Reviewer’s report

Title: Sleep to lower elevated blood pressure: study protocol for a randomized controlled trial

Version: 3 Date: 6 August 2014

Reviewer: Kristen Knutson

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1. Will the study design adequately test the hypothesis?

Major Compulsory Revisions

An important limitation is the inclusion of patients with undiagnosed OSA. The proposed intervention will not improve OSA and therefore the ability to detect an effect of CBT could be undermined. The authors should address why this is not a concern.

Another important limitation is there is no objective assessment of sleep duration and quality, which is the primary target of the intervention arm. Subjective sleep estimates are only modestly correlated with objective measures. The text states, “Participant adherence to the intervention will also be measured, and adjusted for using sensitivity analysis.” but they do not indicate how adherence will be measured. The authors should address why this is not a concern.

A third concern is that the control group gets one 30-minute session (usual care) but the intervention group gets an internet intervention with multiple sessions. How will investigators know it is the change in sleep duration and quality that had an effect and not just the extra attention associated with the internet interaction? The authors should address why this is not a concern.

2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing?

Adequate

3. Is the planned statistical analysis appropriate?

Yes

4. Is the writing acceptable?

Yes

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests