Reviewer’s report

Title: Can meditation improve attention in older adults with a history of falls? Study protocol for a four-week proof-of-concept intervention

Version: 1 Date: 13 Nov 2018

Reviewer: Kim Delbaere

Reviewer's report:

This is a very important and relevant study, with a good rationale. I have some small comments in terms of explaining and giving more detail.

1. I would like some more information on the EEG component, both in the introduction and methods:

The Background does not include any literature review on ERP and meditation literature, which is important to justify using EEG. In particular, what has the literature found in terms of ERPs/iAPF and meditation?

Please define what ERP is.

The hypotheses are somewhat vague. The authors state they expect changes in ERP components (hypothesis 2) but do not state what changes (increased or decreased amplitude, shorter or longer latencies?). Increases in iAPF are also hypothesised (hypothesis 3), but it is not stated whether this is within or between groups (or both).

Is there a specific time period between which at-home testing and EEG will occur?

Please include additional details about the SART in terms of number of trials, % target trials, etc. I.e. Are there enough trials to derive ERPs? Will ERPs be looked at for both target and non-target trials, or just targets?

There are no details about EEG/ERP processing.

2. Comments regarding the intervention

Figure 1 is slightly confusing as the intervention groups are ticked at enrolment, before allocation.

The authors state that an 'experienced research leader' will conduct the meditation sessions - it is unclear what kind of experience will they have?
Could the authors provide a reference or two to justify music listening as an appropriate meditation control?
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**Quality of written English**
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