Subjective Measures of Hearing Aid Outcome in Hearing Impaired School Children

W.B.S.R.Rupasinghe[1], J.M.A.U.Chandrasekara[2], B.N.Jayasena[1]

[1] *Department of Disability Studies, Faculty of Medicine, University of Kelaniya*
[2] *Durdans Hospital, Colombo 03*

It is imperative to ensure that hearing aids provide maximum benefit to the wearer, especially in case of children with prelingual hearing impairment. The current study aimed at exploring the status of hearing aid use among children in two schools for the hearing impaired in and around Colombo, and to measure whether the students are benefitted from their hearing aids. 104 hearing aid users in school setting for the hearing impaired in the age range of 6-16 years were tested during the study. Otoscopic examination, Pure tone Audiometry, Aided audiogram, Speech Identification Score (SIS) and Ling's six sounds test were performed. Subjective measures of hearing aid outcome were measured using the aided performance for SIS and Ling's six sounds test. The relative benefit was measured using the difference between the aided and unaided scores of respective tests. Only 17.31% (n=18) participants from the whole study population receive at least ≥50% benefit from the hearing aids and only 41.34% (n= 43) participants had demonstrated at least ≥50% aided performance score at SIS. Aided performances were better for those with Pure Tone Average (PTA) <90dBHL compared to participants with PTA ≥90dBHL, indicating that there is an association between the degree of hearing loss in the ear with amplification and the aided performance. Results suggest that the benefit provided by the hearing aids used by students with hearing impairment in Sri Lankan school setting is not satisfactory as the speech identification and sounds detection and identification ability with those hearing aids were very poor even at quiet condition and will be more affected in real life listening conditions with challenging signal-to-noise ratios. Potential factors that may have contributed to the results were identified as unaidable hearing loss, inconsistent use, inadequate aural rehabilitation, improper fitting and programming of hearing aids and less compliance for hearing aid use due to use of sign language.