

Improving accessibility of Internet-interventions

Beukes EW ^{1,2}, **Manchaiah V** ^{1,3,4}, **Fagelson MA** ^{5,6}, **Munoz MF** ¹, **Parks Aronson B** ⁷, & **Andersson GA** ^{8,9}

1. Department of Speech and Hearing Sciences, Lamar University, Beaumont, Texas, USA
2. Department of Vision and Hearing Sciences, Anglia Ruskin University, Cambridge, United Kingdom
3. Department of Speech and Hearing, School of Allied Health Sciences, Manipal University, Karnataka, India
4. Audiology India, Mysore, Karnataka, India
5. East Tennessee State University, Johnson City, TN, USA
6. James H. Quillen Veterans Affairs Medical Center, Johnson City, TN, USA
7. Department of Psychology, Lamar University, Beaumont, Texas, USA
8. Department of Behavioral Sciences and Learning, Linköping University, Linköping, Sweden
9. Department of Clinical Neuroscience, Division of Psychiatry, Karolinska Institute, Stockholm, Sweden

Vinaya Manchaiah vmanchaiah@lamar.edu

Fagelson, Marc A. FAGELSON@etsu.edu

Maria F Munoz mmunoz12@lamar.edu

'Beth Parks Aronson' parks.elizabeth@gmail.com

Gerhard Andersson gerhard.andersson@liu.se

Beukes, Eldre eldre.beukes@anglia.ac.uk

Background: An Internet-based tinnitus intervention for use in the USA can address barriers that weaken the provision of tinnitus-related services. Although such interventions exist, their suitability for this population was questioned. The aim of this study was to adapt an Internet-based cognitive behavioural therapy intervention (ICBT) for tinnitus to ensure its utility for a US population. The study objectives were to ensure the program's accessibility in terms of readability, language, and cultural appropriateness.

Methods: The intervention materials were redesigned to ensure accessibility in terms of readability, language, and cultural suitability. Readability Studio was used to objectively evaluate reading level. Cultural and linguistic adaptations were identified by a tinnitus expert in the USA. The intervention was evaluated for functionality, comprehensiveness, readability, and content by specialist audiologists practicing in the USA.

Results: Accessibility was improved to ensure all chapters had readability levels of between Grades 5-6. Cultural and linguistic adaptations were made in terms of content, vocabulary, and spelling. Accessibility was enhanced by translating the intervention material into Spanish. To improve engagement, adaptations were made to the interactive elements and worksheets. Specialist audiologist ratings indicated acceptability of the intervention as an alternative to face-to-face clinical tinnitus management.

Conclusion: Internet intervention material was revised to adhere to best practice guidelines. These revisions improved accessibility, readability and comprehension. Further studies should determine whether these changes improved self-efficacy, engagement, and aided motivation to complete the intervention.