Reviewer's report

Title: Comparison of self-reported pain intensity, sleeping difficulty, and treatment outcomes of patients with myofascial temporomandibular disorders by age group: A prospective outcome study

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Reviewer: Corrie Myburgh

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Review comments: ‘Comparison of self-reported pain intensity, sleeping difficulty, and treatment outcomes of patients with myofascial temporomandibular disorders by age group: A prospective outcome study’.

DR= Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)
MER= Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
MCR= Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

Thank you for the opportunity to review this paper. I shall provide comments following the sub-headings provided and conclude with a summary comment. I will use the abbreviations above to indicate the category of the comment made.

Introduction/aim
1. There is a discrepancy in the hypothesis the authors state at the outset of the investigation and the one they answer. At present these read as:

   Pg6, Line 12-13. We hypothesized that older patients will have more intense pain, greater difficulty in sleeping, and longer treatment than young patients.

   and

   Pg10, line 8-10. We hypothesized that young patients are more likely to have transient single-muscle pain disorder and their symptoms are easy to treat, whereas older patients are more likely to show multiple muscle involvement and many interrelated contributing factors.

   This is a key conceptual issue in the study and as such must be clarified. MCR

Method
2. Pg 6, line 16. The authors do not state a design. It is therefore difficult to evaluate whether the chosen method can reasonably be expected to provide meaningful answers to the hypothesis stated. MER
3. Pg6, line 17. The site of this investigation requires further elucidation. Specifically is this a public or private clinic? MER

4. Pg7, line 15. The case definition is not clear. This study claims to focus on TMD of myofascial origin. It is thus necessary to specifically report the myofascial component. Specifically no mention of muscle groups the rationale for their inclusion is presented. This is a key aspect of the study as muscles such as the Sternocleidomastoid refer pain to the jaw, head and neck. It may therefore appear as if the patient has multiple co-occurring problems, however their origin could be traced back to a single source. MCR

5. Pg7, line 18. The subgroup data should be reported as part of the results section. MER

6. Pg7, line 18. Given the gender differences reported on in the literature, why did the authors not simply focus simply on females? DR

7. Pg8, line 6-7. Is there an issue in asking individuals to differentiate between the pain they are experiencing in three (closely related) regions of the body? The authors do not justify the use of this outcome measure. MCR

8. Pg8, line 7. How does this approach to observing sleep difficulty compare with objective measures of sleep disturbance? No rationale is provided. MCR

Results
9. Pg9, Line4-8. The authors may consider analysing the results using female subjects only as this would eliminate the gender debate. DR

Discussion
10. Pg10, line 10. The authors did not report data relating to the number of muscles involved in the TMD disorders observed. It is therefore not possible to evaluate this discussion point. MCR

11. Pg11, line 6-10. Similar to the comment above, no reported data relates to this discussion point. MCR

Conclusion
12. Pg14, lines 2-3. The authors cannot draw this conclusion based on the data presented. Please refer to my comment regarding Table 4 for further clarification. MCR

Tables
13. Table 2. The authors do not discuss the wide SDs. How might this influence the results and conclusions? MER

14. In order to discuss how age relates to outcomes change scores are required so that the association between age and treatment might be observed. MCR
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests