Author’s response to reviews

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

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We would like to thank the reviewer for his comments. We have revised the manuscript. We hope that this revision will meet the high quality standards of BMC Psychology, and we are hoping for a positive decision concerning publication of the manuscript. Changes are highlighted.

Reviewer reports:

Jared Smith (Reviewer 3): There has been an improvement of the manuscript according to changes made in response to the recommendations of the reviewers, most notably, the clarification of study aims/objectives. But the paper has some structural problems and (regression) analyses remain problematic with findings difficult to interpret in places, which would need to be addressed before being considered as suitable for publication.

Major points

1. Structure: The paper remain difficult to follow structurally. For example, the aims are stated in list format on page 3 (lines 46-52), then immediately repeated in prose format on page 4 (lines1-7) and again at the beginning of the Methods (p.4, lines 11-16). Unusually, strengths of the study are stated in the Methods (p.4 lines 21-30). Sample size estimation would be better placed in the statistical analysis subsection (with regression analysis text).

   Answer

   Thank you for your comment. The appropriate changes were made and the sample size estimation was placed in the statistical analysis section.

2. Introduction. The clarity of study aims/objectives has improved largely as a result of removing the focus of urban versus rural clinics, which in the absence of relevant (comparative) data, was difficult to follow.

   Answer

   Thank you for your comment.
3. Methods p.7 Lines 13,40. Results pp.8-10. As noted in previous review, the adopted alpha value for the study is stated as 0.05 but earlier in the paragraph it is stated that the Bonferroni correction was used. This needs clarifying (the authors’ response in reply letter did not help here). Simply put, are the p values subsequently stated in the text and tables of the Results the original p values or the Bonferroni-corrected values? If the former, then the statement about Bonferroni correction needs to be removed. If Bonferroni is too conservative, the authors could use False Discovery Rate or perhaps simply adopt a smaller p value threshold (e.g., p \textless 0.01)?

Answer

The p-values stated in the text and tables are the original ones and thus the statement about Bonferroni correction was removed from the analysis section.

4. Results pp.7-10. Although wary of introducing more analyses into an already complicated manuscript, I wonder if there is any merit in comparing patients with and without chronic pain on key variables.

Answer

You are right. We remove it from the text

5. Results Table 2. Inclusion of the means and standard deviation values for univariate comparisons yielding significant differences is warranted here.

Answer

An extra table with univariate analysis results for BPI dimensions was added in the results section.

6. Results pp.9-10 Tables 4,5. The regression analyses remain problematic. Although forced entry methods are preferable to stepwise approaches, the analyses are underpowered due to the large number of predictors (14 in Tables 4 and 5) given the (maximum) sample size of 113 chronic pain patients (to this end the sample size calculations on page for regression analyses based on 200 participants are largely redundant and do not state number of predictors, rendering them difficult to interpret). A better approach might be to include only those variables identified as significant associates in univariate analyses for depression and for quality of life.
We have performed a stepwise regression analyses to deal with the problem that you refer and the new results are now presented in the tables and text.

Minor comments:

1. Results, Table 3. Were any tests or examinations performed on the EQ-5D and PHQ-9 subgroup scores in Table 3 to establish that the distributions were approximately normal in comparisons? I ask because it is implied that the comparisons of continuous data used parametric approaches. If a Gaussian distribution is rejected in some comparisons, then tests of association should be done using appropriate tests (e.g., Mann-Whitney, Kruskal Wallis).

Answer

The normality assumption was evaluated using Kolmogorov-Smirnov test and the information was added in the text. Only BPI was not distributed normal and the appropriate non parametric analysis had been performed.

2. Results Tables 2,3,4,5 Specifying in the table titles that the (sub)sample only included those with chronic pain and providing the overall n value for would help the reader.

Answer

The appropriate changes were made.

3. Results Tables 2,4,5. Providing both unstandardized and standardized betas in regression models may be helpful. These can be difficult to interpret for categorical variables, particularly in this instance where 'educational level' has 3 categories (presumably each numbered 0, 1 and 2?).

Answer

Standardized betas were added in the new regression models.

4. Results Table 2,3,4,5. The variable 'How long do you have it, specialist consultation for pain relief' appears to be 2 separate variables in some tables but combined in others. Requires clarification.
Answer

Thank you for the comment! We are very sorry, but there was a typographical error! These are two variables as shown in univariate analysis 1) 'How long do you have the pain and 2)did you have specialist consultation for pain relief. The coefficients for specialist consultation were omitted from regression by mistake. We have corrected this!

5. Discussion p.12 Lines 20-50. This paragraph largely repeats the Results of the study with statistical notion - all findings should ideally be discussed with reference to other studies.

Answer

We have done so at the best of our abilities in the discussion section.