Reviewer's report

**Title:** Physical activity intervention for emotional & cognitive functioning in breast cancer patients receiving chemotherapy

**Version:** 2  **Date:** 19 August 2014

**Reviewer:** Norelee Kennedy

**Reviewer's report:**

Major compulsory revisions

Pg 3 Paragraph 2 – first sentence – revise this sentence to make it clearer what the argument is – do you mean frequently reported by patients as opposed to frequently reported as in a research finding?

Include refs for last two sentences in this paragraph

3rd paragraph – first sentence reads like a reference to specific study findings – please give more detail on the study and situate the study better ie with an introduction to this paragraph and relate it more to breast cancer and chemotherapy

Argument for evidence of cognitive decline in breast cancer patients treated with chemotherapy needs to be better made. Introduction starts with a general introduction to cognitive issues post chemotherapy. It is not clear the magnitude of the problem in breast cancer to make a case for why an intervention is needed.

Benefits of PA are well described – however it is assumed that cognition responses will be similar in this population to healthy individuals, children and the elderly. Can it be assumed that cognitive functioning will respond to PA in a similar way in people undergoing chemotherapy?

Why is a home based programme proposed as opposed to a lab based study to explore effects followed by a home based study to explore further practicalities, feasibility, acceptability?

On what basis is the judgment re suitability to participate in moderate exercise being made? Will any objective measurement of fitness be used in that decision making?

Who will invite the participants to the study?

Change grammar tense to “will be assessed” and will complete”

Age range of participants is wide – how will natural differences in cognitive function associated with age be accounted for?

Add – receiving chemotherapy as an inclusion criterion. Add not meeting PA guidelines as a criterion

Who will determine the exclusion criteria?
Explain why pseudo randomisation is being done. How will it be done? Why is not possible to blind the allocation and the research team?

Justify why 12 weeks for the intervention.

Will the period of time to get to 30 mins activity per week be part of the 12 week intervention?

Measures of PA – what accelerometer will be used to measure PA? Pedometers are not accelerometers and will not measure intensity. Why 10 hours wear time for the monitor?

Outcome measures – describe the psychometric properties for the measures. Have they been validated in this population?

In what order will the questionnaires be completed?

What previously published data was used for the sample size calculations?

What is the primary outcome measure?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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'