Reviewer's report

Title: A randomised controlled trial of the use of aromatherapy and hand massage to reduce disruptive behaviour in people with dementia

Version: 2 Date: 12 October 2012

Reviewer: Eva (Simone) van der Ploeg

Reviewer's report:

Thank you for the opportunity to review this paper. It reports on an important and potentially easy to implement intervention. The paper describes a rigorous trial, but may benefit from some changes.

Major revision

The discussion part of the abstract seems unrelated to the rest of the abstract: a lot of new information is presented.

Only 2 studies using aromatherapy are presented in the introduction, with a lot of space reserved for a study describing the effects of Melissa oil, which seems less relevant as you are using Lavender oil. In the Discussion, you mention 3 other studies that have studied the effectiveness of Lavender oil, I suggest moving these to the Introduction.

Also no explanation is given about how aromatherapy may work. In the Discussion it is then speculated that the olfactory system may not be in tact in severely cognitively impaired individuals, whereas it also has been postulated that lavender oil may cross the blood-brain barrier. Please, provide an overview of how aromatherapy may work in your introduction and revise your discussion accordingly.

Because the journal is not an aged or geriatric specific journal, I think some of the inclusion criteria need some explanation, for example inclusion criteria 1 and 2 and exclusion criteria 1.

Page 8: you describe that the intervention was applied in a quiet and private environment, would this have had any impact on your findings?

With the psychometric properties for the CMAI, are you reporting the inter-rater-reliability in your own study? Despite the remarkable properties found by the developers of the CMAI, we found in the Australian aged care setting that inter-rater-reliability was very low for the CMAI: the perception of people’s behaviour seemed very individual. Because of staff rotating, I assume that during your 6 week period, it was different staff reporting CMAI scores. This deserves to be addressed as a limitation for your study as well as when discussing other studies using this outcome measure.

The splitting of the group into 2 age categories seems arbitrary and complicates your findings (with unexpected increase and decrease in CMAI scores). I would suggest deleting this subgroup analysis. Not in the least, because you are
describing the identified differences in differences between the two groups in dementia severity. However, it makes more sense to then just discuss the differences for severe vs. mild/moderate cognitive impairment, which I believe were non-existent.

The discussion needs major revision and restructuring. You kind of lost me on page 16, where it seemed you are presenting more, and irrelevant findings of your study.

With the limitations: did you not monitor changes of medications or use of PRN medications during the study period? This could have had a major impact on your findings.

The conclusion is very long and again contains a lot of new information. Maybe a section describing Implications is in place?

Minor revision
I think it’s best to also describe the recruitment/loss to follow-up procedure in the text, not only in the flow chart.
page 8: Mini Mental State Examination: the i in Mini is missing and usually capitals are used.
You sometimes switch between times (past and present) throughout the paper.
I am not familiar with the term chair-fast.
The CMAI means on page 12 do not mean much when the range or labels of scores (e.g. 2 = several times a day) or not reported.
Also I think the behaviours are usually referred to as non-aggressive and aggressive. Capitals are usually not used for the CMAI groups.
Data are plural, so ‘data were’ instead of ‘data was’

Level of interest: An article of importance in its field

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

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