Reviewer's report

Title: Physical and psychosocial benefits of yoga in cancer patients and survivors, a systematic review and meta-analysis of randomized controlled trials.

Version: 1 Date: 26 July 2012

Reviewer: Rebecca Speck

Reviewer's report:

This systematic review and meta-analysis aims to describe and measure the effects of yoga on physical and psychological outcomes in cancer patients and survivors. Investigators found 16 eligible studies, of which 15 included breast cancer patients. With the exception of functional well-being, social function, sleep disturbance, and emotional function, the heterogeneity between studies is moderate to very high for all outcomes, limiting the conclusions to be drawn on the benefits of yoga in this population.

Discretionary Revisions

1. Did you give any consideration to excluding the Cohen study (lymphoma) from analyses? I understand the intention of your undertaking was to be all-inclusive (in the context of your eligibility criteria), but given the clear dominance of breast cancer research in this field, wouldn’t restricting your analyses to those studies provide more interpretable, impactful findings?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

2. Results, sentence 3 – what is meant by “…because they did not describe the effects of an RCT.”?

3. Figures 3-11 are never mentioned in the manuscript. They should be referenced in the text if you want to include them.

4. Discussion, sentence 2 – I like the phrase “physical postures.” This is more specific than terminology you use earlier in stating that you only included studies with a “physical component”. Please use “yoga interventions with physical postures” throughout, instead of yoga program with a physical component.

5. Discussion, Clinical Implications – you state no adverse effects were reported. Did the publications explicitly state there were no adverse effects, or did they just not mention any? Did any of the studies actually systematically assess adverse effects?

6. Your reference section has redundancies, some articles are listed more than once.

Aug 1;118(15):3766-3775.

Major Compulsory Revisions

8. Results - What is your rationale for excluding outliers from your analyses? What defines an outlier? Was a cutoff point used, eye-balling, something else? How can you rationalize excluding outliers when the act of excluding them did not have consistent effects across the outcomes you evaluated? For example – excluding the outlier for Physical Function brought your I squared value from 87.5 to 0, but for Distress it brought your I squared value from 80.4 to 61.3 (which is still very high). Given the lack of rationale provided and inconsistent results in decreasing heterogeneity from this methodological approach, currently this is not a reasonable way to present your data.

9. Results, you state that there are 16 studies. After review I conclude that there are really only 13 studies if some of the publications are reporting on the same experimental population. If this is correct, please revise to state to the effect that there are 16 publications reporting on various outcomes in 13 individual studies. It is essential to differentiate between the number of actually trials, vs. publications on unique outcomes. The language throughout the results should be modified so that it is clear whether you are talking about “studies” or “publications” – for example in the quality assessment it is unclear if you are double counting your quality outcomes because you list all publications in the table and evaluate each of them separately.

10. Discussion, Strengths and Limitations – please comment on the heterogeneity observed, and the impact that has on interpretability of effect sizes.

11. Figures 2-11 are all of poor quality, part of the images are clearly missing, and are therefore currently inevaluable.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.