

Critical Review:

Does the evidence indicate that when tinnitus therapies, specifically Tinnitus Retraining Therapy, Tinnitus Masking, or Cognitive-Behavioural Therapy are compared, one of these therapies is more effective in the reduction of tinnitus-related distress?

Majda Basheikh

M.Cl.Sc (AUD) Candidate

University of Western Ontario: School of Communication Sciences and Disorders

This systematic review compares the efficacy of the following therapies used in the treatment of subjective tinnitus: Tinnitus Retraining Therapy (TRT), Tinnitus Masking (TM), and Cognitive-Behavioural Therapy (CBT). Study designs include mixed randomized and mixed nonrandomized clinical trials, single group pre-posttest, and a systematic review. Current research suggests that TRT provides greater long term effects, whereas the effects of TM are not as persistent. Positive outcomes were also observed in studies combining TRT with CBT or other management strategies. Although limited evidence was available to support one specific therapy over another, the benefits of combined approaches incorporating both sound therapy and counseling are apparent. Additional research is required that incorporates standardized protocols and unbiased methodologies.

Introduction

Tinnitus is the perception of sound in the absence of an external stimulus. It is often associated with hearing loss, but can also occur as an isolated symptom. Tinnitus perception varies widely among individuals, and may consist of ringing, rushing, roaring or chirping sensations that may vary in pitch and loudness. Tinnitus can result in a great degree of distress and irritability, creating sleep, emotional and cognitive disturbances (Roeser, Valente, & Hosford-Dunn, 2008). Therefore, the evaluation of the efficacy of management strategies would prove valuable to individuals suffering from this pathology.

Tinnitus Masking (TM), Tinnitus Retraining Therapy (TRT), and Cognitive-Behavioural Therapy (CBT) are three common interventions in the treatment of tinnitus. TM is a form of sound therapy, whereby a device worn in or on the ear generates broadband noise to reduce the perception of tinnitus. The device can be a hearing aid, noise generator, or a combination of both (Henry, Schechter, Nagler, & Fausti, 2002). The goal of this therapy is to reduce tinnitus-related distress by partially or completely masking the tinnitus. This is achieved by setting the level of the noise to the point where the tinnitus becomes inaudible. TM also incorporates counseling to educate the patient on their tinnitus and use of tinnitus maskers, as well additional suggestions on coping. However, counseling is usually informal and is primarily

Chi-Squared test. Calculations were also performed to examine correlations between the baseline and rate of change for each outcome

The risk of bias for the selected papers ranged from medium to high. Analysis of each individual paper revealed that sound therapy is an effective treatment strategy.

Clinical Recommendations

Combined therapies appear suggestive in the treatment of tinnitus, but the evidence is not sufficient enough to support a specific treatment method. The research is lacking in terms of which specific factors are most critical in the reduction of tinnitus-related distress.

References

- Caffier, P.P., Haupt, H., Scherer, H., & Mazurek, B. (2006). Outcomes of long-term outpatient tinnitus coping therapy: psychometric changes and value of tinnitus-control instruments. *Ear and Hearing, 27*(6), 619-627.
- Dollaghan, C. (2007). *The handbook of evidence-based practice in communication disorders*. Baltimore: Paul H. Brookes Publishing Co.
- Gelfand, S. A. (2009). *Essentials of Audiology: Third Edition*. New York, NY: Thieme Medical Publishers, Inc.
- Henry, J.A., Schechter, M.A., Nagler, S.M. & Fausti, S.A. (2002). Comparison of Tinnitus Masking and Tinnitus Retraining Therapy. *Journal of the American Academy of Audiology, 13*, 559-581.
- Henry, J.A., Schechter, M.A., Zaugg, T.L., Griest, S., Jastreboff, P.J., Vernon, J.A., Kaelin, C., Meikle, M.B., Lyons, K.S., & Stewart, B.J. (2006a). Clinical trial to compare tinnitus

masking and tinnitus retraining therapy. *Acta oto-laryngologica. Supplementum, 556*, 64-69.

Henry, J.A., Schechter, M.A., Zaugg, T.L., Griest, S., Jastreboff, P.J., Vernon, J.A., Kaelin, C., Meikle, M.B., Lyons, K.S., & Stewart, B.J. (2006b). Outcomes of clinical trial: tinnitus masking versus tinnitus retraining therapy. *Journal of the American Academy of Audiology, 17*(2), 104-132.