Reviewer's report

Title: Health related muscular fitness, physical activity participation, metabolic syndrome and walking capacity in schizophrenia patients: a cross-sectional study

Version: 1 Date: 4 November 2012

Reviewer: Diego Moliner-Urdiales

Reviewer's report:

The manuscript is well written, the data seem interesting, and the references are appropriated. However, I consider that the aims and the results of the study should be reviewed in order to properly focus the discussion section.

Major Compulsory Revisions

1. Title
   The title must be directly related with the aims and the conclusions. Please, re-write the title.

2. Abstract
   The Abstract only include one of the aims of the study, and it does not fit with the conclusions. Please, check this issue.
   Please, include a brief sentence indicating how many controls were recruited for the study.

3. Background
   In my opinion the aims of the study were 1) to assess walking capacity and muscular fitness in a sample of patients with schizophrenia, and 2) to establish the variables that can explain the variability on walking capacity and muscular fitness. Please, rewrite the aims of the study.

4. Methods
   How did you evaluate smoking habit?. How did you evaluate illness duration? Please, include these issues at methods section.
   Statistical section should be clarified according the aims of the study. Some of the statistical analyses are not clearly stated at this section.
   - At Table 2 you calculated the effect size statistics as Cohen’s d. Please, define the use of this statistical test at statistics section and at the table, and indicate the 95% confidence intervals.
   - Please, indicate the significance of “#” at statistics section and at the table 2.
   - Indicate at the end of statistical analyses the p value that you considered statistically significant (p<0.01).
5. Results
The sub-title of paragraph 4 indicates “associations” but you calculate “correlations”. Please, check this issue.
Why did you create table 4?. What is the relationship of table 4 with the aims of the study?. Please, clarify this issue.

6. Discussion
In my opinion discussion section should be rewritten and divided into several paragraphs. A general review is necessary to fit the discussion and conclusions with the aims of the study.
In my opinion, data about metabolic syndrome (Table 4) and all the comments included at discussion section are out of the aims of the study. Probably, all the speculations about the relationship between fitness and metabolic syndrome should be omitted.
A high percentage of the discussion is focused on “future studies”, but I consider that this information should be briefly included at the end of the discussion.
Clinical implications should be focused on the results of the study:
- Whether you did not check the recommendations of weekly physical activity, you only can state that patients with schizophrenia should improve muscular fitness in order to maintain walking capability.
- As you do not evaluate the effects of muscular exercise, you can not speculate about its benefits.
- Due to the cross sectional design of the study, you can not state about the effects of improve fitness in patients with schizophrenia.
The use of one test to evaluate muscular fitness (standing broad jump), a the small sample of control group should be included as limitations of the study.

Minor Essential Revisions
1. Background
Background section is well focused according the aims of the study, but I consider that it should be divided into 3 or 4 paragraphs to a easier reading.

2. Methods
Please, briefly define DSM-IV criteria first time it appears.
Why did the authors only select 40 control people?.
I would not include the name of the tests in the subtitles of methods section (e.g. 6MWT, IPAQ, PECC…). Please, simplify the subtitles.
Please, briefly define the diagnosis of metabolic syndrome according the International Diabetes Federation criteria.
How did the authors record the dosage of chlorpromazine?. Please, add some information about this issue.
3. Results
The information of second paragraph about “mean duration of illness” could be stated at the first paragraph.
Please, include “IPAQ” over the corresponding results at Table 2 and Table 3, and indicate the significance at the end of the tables.
Please, include “PECC” over the corresponding results at Table 3, and indicate the significance at the end of the table.
Tables 5 and 6 are not self-explanatory. Please, add some information in the title about the statistical analysis, and include a brief explanation about “Cumulative r2” and “F” at the end of the tables.
Please, avoid to start the discussion with “to the best of our knowledge”. I consider more adequate to open the discussion section with “the main results of the study indicate that…”.

Minor issues not for publication
Include a dot at the end of the first line at the limitations section.

**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