

Prevalence of Sensorineural Hearing Loss on Screening in Preschool Children - A 10-year Experience

S, Fonseca¹ C, Reis² C, Monteiro² L, Monteiro² M, Serrano¹

¹Instituto Politécnico de Coimbra, ESTESC-Coimbra Health School,
Audiologia, Portugal

²Hospital dos Lusíadas, Lisboa, Portugal
mserrano@estescoimbra.pt

Background, Hearing impairment in children can compromise the development of language and communication skills, academic achievements, and the negative impact of even *minor alterations* is recognised. Since the implementation of Universal Newborn Hearing Screening, preschool hearing screening programmes would identify later onset or progressive hearing losses and conductive hearing loss. Early identification of hearing loss is very important to provide optimal hearing conditions in school children, minimising the effects on the social, emotional and cognitive development of the individual, which are very important by the time the child starts primary school. Hearing loss can have a great impact on reading, writing, central auditory processing, and balance. According to Wake et al. (2006), the prevalence of slight sensorineural hearing loss is 1.5% when unilateral and 0.6% when bilateral. The present study aims to verify the prevalence of refer only on audiometry screening in pre-school screening (sensorineural hearing loss).

Material and Methods, This is an observational study utilising the results obtained in a ten year audiological and otological screening of preschool children. Written Informed Consent was obtained from the parents prior to initiating the study. Otoscopy, Tympanometry and Audiometry (1, 2 and 4 KHz presented at 40 and 20 dB intensity) were performed at the first stage of the screening and the results were classified as “pass” or “refer”. Every non-normal result of any category would imply a second stage consisting of observation by an ENT specialist at the site and the establishing of a follow-up plan.

Results, 595 children aged 5 and 6 years were screened between 2007 and 2017, of whom 192 (32.3%) required referral to the second stage. 10 children had unilateral changes only on audiometry screening and 3 children had bilateral changes only on audiometry screening. The most frequent alteration was found in the tympanogram.

Conclusion, The prevalence of sensorineural hearing loss is 2,2%, with 1,7% unilateral and 0,5% bilateral. The prevalence of sensorineural hearing loss was similar to the reported in others studies. It's extremely important to perform a hearing screening in the age range of 5-6 years, with the main objective of identifying and referring for treatment/rehabilitation children who present alterations in order to reduce the consequences of the hearing impairment.

Key-words, Hearing Screening, Preschool Children, Sensorineural Hearing Loss