Author’s response to reviews

Title: Pain perception and functional/occlusal parameters in sleep bruxism subjects following a therapeutic intervention

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HAFM-D-18-00055R2

Dear Professor Stamm,

Please find enclosed our revised manuscript “Pain perception and functional/occlusal parameters in sleep bruxism subjects following a therapeutic intervention” submitted to Head and Face Medicine. We appreciate your assistance and the encouraging comments of the reviewers. Your recommendations and the reviewers comments have been regarded very seriously and we have tried to incorporate them as accurately as possible.

We hope that our manuscript will now meet the requirements for publication in Head and Face Medicine.

In accordance with the “Author Guidelines” we assure that this paper is original from our interdisciplinary research group, not presently under consideration for publication elsewhere, free of conflict of interest, and conducted by the highest principles of human subject.

We are grateful for any further suggestions on your part.
Thanking you in anticipation.

Yours sincerely,

Michelle A. Ommerborn

Itemized answers
Reviewer #2

Reviewer comment:
1. I have an ethical concern regarding possible dental damages due to the interruption of the use of the OA, in the OA group, or the absence of an OA use in the CBT group. The authors are asked to discuss this issue.
Authors: The authors are very grateful for your thorough and detailed review. The authors understand the reviewers concern regarding the interruption of the OA use and the absence of an OA use in the CBT group and we have included this issue in the discussion section. Please see page 18. Indeed, the application of an occlusal splint prevents further tooth loss resulting from ongoing sleep bruxism activity. However, this is a predominantly symptomatic management approach. In this context, it should be mentioned that before participating in the study, each subject did not use any occlusal splint, too. Furthermore, this interventional study compared the effects of a cognitive behavioural therapy (CBT) with that of an OA therapy. In particular, the possible long-term effect of a CBT should be investigated. Parts of the data concerning the effects of this intervention on SB activity have been published elsewhere [1]. For that reason, both groups required a period of 6 month without any intervention. Moreover, during the period of the intervention additional management approaches, such as the use of an occlusal splint combined with the CBT, could have covered the possible effects resulting from the CBT. Therefore, the authors found a comparatively manageable period of six month without OA acceptable with respect of the progression of further attrition or possible tooth damage. In search of a perhaps new causal-oriented treatment for SB, the authors found the selected study design acceptable as confirmed by the ethical committee of the Medical Faculty. With respect to the ethical responsibility of scientific investigations, each participant was given the opportunity to try the respective other therapy after completion of the entire study. In the OA group, subjects who required getting their splint back or asked for a new one, received an OA again.

Reviewer comment:
2. It is well know that although sleep and awake (SB & AB) are two different phenomena, they many times comorbid, causing similar symptoms. What's more, the present state of the art regarding bruxism is that SB is not related to pain or TMJ signs, while AB is a possible cause for pain and masticatory symptoms. The fact that participants performing AB were not excluded or even diagnosed is a study
limitation that should be discussed.

Authors:
The authors are very thankful for your suggestion. Indeed, during the clinical examination each participant was asked whether he or she clenched their teeth while they were awake. Almost 65% of the SB subjects also reported possible awake bruxism. Due to the fact that the assessment of awake bruxism was solely based on the self-report of the participants, its value is limited. Now that the reviewers encouraged us to mention this issue, we included this information in the methods, results, and discussion section. Please see pages 6, 12, and 17.

Reviewer comment:
Authors: Thank you so much for your detailed review. According to your suggestion, authors have revised the introduction. Please see page four.

Reviewer comment:
4. Please, before first using an abbreviation write the full term
Authors: Following your advice, we have revised the entire manuscript.

References