



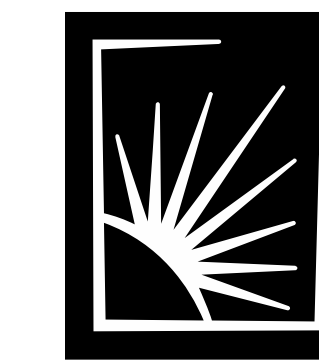
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Symptom Improvement in Chronic Subjective Tinnitus Following Transcranial Magnetic Stimulation: A Retrospective Open-Label Study

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Background

Tinnitus, particularly in cases without an identifiable physical cause, often poses a significant treatment challenge, with limited effectiveness of pharmacological interventions¹. Transcranial Magnetic Stimulation (TMS), has shown promise in alleviating tinnitus symptoms².

Objective

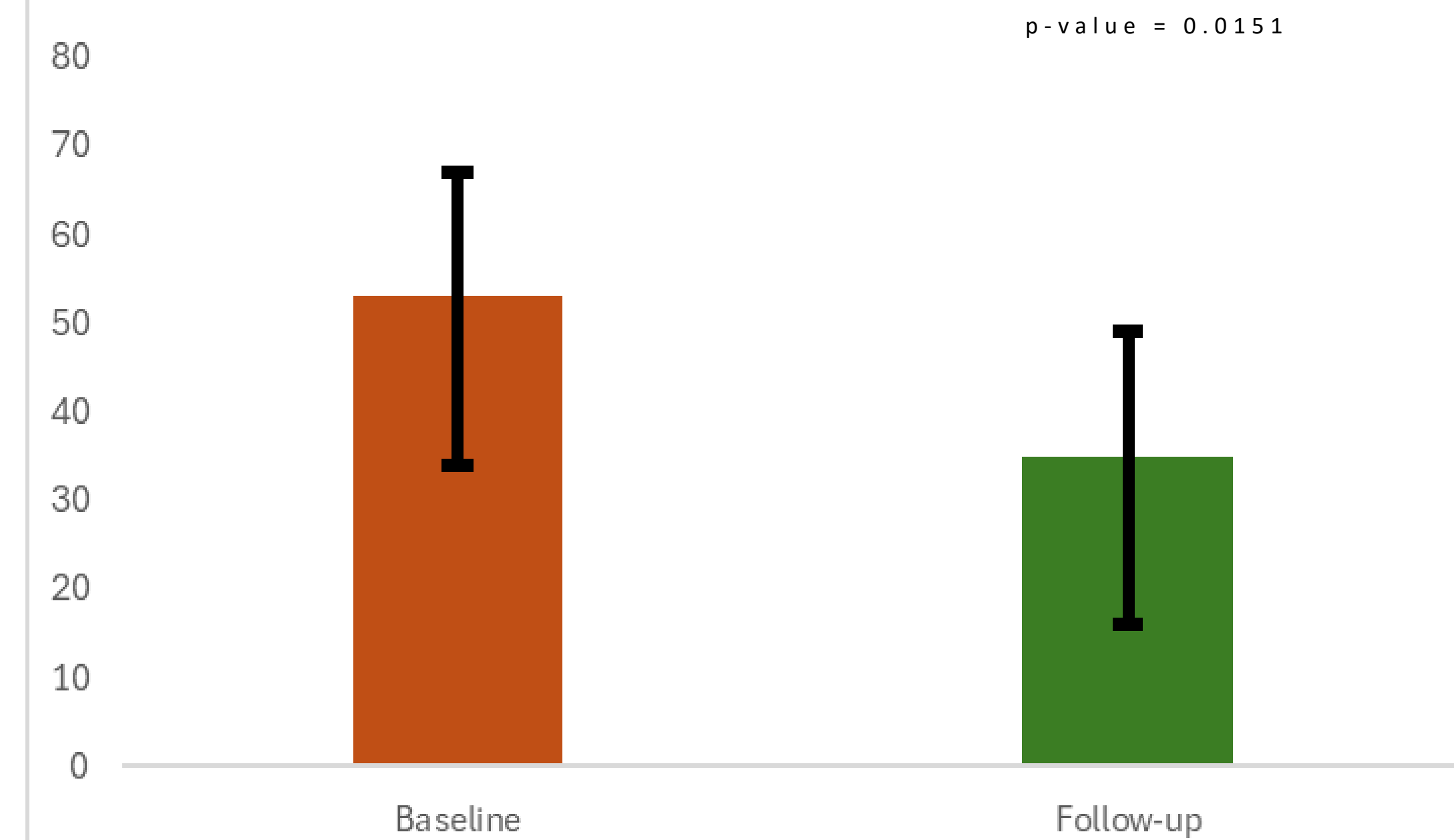
To explore the effectiveness of TMS for tinnitus in light of the increasing prevalence of tinnitus and the limitations of existing treatments.

Methods

- This retrospective study involved 32 adult patients diagnosed with tinnitus, who received TMS. The number of treatments (10) and the follow-up duration (4 weeks) were chosen based on standardized treatment guidelines and tailored to patients' needs.
- The assessment included pre- and post-treatment evaluations using the THI (Tinnitus Handicap Inventory) to measure changes in patient-reported tinnitus severity³.

The Wilcoxon rank sum test was used to compare the THI scores among patients at baseline and 4 weeks of follow-up.

THI



Key Takeaways:

- Transcranial Magnetic Stimulation (TMS), has shown promise in alleviating tinnitus symptoms, Pharmacological treatments have limited effectiveness against these symptoms.
- We are hopeful that future studies would replicate our findings and efforts would be directed at optimizing TMS protocols for its more widespread use in treating tinnitus.

References :

- 1) Park KW, Kullar P, Malhotra C, Stankovic KM. Current and Emerging Therapies for Chronic Subjective Tinnitus. J Clin Med. 2023 Oct 16;12(20):6555. doi: 10.3390/jcm12206555. PMID: 37892692; PMCID: PMC10607630.
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- 3) Newman CW, Jacobson GP, Spitzer JB. Development of the Tinnitus Handicap Inventory. Arch Otolaryngol Head Neck Surg. 1996 Feb;122(2):143-8. doi: 10.1001/archotol.1996.01890140029007. PMID: 8630207.

Results

Our participants were predominantly men (72%) with a median age of 36 years (IQR: 28-51 years) and a median disease duration of 2.0 years (IQR: 0.7-3.3 years).

Significant improvement was observed in the THI scores, decreasing from a median of 53 (IQR: 34-67) at baseline to 35 (IQR: 24-57) post-treatment (p-value = 0.0151). Most treatments were conducted at 1 Hz frequency (79%). Around one-fifth of the patients were on benzodiazepines

Conclusion

This study provides evidence for the effectiveness of TMS for tinnitus. We are hopeful that future studies would replicate our findings and efforts would be directed at optimizing TMS protocols for its more widespread use in treating tinnitus.



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