Reviewer’s report

Title: Patients with chronic Pain: Evaluating Depression and their Quality of Life in a single center study in Greece

Version: 0 Date: 17 Aug 2018

Reviewer: Haruo Fujino

Reviewer's report:

The manuscript titled "Patients with chronic non-cancer Pain: Evaluating Depression and their Quality of Life" attempts to investigate associations between pain, depression, and quality of life in a Greek primary health care setting. The study is potentially interesting and informative; however, I have several comments for the current manuscript, which may improve the quality of the manuscript.

1. An addition of some specific words in Title may be helpful for the readers, such as "in Greek sample" or "single center study in Greece"

2. Many studies have reported associations between pain, depression, and quality of life, such as Tesio et al. 2018 Front Psychol and Tsuji et al. 2016 BMC Musculoskelet Disord. Include the summary of the previous studies.

3. The method used to select participants was quasi-randomization. Please carefully avoid to use "random" in Abstract and Methods sections. Also, please describe the reasons to select 200 from 637.

4. In the first paragraph in Results section, use both number of participants and percentage, as follows: …140 (70%) participants of the study population reported a chronic disease and 24 (17.1%)…

The same applies hereafter in Results section.

In P7, "16.6% of the participants were diagnosed with depression." In P6, "11.5% of them had been diagnosed with depression." Which is correct? Please check the number of participants carefully.
5. P7, There are several sentences that describes differences in groups, such as "Women and those who mentioned suffering a mental disorder had more pain". Show t-/F-values and p-values for those results in text or Tables. The same applies in Results section.

6. P-values reported in Results section were not applied Bonferroni correction or corrected significance threshold. Apply the correction for the multiple testing.

7. Describe which variables were used as explanatory variables in multiple regression analysis. Additionally, to strengthen your conclusions, you can use hierarchical multiple regression with enter method for prediction of quality of life: 1st step: demographics and clinical variables, 2nd: pain measures and depression. It would show the significant increase of explained variance by 2nd steps even after controlling demographic and clinical variables.

8. I cannot find any results analyzed using logistic regression analysis. Also, multiple regression analysis were not described in statistical analysis section.

9. In P10, please discuss the similarities and differences between the current and previous studies. Summarize the main finding in the first sentence, and then discuss the interpretation and compare the results with previous findings.

Minor comments:

10. In P5, "Each one is classified within three levels of gravity", it can be severity?

11. Generally, beta shows a standardized value in multiple regression. Carefully check the values in Table 5.

12. P7 the third line from the bottom, was it "estimated"? If so, describe how the value was estimated.
13. The second paragraph in P9, "training and resources to assess" -&gt; assess.

14. Clearly describe the proportion, such as 70% instead of "seven out of ten" (four, two, ...) in P9.

15. Use the decimal point, not a comma throughout the manuscript (including text and tables).

**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.

Unable to assess

**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

**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