

Estudio número 11

Resultados del uso de audífonos en personas con hipoacusia neurosensorial unilateral.

La hipoacusia neurosensorial unilateral puede tener un impacto negativo en las capacidades que brinda la audición simétrica y binaural. Aunque la sordera unilateral (pérdida completa de la audición en un oído), ha ganado un mayor interés en la investigación publicada, hay un vacío en la bibliografía sobre los resultados de audífonos para personas con audición residual, o adaptable, en el oído afectado.

Este estudio cuasi experimental evalúa los resultados de pruebas realizadas con y sin el uso de audífonos en un grupo de individuos con hipoacusia unilateral con audición residual. Para ser reclutado, entre septiembre de 2011 y agosto de 2012, una muestra de veintidós personas con audición residual suficiente en el oído afectado como para la adaptación del uso de un audífono. Cada participante fue adaptado con un audífono retroauricular digital acoplado a un molde de oído personalizado.

Se realizaron pruebas estandarizadas, primero sin audífonos, y se repitieron posteriormente tras un intervalo de tres meses con audioprótesis. Los resultados también incluyen la evaluación mediante dos cuestionarios de beneficio subjetivo: el perfil abreviado del beneficio de audífonos (APHAB) y el de la escala de 49 ítems Speech, Spatial, and Qualities of Hearing (SSQ49).

Se evidenció que el uso de audífonos por parte de personas con hipoacusia neurosensorial unilateral puede mejorar la pérdida de discriminación espacial asociada con la interferencia del ruido de fondo, especialmente en situaciones donde existe una separación espacial de los estímulos y el habla se dirige hacia el oído afectado, además de proporcionar un beneficio subjetivo, como lo demuestran los cuestionarios APHAB y SSQ49.

Outcomes of hearing aid use by individuals with unilateral sensorineural hearing loss (USNHL).

Background: Unilateral sensorineural hearing loss (USNHL) can have a negative impact on functions associated with the advantages of balanced, binaural hearing. Although single-sided deafness, which is a complete loss of audibility in one ear, has gained increased interest in the published research, there is a gap in the literature concerning hearing aid outcomes for individuals with residual, or otherwise "aidable," hearing in the affected ear.

Purpose: To assess hearing aid outcomes for a group of individuals with USNHL with residual, aidable function.

Research design: A quasi-experimental study of hearing aid outcomes with paired comparisons made between unaided and aided test conditions.

Study sample: A convenience sample of twenty-two individuals with USNHL, with sufficient residual hearing in the affected ear as to receive audibility from use of a hearing aid, were recruited into the study from September 2011 to August 2012.

Intervention: Each participant was fit with a digital behind-the-ear hearing aid coupled to a custom ear mold.

Data collection and analysis: Assessments were performed at baseline (unaided) and after a three-month field trial (aided) with primary outcomes involving objective measures in sound field yielding signal-to-noise ratio loss (SNR Loss) via the Quick Speech-in-Noise Test and word recognition scores (WRS) via the Northwestern University Auditory Test, No. 6. Outcomes also involved the administration of two well-established subjective benefit questionnaires: The Abbreviated Profile of Hearing Aid Benefit (APHAB) and the 49-item Speech, Spatial, and Qualities of Hearing Scale (SSQ49).

Results: As a group, participants showed significantly improved median SNR Loss thresholds when aided in a test condition that included spatial separation of speech and noise, with speech stimuli directed toward the worse ear and noise stimuli directed toward the better ear (diff. = -4.5; $p < 0.001$). Hearing aid use had a small, though statistically significant, negative impact on median SNR Loss thresholds, when speech and noise stimuli originated from the same 0° azimuth (diff. = 1.0; $p = 0.018$). This was also evidenced by the median WRS in sound field (diff. = -6.0; $p = 0.006$), which was lowered from 98% in the unaided state to 92% in the aided state. Results from the SSQ49 showed statistically significant improvement on all subsection means when participants were aided ($p < 0.05$), whereas results from the APHAB were generally found to be unremarkable between unaided and aided conditions as benefit was essentially equal to the 50th percentile of the normative data. At the close of the study, it was observed that only slightly more than half of all participants chose to continue use of a hearing aid after their participation.

Conclusions: We observed that hearing aid use by individuals with USNHL can improve the SNR Loss associated with the interference of background noise, especially in situations when there is spatial separation of the stimuli and speech is directed toward the affected ear. In addition, hearing aid use by these individuals can provide subjective benefit, as evidenced by the APHAB and SSQ49 subjective benefit questionnaires.

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