

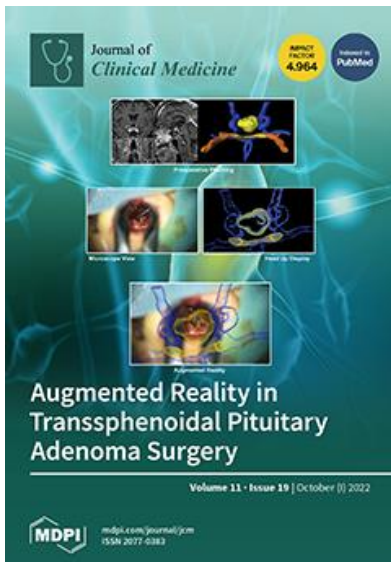
Hearing Aid Use Time Is Causally Influenced by Psychological Parameters in Mildly Distressed Patients with Chronic Tinnitus and Mild-to-Moderate Hearing Loss.

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Abstract:

Background: Hearing aids (HAs) can improve tinnitus-related distress (TRD) and speech-comprehension (SC) in silence or at 55 dB noise-interference (SC_55 dB) in patients with chronic tinnitus and mild-to-moderate hearing loss. However, the role of HA use time in relation to psychological, audiological, or self-reported tinnitus characteristics is under-investigated.

Methods: We examine 177 gender-stratified patients before (t1) and after an intervention comprising binaural DSLchild algorithm-based HA fitting and auditory training (t2) and at a 70-day follow up [t3]. HA use time was retrospectively retrieved (at t2) for the pre-post- and (at t3) post-follow up periods. General linear models investigated HA use time in relation to (1) general audiological, (2) tinnitus-related audiological, (3) tinnitus-related self-report, and (4) distress-related self-report indices before and after treatment, where applicable. Receiver operator characteristic analyses identified optimal HA use time for hereby-mediated treatment changes.

Results: At t1 and t2, psychological, but not audiological indices causally influenced prospective HA use time—except for SC_55 dB at t1, which, however, correlated with patients' anxiety, depressivity, and psychological distress levels. Correlations did not differ between patient subgroups defined by categorical tinnitus-related audiological or self-report indices. HA use time partly mediated treatment-related improvement in TRD, but not SC. Optimal use amounted to 9.5–10.5 h/day.

Conclusions: An awareness of psychological influences may help clinicians facilitate HA use and, thereby, TRD improvement with hearing amplification.

Related links:

- Online publication: <https://doi.org/10.3390/jcm11195869>
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