Reviewer’s report

Title: The effectiveness of ICT-based neurocognitive and psychosocial rehabilitation programmes in people with mild dementia and mild cognitive impairment using GRADIOR and ehcoBUTLER: study protocol for a randomized controlled trial.

Version: 0 Date: 17 Sep 2017

Reviewer: Chariklia Tziraki

Reviewer’s report:

This overall a well written paper and addresses a important and clinically relevant topic.

Here are some specific comments that I think would improve the paper.

1. The background section makes a point of emphasizing cognitive rehabilitation p 1 line 38 as a more effective than cognitive training, but the paper does not continue to explore this framework. I think this distinction may be the most innovative part of the paper and it would allow the technology advocated in the paper to be practically translated in a variety of clinical conditions not just MCI and age related cognitive decline. The word "effective" should be carefully defined, especially since the background section mentions the potential benefits of the GRADIOR to both PwD and also their caregivers (formal? Informal, paid?) etc.

2. Intervention related issues:

The exclusion /inclusion criteria are well defined, however, I am wondering whether the possibility of recent hospitalizations (past 6 months) for other comorbidities ie MI or stroke should also be included as exclusion criteria, for a variety of reasons. The sample size calculations assume a 15% drop out, but it is likely to be 20% for the targeted age group. The outcome measurements are well defined except for the most important one: MOOD which appears to be left to the tester, without defining the time of day the testing will be performed! Finally, ethically it is perhaps important to consider the option of "participatory research" model since since i doubt that full PwD consent can be given.

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