assess

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 recommend additional statistical review

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

Needs some language corrections before being published

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