Reviewer’s report

Title: Daily Physical Activity and Related Risk Factors in COPD

Version: 0 Date: 17 Dec 2019

Reviewer: Matthew Armstrong

Reviewer's report:

To the Author:

The study by Albarrati and colleagues has studied an interesting topic investigating the risk factors related to lower levels of daily physical activity in patients with COPD. The manuscript has a sound structure and the design is adequate to answer the given aim. Please see my major and minor comments that need to be attended to by the author as indicated below;

Introduction:

1. A solid rationale is given with the relevant references used throughout.
2. Aim of the study is relevant and provides a novelty, however no hypothesis is given?
3. Could the author provide a hypothesis for the study outcome?

Method:

1. You argue in the introduction that discrepancies in the results of previous literature may be due to patients being recruited from pulmonary rehabilitation, yet your patient cohort is also from rehabilitation? I would just like you to elaborate a little on why you state that in your introduction and yet the patients in your study are recruited the same. It may be better to rewrite the last section of the introduction.
2. Again in your introduction you state that control subjects recruited in previous studies may be relatively active and may not be representative of the older population, would you agree that control subjects that are recruited from previous research studies, like in your study, maybe more active than say subjects of a similar age who haven't previously taken part in research? This may affect the robustness of your findings.
3. When describing your assessment of physical activity, you do not provide any confirmation of "valid hours of activity" i.e. 08:00 to 22:00 as you would normally find in research using accelerometers to measure physical activity levels. Would you be able to confirm this in your manuscript?
4. How many valid days of activity did you use, and did you base the analysis on weekdays alone or weekends as well? Could a sentence be added with this information?

5. No sample size calculation has been provided, I think it would help if one was provided or at least an explanation to why one hasn't been provided?

Results:

1. It would be good to see a consort diagram in the results section please.

2. I may have interpreted the findings wrong, but are the number of steps reported in your results text (line 165-166) different from those reported in table 1?

3. Could you include in the figure legends an explanation of what the error bars represent?

4. Line 217, does table 2 demonstrate what this sentence is showing?

5. Line 244, CAT needs to be abbreviated earlier in the manuscript as it is wrote earlier as "COPD Assessment Test", please add (CAT) after this.

Discussion:

1. In a number of cases throughout the discussion you refer to daily physical activity as a number of different phrases and abbreviations i.e. DPA, physical activity levels, activity levels. For consistency could you keep to the earlier abbreviation of DPA or decide on the best phrase which you can use throughout?

2. I think you repeat yourself in the paragraph from lines 298-303 and it sounds poor, could you re-write this paragraph please?

3. Line 310 requires an abbreviation for "handgrip muscle strength".

4. Line 323, replace "an" with "and".

5. Line 325, requires an abbreviation for "systematic inflammation".

* Please take care with your abbreviations throughout the manuscript and present all of them at the end, as currently many of them are missing.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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