Reviewer's report

Title: Reducing the frequency and severity of auditory hallucinations: A randomised clinical trial of a novel Audio Visual Assisted Therapy Aid for Refractory auditory hallucinations (AVATAR therapy) compared to supportive counselling

Version: 1 Date: 25 May 2015

Reviewer: Tara Donker

Reviewer's report:

Review of `Avatar.' By Craig et al.

Associate editor: Tara Donker

I have no competing interests in relation to the manuscript.

This protocol is suitable for publication in Trials.

General comments:

This paper describes the design of an RCT aimed to evaluate the clinical- and cost effectiveness of a AVATAR therapy compared to supportive counselling in the treatment of auditory hallucinations. AVATAR is an interesting, innovative and high-tech treatment aimed to decrease auditory hallucinations. The manuscript has importance in the field of psychology and psychiatry. The manuscript is well-organized and well-written, and the study (single-blind RCT) is well-designed. As this protocol has already received ethical approval and external funding approval, the current peer review will only consider the acceptability of writing and whether sufficient details to allow replication are provided. Sufficient details are provided to allow replication of the study if the authors address some of the comments below. I only have a few comments the authors may wish to address.

Minor Essential Revisions

Title and abstract

1. The study seems to include more objectives than the one mentioned in the abstract (clinical effectiveness); the study also contains an economic evaluation, and it will also include qualitative data, mediators and moderators. The authors may wish to include these objectives to the abstract as well.

2. Please add: ‘Protocol of’ a RCT. to the title, and add the full institutional addresses and email addresses of all authors to the title page

3. Please include the research setting in the method section of the abstract

Introduction

4. Pilot study: could the authors provide information about the feasibility of the
pilot study, and how well the avatar resembled the persecutory voices of the participants?

5. The study hypotheses d and e (mediators and moderators) have not been embodied in the background. Please describe previous literature on potential mediators and moderators in the introduction section. Furthermore, the cost-effectiveness hypothesis is missing.

6. There are some type-o’s

Methods

7. Which diagnostic interview will be used to assess psychosis, who and how are the assessors trained?

8. Please add psychometric properties and assessment method (paper-pencil, online…) to the questionnaires.

9. Which potential mediators/moderators will be included?

10. AVATAR therapy: for replication purposes: could the authors provide a reference or a description of the development of AVATAR (e.g. which software has been used, which method is used to develop the avatar and determine the resemblance of the voices, which therapy techniques are being used [cognitive therapy, …], provide examples of the therapeutic interventions. Would be interesting to include the website URL or screenshots of the therapy. What do the authors mean by ‘discussion’ and ‘closely monitored’? Please operationalize.

11. Therapists of the AVATAR therapy: please include information of the clinical background and training of AVATAR to the manuscript.

12. As Supportive Counselling is meant as a control group, will participants be able to attend AVATAR therapy afterwards?

13. Power calculations: might be underpowered for mediators/moderators. Have the authors conducted power calculations for this type of analysis?

14. Health economic analysis: the authors are advised to use the CHEERS checklist for economical evaluations which provides guidelines on how to report CEA/CUA (Husereau et al 2013; Consolidated Health Economic Evaluation Reporting Standards (CHEERS): Explanation and Elaboration..Value in Health (16) 231-50)

15. Analysis: there will be no test of statistical significance between groups on any baseline variable: why not? Even though they will be randomized, differences between groups at baseline may still exist and may bias results.

16. Analysis: moderator analysis is missing.

17. Please include information on data management and confidentiality (SPIRIT checklist)

Discretionary revisions:

1. Qualitative evaluation: it would be interesting to assess data on the experience of therapist using AVATAR as well, as they will have to use it in clinical practice as well, and it could provide valuable information to refine the therapy and for
implementation purposes.

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

**Quality of written English:** Acceptable

**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