Reviewer's report

Title: Osteopathic manipulative treatment for nonspecific low back pain: A systematic review and meta-analysis

Version: 2 Date: 4 July 2014

Reviewer: Rafael Pinto

Reviewer's report:

This review has improved considerably compared to the previous version. However there are a few issues that still need to be addressed.

Minor comments

Abstract – The use of GRADE should (if word count allow) be mention in the methods section of the abstract.

Introduction

Page 6 – line 132-133. Authors should follow PICOS format. Include the comparison of interest and study design in this sentence.

Page 6 – line 135-137. This would be a good justification if authors were able to locate additional papers through this source. However, this information was not stated in the results. How many papers were found by searching the grey literature?

Methods

Page 12 – line 278 to 283. More detailed information is needed here. Please specify what were the criteria for each domain. Refer to the following review for how to report this section of the GRADE approach: Rubinstein et al. Spinal manipulative therapy for acute low-back pain. Cochrane Database of Systematic Reviews 2012, Issue 9, CD008880.

Results

Page 14 – line 330 - 380. There is no information on the clinical relevance of the estimated effects and heterogeneity of the pooled effect.

Page 14 – line 335. Wouldn’t the considerable heterogeneity (I²=86%) found here prevent meta-analysis for this comparison? Also, it is not common practice in this area to pragmatically pooled acute and chronic studies. You can probably pool studies that report mixed population (i.e. recruit patients with acute and chronic symptoms) but you have pooled studies which only recruited chronic patients with studies which recruited mixed population. This might explain the high heterogeneity found. Similarly, very high heterogeneity was found in the pooling of studies investigating OMT for low back pain – pregnancy (outcome: pain and function status) and OMT for low back pain – chronic (outcome: pain).
Discussion
Page 16 – line 401-402. Although the authors have used Cochrane handbook to assess clinical relevance, stating that effects were clinically relevant is overly optimistic. The widths of the 95% Confidence Intervals indicate that the results are very imprecise. The lower bounds of the 95% confidence interval for most of the pooled effects are less than 10% of the scale for MDs and less than 0.5 for SMDs. Based on that the authors should probably tune down their conclusion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
none