PEER-REVIEW REPORT

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [ ] Anonymous [Y] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

REVIEW OF MANUSCRIPT ID: 86251   Congratulations for this very interesting paper regarding a non-invasive technique that can help patients with neurologic and psychiatric disorders. Your review cand help bring up to date clinicians in both neurology and psychiatry, thus fulfilling its multidisciplinary role.   This is my report regarding the submitted paper. 1. Title. The title does reflect properly the content of the manuscript, but I suggest removing "A mini-review" and leave "review" in place, since the number of references cited is appropriate. 2. Abstract. The abstract reflects very well all aspects of the manuscript. It does not need to be changed. 3. Key Words. Well chosen. 4. Introduction. Is constructed according to a review paper. 5. Main article. This section is constructed and build on the proper structure of subchapters in order to highlight the main ideas of the review. However, some research and inquiry about the implications of DTMS is missing, when addressing certain points, such as: - For Alzheimer`s disease: How does DTMS fare compared to Neural oscillations regarding the evolution of patients with Alzheimer`s disease Neural oscillations and brain stimulation in Alzheimer's disease. Zahra Jafari, Bryan E Kolb, Majid H Mohajerani. Prog Neurobiol

2020 Nov; 194:101878. PMID: 32615147 DOI: 10.1016/j.pneurobio.2020.101878 - For Aphasia: Does DTMS improve, in any kind, speech patterns of patients with aphasia? A known issue raised by authors such as: Réka Incze (Kutasi) in THE IMPORTANCE OF SPONTANEOUS AND SEMI-SPONTANEOUS SPEECH AND ITS ANALYSIS IN APHASIA EVALUATION, JOURNAL OF ROMANIAN LITERARY STUDIES, Issue 14, 2018, in http://old.upm.ro/jrls/JRLS-14/Rls%2014%2050.pdf 6. Results. n/a 7. Discussion. This section is constructed according to a review paper. However, the author might expand a bit this section considering the two topics above. 8. Illustrations and tables. All provided tables are well constructed. 9. Biostatistics. Not applicable. 10. Units. n/a 11. References. The list of all 67 references is adequate and so is the timespan, over 70% of papers being newer than 5 years. 12. Quality of manuscript organization and presentation. It is fit for publication after the minor observations have been amended. 13. Research methods and reporting. The article follows the appropriate structure of a review. 14. Ethics statements. This paper does not need such statements. Conclusion: The paper needs a minor review prior to being considered for publishing.

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SPECIFIC COMMENTS TO AUTHORS

Thank you for the opportunity to review your manuscript entitled " The past, present, and future of deep transcranial magnetic stimulation (DTMS): A mini-review in neurological and psychiatric disorders ". In general, I think this manuscript could be considered for publication after adequate revision. We give specific comments as follows: 1. Give the relatively good evidence using dTMS in depression, I suggest author move the paragraph of "psychiatry" first, then describe the paragraph of "neurological". Also, in the title as "the past,….: a mini-review in psychiatric and neurological disorders". 2. It is better to provide the average response and remission rate using rTMS in TRD (treatment-resistant depression) and also point out the response/remission rate using dTMS in TRD to provide the better efficacy and lower (or similar) adverse events to support your thinking. Please refer to PMID: 31863873 to get relevant data. Author already cited ref. 40 published in 2015, but there is updated meta-analysis. 3. "The results showed that the HDRS-21 score improved by 6.39 points in the DTMS group compared to only 3.28 points in the pseudo-stimulation group and that the response and remission rates were higher in the DTMS stimulation group than in the

pseudo-stimulation group." Please use "sham control" instead of "pseudo-stimulation" across the main text. 4. In table 5, please mentioned if the MDD belongs to TRD? Please be specific. Also, there is "NO" adverse event? Does author indicate the serios/major adverse effect? I don't think there is no any adverse event (such as painful sensation, tickling sensation etc.) Please clarify across other tables. 5. "A Meta-analysis published in 2016 suggested that TMS was more effective than sham stimulation in improving OCD symptoms." There is updated meta-analysis of PMID: 37343662. Please revise it and provide the response/remission rate to give reader more broad understanding. Also, we encourage author to provide the definition of response (30% reduction from baseline), which might be different from depression. 6. "The development of DTMS applied to MDD is shown in Table 6." Typo error. Please using OCD instead of "MDD" here. 7. "In 2018 the U.S. Food and Drug Administration (FDA) approved the use of DTMS for the treatment of OCD, perhaps for those patients who do not have significant results with medication and psychological interventions." Please mention "H7 coil" here to be specific. 8. Please avoiding using "schizophrenic patients". Please use patients with schizophrenia across the main text. 9. In the session of "schizophrenia", author reported studies with small sample size, which might explain the negative findings. I encourage author to add more update studies in this session. 10. "There is no effective treatment for AD patients [9]". Currently, there are several disease-modifying therapy such as monoclonal antibodies developed, although there are for early AD stage and ARIA was found. Please add this description briefly in this AD session. 11. In table 1, Avirme 2016 is case series study. I suggest author should specific point out what kind of study in every study across the whole tables. 12. In table 1 and 2, the significance of "lay a foundation" should be revised. Please just describe the conclusion of recruited studies. 13. "Some scholars have suggested that an interhemispheric competition model is a basis for rTMS to promote motor recovery after stroke, in which the healthy hemisphere

inhibits the diseased hemisphere, resulting in reduced dominance of the hemiplegic limb." Please cite relevant reference here. 14. In discussion section, several sentences did not cite relevant references. Please add relevant references. 15. In discussion, please mentioned currently the evidence of dTMS should be most strong in the treatment of depression and OCD. But for other neurological disease (particularly for neurodegenerative disorders), only very preliminary results and small sample sizes. Large sample sizes with RCT should be warranted

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Author had addressed my concerns adequately.