Reviewer’s report

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

Version: 2 Date: 06 Mar 2019

Reviewer: Jared Smith

Reviewer's report:

This paper describes a study intended to investigate chronic pain and its comorbidities in patients attending health care services in a primary care setting. The burden of chronic pain in primary care patients is an important area of study and literature from Greece concerning chronic pain is limited. As such, this is a study of interest. The study does have some notable strengths including the sample under study, wide range of patient variables collected and high response rate. However, the study suffers from a number of substantial problems concerning the analyses and interpretation, which would need to be addressed before being considered as suitable for publication.

Major points

1. Abstract. p.1 Lines 27-44. The Results section of the Abstract is unclear - are results stated from univariate or regression analyses - if the associations reflect findings from the regression analyses, then best to make that clear and note in an appropriate manner (e.g., Regression analyses revealed that female gender, having a chronic mental disorder... were independently related to decreased quality of life).

2. Introduction. The strength of this study is the population under study and the large number of variables examined. While the Introduction does provide some rationale for the study, this could be developed further.

3. Results pp.7-10. It is unclear why the analyses pertaining to impact of chronic pain, which appears to be the focus of the paper, included all patients presenting to the (primary care) clinic. This especially makes interpretation of the regression analyses complicated (for example, in Table 5, do the significant independent variables suggest these patient characteristics are important in depression for patients attending primary care, or are they important in patients with chronic pain attending primary care?). Would be more informative to analyse (at least in associative analyses) only patients with chronic pain.
4. Results Tables 2,3. Why are only continuous variable correlates of PHQ-9 scores considered in Table 2 and all univariate analyses for EQ-5D scores presented in Table 3? Would be preferable to have both PHQ-9 and EQ-5D considered in the same manner (preferably in a single table).

5. Results pp.9-10 Tables 4,5. The regression analyses are problematic. The use of pain severity and pain interference as dependent measures in one set of analyses (Table 4) and then independent variables in subsequent analyses (Table 5) is unhelpful and renders focus unclear. Further, stepwise regression methods are most appropriate for use in exploratory research. The relationship between pain intensity/interference and depression/quality of life in patients with chronic pain is already well established - a forced entry or hierarchical approach (according to type of variable; e.g., demographic, pain-related, other clinical) including those variables identified as significant correlates in univariate analyses for depression and for quality of life would be a preferred method.

6. Results pp.9-10 Tables 4,5. What was the overlap between depression as determined by PHQ-9 cut-off and the chronic mental disorder - if significant, then including both indices of mood in regression models is largely unwarranted.

7. Discussion p.10 Lines 36-49. Literature pertaining to studies of chronic pain, depression and quality of life in patients presenting to primary care services would be especially helpful here (e.g., Arnow et al., 2006).

8. Discussion p.11 Lines 6-23. The findings of chronic pain in more than half the attending patients is important. Would be helpful to compare with other pain prevalence studies, especially those concerning patients in primary care settings.

9. Discussion p.14 Lines 4-22. A primary limitation of the study is the cross-sectional design, which limits firm statements about the direction of causality between pain and psychological dysfunction (e.g., depression). This should be noted.
10. Discussion p.14 Lines 4-22. Another important limitation of the study is the absence of measurement of pain-specific constructs (other than pain interference) such as pain catastrophizing, acceptance and self-efficacy, all of which have been associated with psychological dysfunction and quality of life in individuals with chronic pain (e.g., Mason et al., 2008; Sullivan et al. 2005; Turner et al., 2005). This should be acknowledged.

Minor comments:

1. Introduction p.3 Lines 9-20. The sentence beginning 'However, this subject has not received much attention in…' needs rephrasing.

2. Introduction p.3 Line 41. '…main types of pain..' could perhaps be more clearly described as '…pain characteristics (e.g., location)…'.

3. Methods p.4 Lines 41-43. The statement 'For the purpose of this study, chronic pain is defined as constant pain or pain that flares up frequently, and has been experienced for at least 3 months' needs a reference.


5. Methods p.6 Lines 37-43. Best to refer to the questionnaire as EQ-5D-3L (and state the three severity levels), considering that the more recent EQ-5D-5L is commonly adopted in pain research. Also, a statement detailing the EQ-VAS is warranted here.

6. Results p.8 Lines 41-52. Providing means (SD) or medians (IQR) for these variables where significant differences were observed would be helpful here.

7. Results p.9 Lines 24-28. t and r values for these analyses are clearly displayed in Table 3. As such, no need to repeat values in text.

8. Results p.9 Lines 24-28. How do the EQ-Health and EQ-VAS scores compare with the general Greek population (from normed studies)?

9. Methods p.7 Lines 13,40. Results pp.8-10. The adopted alpha value for the study is stated as 0.05 but earlier in the paragraph it is noted the Bonferroni correction was used. This needs clarifying. Also, are the p values subsequently stated in the text and tables of the Results the original p values or the Bonferroni-corrected values?

10. Results Table 1. Would be easier to read if each variable/construct was classified under appropriate headings (sociodemographic, clinical, pain etc.).
11. Results pp.9-10 Tables 4,5. The power analyses (p.5) used to estimate sample size for regression analyses assumed an effect size of 0.13. What were the observed effect sizes in regression analyses? Also, a summary value for total variance explained by models, such as adjusted R-squared, would be helpful.

12. Discussion p.14 Lines 5-7. I'm not sure a chronic pain sample size of 200 is small as suggested by the authors.

13. General. There remains several places where decimal points and commas are missing or interchanged.

References


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

Yes

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?
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No

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