Critical Review: The Benefits of Auditory Training for Adults with Mild to Moderate Sensorineural Hearing Loss.

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The purpose of this cr

retention was maintained for 8 weeks post training. In addition, after training, participants showed greater accuracy for syllable discrimination of difficult phonemes.

The major strength of this study is that it is a randomized control trial and any significant changes from baseline, can be fairly confidently attributed to treatment effect. In addition, the randomization of participants reduces any biases and allows experimenters to be more confident that changes in baseline performance are likely due to the effects of intervention, not confounding variables. The Stecker et al. (2006) study used ANOVA to determine statistical significance of performance changes and to evaluate effect of interaction on results. This increases the confidence that their results are truly a result of the intervention and not just confounding variables. One weakness of this study is that there was no blinding of the experimenters. Since they were the ones evaluating the participants post training, the lack of blinding could have made them bias towards the treatment groups.

Non-Randomized Control Trial

Bode and Oyer (1970) conducted a non-randomized control trial that used speech discrimination

the research laboratory. The greatest improvement (21.7%) from baseline was measured in the frequent word stimuli evaluation (p<.05). Smaller, but significant improvements were also measured in the remaining post training evaluations.

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References

- Bode, D.L. and Oyer, J.J. (1970). Auditory training and speech discrimination. Journal of Speech and and Hearing Research, 13, pp.839-855.
- Brouns, K., Refaie, A.E., and Pryce, H. (2010).

 Auditory Training and Adult Rehabilitation: A

 Critical Review of the Evidence. Global

 Journal of Health Science, 3(1), pp 49-63.
- Burk, M. H. and Humes, L.E. (2008). Effects of long-term training on aided speech-recognition performance in noise in older adults. *Journal of Speech, Language, and Hearing Research*, 51 (3), pp 759-771.
- CASLPA (2005). Adult Hearing Disorders. http://www.caslpa.ca/PDF/fact%20sheets/adult %20hearing%20disorders.pdf
- Gil, D. and Ioria, M.C.M. (2010). Formal Auditory Training in Adult Hearing Aid Users. Clinics. 65 (2). pp165-174.

- Humes, L.E., Burk, M.H., Strauser, L.E., and Kinney, D.L. (2009). Development and Efficacy of a Frequent-Word Auditory Training Protocol for Older Adults with Impaired Hearing. *Ear and Hearing*, 30 (5), pp 613-627.
- Kricos, P.B. (2006). Audiologic Management of older adults with hearing loss and compromised cognitive/psychoacoustic auditory processing capabilities. *Trends in Amplification*, 10 (1), pp 1-21.
- Stecker, G.C., Bowman, G.A., Yund, E.W., Herron, T.J., Roup, C.M. and Woods, D. L. (2006). Perceptual training improves syllable identification in new and experienced hearing aid users. *Journal of Rehabilitation Research and Development*, 43 (4), pp 537-552.
- Statistics Canada. (2006). Participation and Activity Limitation Survey 2006 Facts on Hearing Limitations. Social and Aboriginal Statistics Division. Catalogue no. 89-628-X 2009012
- Studebaker, G. (1985). A "rationalized" arcsine transform. *Journal of Speech and Hearing Research*, 28(3), pp 455-62.
- WHO, (2010). Deafness and Hearing Impairment. http://www.who.int/mediacentre/factsheets/fs300/e