Reviewer's report

**Title:** A randomized, controlled cross-over trial of dermally-applied lavender (Lavandula angustifolia) oil as a treatment of agitated behaviour in dementia

**Version:** 4  **Date:** 17 June 2013

**Reviewer:** Li-Chan Lin

**Reviewer's report:**

The manuscript seems much more improved from the initial submission. The following things need to be considered and clarified.

1. This research design was cross-over design, is it necessary to control subjects’ age, gender and dementia severity during analysis of repeated measure?
2. Even though 77 subjects were estimated, 64 subjects were recruited in this study (p.9). The authors explained the negative result might not be from inadequate power in Discussion section. In contrast, product variability and the limited knowledge base of lavender’s pharmacological properties were regarded as the reason that the finding was not significant (p.12). I am not convinced that power is not inappropriate.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.