Hearing Aid Usage in Different Listening Environments

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Abstract

This study investigates the daily listening environments of hearing aid users through their hearing aid data logging capacity. Based on a preliminary investigation of data logging information from 72 hearing aid users, it was found that the majority of the daily listening situations were speech and noise environments. The patterns of the daily listening situations were recorded in four levels: 0-5%, 5-10%, 10-15%, and 15-20% of total usage time. The patterns of the daily listening situations were recorded in four levels: 0-5%, 5-10%, 10-15%, and 15-20% of total usage time.

Introduction

Hearing aid users have access to a variety of listening environments, which can influence their hearing aid usage. The aim of this study was to investigate the daily listening environments of hearing aid users through their hearing aid data logging capacity.

Method

Eighty hearing aid users were selected from a larger cohort of 200 hearing aid users. The participants were divided into four age groups: 50-59, 60-69, 70-79, and 80-89 years old. The participants were asked to wear their hearing aids for a period of 24 hours and record their daily listening environments. The data was collected using two hearing aid models: Oticon Syncro and ReSound Metrix. The data was analyzed using a Kruskal-Wallis one-way ANOVA with post-hoc multiple pair-wise comparisons using the Tukey test.

Results

The results showed that the listening environment most often experienced by the hearing aid user was “Speech in Noise”. Since data logging is now available in a number of hearing aid models, information about a hearing aid user’s listening environments is very important in the prescription of desired hearing aid programs.

Discussion

The results of this study suggest that the general listening pattern identified in this study is independent of the manufacturer of the hearing aid and data logging device. This preliminary data precedes a follow-up study that will examine the listening environments of hearing aid users in different age groups.

Acknowledgements

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Figure 1: Screenshot of Oticon Syncro

Figure 2: Screenshot of ReSound Metrix

Figure 3: Mean percentage of time spent in each listening environment, including Quiet, Soft, Loud, and Noise Only.

Figure 4: Mean percentage of time spent in each microphone mode, including BTE & ITE, Monaural, and Split Directional.

Figure 5: Mean age of participants in each age group.

Figure 6: Mean sound level of participants in each age group.

Figure 7: Mean number of program adjustments in each age group.

Figure 8: Relative Listening Environment Usage.

Figure 9: Relative Overall VC usage.