Reviewer's report

Title: Exercise therapy in adults with serious mental illness: systematic review and meta-analysis.

Version: 2 Date: 5 November 2013

Reviewer: Michael Ussher

Reviewer's report:

This article presents a systematic review and meta-analysis of studies investigating the role of exercise therapy for adults with serious mental illness. This is an important issue as if exercise therapy was shown to have a benefit for this population it would have important public health implications. This therapy could be readily disseminated, is likely to be cost-effective and is targeting a population which has very poor physical health and physical activity levels. The reported methods are highly appropriate and the article is well written.

Major compulsory revision

1. There is an existing Cochrane review with a very similar scope and the authors need to state how their review relates to the Cochrane review (e.g. updates the systematic review and adds a meta-analysis):

Exercise therapy for schizophrenia.

Gorczynski P, Faulkner G.

Also the authors may wish to refer to the 2013 review of studies on exercise therapy and schizophrenia in the text edited by P. Ekkekakis 'Routledge Handbook of Physical Activity and Mental Health.'

2. I would advise the authors to exclude study 43 from the review as it compares the addition of motivational techniques to an exercise programme with exercise alone and does not look at the effects of exercise therapy per se.

Minor essential revisions

1. Abstract - write the full names for SWD and SMD.

2. Throughout manuscript correct 'compared to' (ie likening something to something else) to 'compared with'.

3. Introduction, final paragraph: The statement 'In the general population about 60% of men and 70% do less than the recommended levels [29]' is misleading. I suggest revising it along the lines: 'In the general population about 60% of men and 70% self-report less than the recommended levels and objective measures of activity suggest that far more of these individuals are failing to meet the recommendations [29].'

4. In the section 'Exercise Interventions' (p.8) you need to include all the studies
when summarising the types of intervention employed. Also please indicate which studies, if any, including exercise counselling/consultation and summarise the intensity of the exercise interventions (e.g. moderate intensity).

Discretionary revisions
1. Introduction - when referring to poor physical health among those with serious mental illness it might be useful to reference:

2. Introduction paragraph 2: for smoking rates in the general population ref 19 is cited with a figure of 25% given for Scotland. I think it would be more appropriate to give a figure for England (e.g. Health Survey for England) or for the UK.

3. Refs 31 and 32 are a little outdated I would suggested replacing them with the appropriate review chapters in the recent text edited by P. Ekkekakis 'Routledge Handbook of Physical Activity and Mental Health.

4. In the section 'Setting and participant characteristics' I suggest giving a summary of the ethnicity of the participants.

5. In the 'Outcomes' section I think it would be clearer if you discuss the effects on physical activity levels (ie measure of compliance) and other health outcomes separately.

6. In the 'Discussion' the authors might want to mention that the studies do not report the barriers to exercise, if this is the case.

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.