Reviewer’s report

Title: An Umbrella Review of the Literature on the Effectiveness of Psychological Interventions for Pain Reduction

Version: 1 Date: 01 Aug 2017

Reviewer: Sam Norton

Reviewer's report:

Reading through the revised manuscript it has been considerably improved since the first submission in terms of the clarity of the reporting. It reads remarkably well given the task is to summarise such a large number of studies and individual meta-analyses.

The authors have more or less addressed all of my comments sufficiently. I will leave it up to the associate editor to decide whether the following need to be further addressed:

1. As the authors note, what they present is not a typical umbrella review and goes beyond what is typical. It would be useful to note this with justification in the introduction

2. The new table 1 goes some way to addressing my second point, however, this is still a large table that is not easy to digest quickly so it is still not possible to get a handle on the types of interventions assessed across different conditions. I do not accept that doing this is impossible as a simple bar chart or even table of the frequencies by condition would achieve this

3. The justification given for the sensitivity analysis in the response letter would be useful in the main text. Personally I still think it is rather obvious that lowering the bar in the sensitivity increases the number meeting the criteria but I take the point that the idea is to demonstrate the issue is one of sample sizes

4. The authors addressed my last point about where research should be focused with a rather broad call for 'larger and better-conducted RCTs'. I was hoping for some more specific insights particularly around where evidence for certain interventions is either lacking (and small pilot / feasibility studies might be worthwhile) and areas where the next
obvious step is a larger pragmatic RCT and anything else should be avoided. Also, the authors conclusion states: 'Future research should further focus on building networks involving all stakeholder groups to achieve consensus and develop guidance on best practices for assessing and reporting pain outcomes'. This is not really a research aim per se and also is well underway just not necessarily adhered to by trials (e.g. COMET initiative and specifically for chronic pain populations the OMERACT initiative and the IMMPACT initiative for core outcome sets).

**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.

I am able to assess the statistics

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Acceptable
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