Reviewer's report

Title: Virtual reality exposure therapy as treatment for pain catastrophizing in fibromyalgia patients: proof-of-concept study (study protocol)

Version: 2 Date: 3 February 2011

Reviewer: Alex Burdorf

Reviewer's report:

Major Compulsory Revisions
1. The role of the preliminary study and associated power analysis (population proportion ? which parameter ?) remains unclear in the protocol. I suggest to seriously consider to completely remove this part from the manuscript OR present more details as to the specific contribution of this study to study 1.
2. It would make more sense to clearly describe first all combined aspects of study 1 and 2 (please ensure that you start with study population, design etc) and then present specific aspects of both studies separately.
3. The rationale is that VRET may incur neurophysiological changes in the functional brain areas associated with pain catastrophizing (PCS), thereby change pain catastrophizing, and consequently remove a barrier for physical activity (PA).

The analysis of the data gathered should reflect this model. Thus, are changes in PCS the result of neurophysiological changes (this is something else than VRET on PCS) and have these changes in PCS any effect on reported PA in daily activities.

Minor Essential Revisions
1. I am not entirely convinced about the feasibility argument to include 20 patients. One would like to know the variance in fMRI parameters to be used, since this will guide towards discriminatory power of changes within subjects. Please note that when describing the use of fMRI the parameters to be used should be defined and described.
2. Please explain PCS and TSK and provide references
3. Please explain GPPAQ and FIQ scores and provide references

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

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'