Reviewer’s report

Title: Psychological wellbeing and physical activity in children and adolescents with inflammatory bowel disease compared to healthy controls

Version: 0 Date: 13 Oct 2016

Reviewer: OCISKOVÁ MARIE

Reviewer’s report:

Dear authors,

It was a pleasure to review your paper. I hope that you find my comments useful and that they further improve your text.

Title: I suggest uniting the capitalization of the words- "well-being" and "physical activity" are capitalized, other words are not - either capitalize only the first word of the title, or capitalize all relevant words.

Abstract: The abstract is clear and concise.

Background: The Background is also very well written. The empirical bases of all hypotheses are clear. I found several minor typos (e.g. "25%" where "25 %" should be or a lack of commas in several sentences).

Methods: Procedure: Please elaborate on how you found the participants. Were they your patients who were invited to participate in the study? Or did you look for them elsewhere? Where did you find the controls? In a local school? Or somewhere else? When did the study took place? What was its duration?

Sample: The sample is small. However, it is fully justifiable in the study with this population. Please, state if the sample sizes of the three subgroups were large enough for the statistical analyses you made. Also mention inclusion and exclusion criteria for both the clinical and control group. Also, state how many patients had CD and how many dealt with UC.

Tools: What was the Cronbach’s alpha in your translation of the KIDSCREEN? The same goes for the ChilD-S.

Statistical analyses: Were the data normally distributed? This is a condition for the use of ANOVA (which is especially important in small samples such as yours). Another condition of the ANOVA use is the group size. It should be higher than ten for each group entering the analysis. One of your groups only consists of 8 participants. Please, re-evaluate your
statistical procedures. Either find several reliable sources, that back up your statistical decisions, or use another method instead of ANOVA (the Welch test, the Kruskal-Wallis H test, depending on the characteristics of the sample...). Also, were you able to use the Pearson’s correlation? You cannot apply the central limit theorem in your study so you really need to analyse the normality of your data or find strong sources claiming that the normality violations are not a big deal in a study design such as yours.

Results: I will review this part as if you wouldn’t change the statistical procedures. If you do it (it might be recommendable), this part, along with the Discussion, should be reviewed again.

"As shown in Table 2, there were no significant differences between the three groups." - Please, specify what differences weren’t significant.

Table 4: "Difference from norm 7.08 ± 131.32" - A typo. I believe that there should be one more number in this result, as the other groups reached 80.8 and 65.5 points and the between-group difference was medium.

The effect sizes in the tables are very nice.

Anyway, I suggest putting more emphasis on the p values. I understand that they tend to be overrated. However, you often omit the results of the Bonferroni corrections and focus largely on the effect sizes. You should argue why the effect sizes were more preferable and, more importantly, not to forget to state the p values in the text where only the effect sizes are now mentioned (they should be a part of the interpretation as well). Otherwise, the results will remain, statistically speaking, a bit confusing.

Discussion: This part seems nice. It has a logical structure and properly discusses all important findings.

The list of the factors of low albumin values - please, add citations.

"Therefore, the 322 present data do not match those studies showing a lower overall HRQOL among patients with IBD." - You only cite one study, you should add another or fix the sentence.

Conclusion: The conclusion is also clear and concise.

To sum it up, the study seems very nice. The main problems, that need to be addressed, are the applied statistical analyses and the presentation of the results (the p values).

**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:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests
I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal