

## **Use Of A Remote Microphone In Schoolchildren With Unilateral Hearing Loss**

Maria Fernanda Mondelli and Jacob

Department of Speech Language Pathology and Audiology, Bauru, Brazil

Bauru School of Dentistry, University of São Paulo, Bauru, Brazil

**Objectives:** Was to evaluate the effectiveness of a Remote Microphone (RM) adapted bilaterally in patients with UHL in relation to speech perception, sustained auditory attention and participation in class.

**Background:** Design: the participants included 11 children diagnosed with severe/profound sensorineural UHL between 5 and 17 years of age, enrolled in regular school and hearing aid users by the Department of Clinical Speech Pathology

**Methods:** After adjustment of the RM system, the children immediately performed the following: speech perception through the Hearing in Noise Test (HINT), participation in class by "Classroom Participation Questionnaire" (CPQ) and the Sustained Auditory Attention Ability Test (SAAAT). The evaluations were conducted in four different conditions: only with hearing aids in the affected ear; hearing aids and RM system in the affected ear; hearing aid in the affected ear and RM system in both ears; and hearing aids in the affected ear and RM system in the normal ear. To not affect the learning in the evaluations, different conditions were applied with an interval of 15 days and again after three months of effective use of the devices. ANOVA and t-test were used for statistical study.

**Results:** the study of the HINT results was performed by analysis of three-way ANOVA for repeated measures, which confirmed the difference between the intervention factors (hearing aids / RM system), position (front noise, left noise, right noise, noise behind and compound noise) and time (first evaluation / at 3 months) and the significant interaction between these three factors. The comparative analysis of the results obtained in the CPQ showed significant differences in the t-test statistical analysis ( $P = <0.001$ ) for all subscales: understanding of the teacher"; "understanding of colleagues"; and "positives and negatives aspects. The two-way ANOVA for repeated measures used in the study for the SAAAT results revealed differences between the intervention and time, and both interacted significantly.

**Conclusions:** The survey participants showed superior results with the RM system used in all evaluations, suggesting effectiveness of this device associated with hearing aids for individuals with UHL.