

NHS 2008 Conference

Villa Erba Congress Center, Cernobbio (Como Lake), Italy - June 19-21, 2008

Abstract Form

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All messages will be sent ONLY to the corresponding author, please check very carefully your e-mail address				
Title of the abstract	Association of audiologic and otologic manifestations of Down syndrome in the Philippines utilizing a educational hearing game with sound awareness module: a preliminary survey			
Authors	Lapeña JF ^{1,2} , Fullante PB ² , Jimena GLM ¹ , Carrillo RCC ^{1,3}			
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TEXT:

This study aimed to determine the association of audiologic and otologic manifestations of Down Syndrome in the Philippines utilizing an Educational Hearing Game with Sound Awareness Module (SAM), a sound field listening game with 3 calibrated animal sounds and picture cards (cow, rooster, bird) designed by Janusz Nowosielski PhD(E.R.A. Centre Pty Ltd, Melbourne, Australia), to detect problems in children 18 months and above.

Materials and Methods: Of seventy-three (73) persons with informed consent who underwent otorhinolaryngologic examination at the Down Syndrome Association of the Philippines Inc annual free clinic, thirty-two (32) voluntarily underwent separate audiometric screening and otologic evaluation by two teams. Initial screening by the first team utilized the SAM; subsequent examination by the second team used an original screening inventory checklist and standard instruments including LumiView™ with pneumatic otoscopes and assorted ear speculae (Welch Allyn Corp., NY, USA). Interventions included impacted cerumen extraction, otitis media treatment and/or referral for further management. The separately obtained data were tabulated and analyzed using a Chi²/Fischer exact test.

Results: 32 persons with DS (mean age was 8 yrs, range 0-48yrs) attempted both audiometric and otologic examination. 20 completed initial SAM screening with 6 passing. The 14 that failed all had various ear examination abnormalities; low-set pinna, external auditory canals (EAC) 3mm or less, impacted cerumen (IC), ear discharge, dull or non-mobile tympanic membranes (TM). 4/6 of those who passed had at least one non-mobile TM, 3/6 each had impacted cerumen or EAC 3mm or less in at least one ear.

Conclusion: Persons with DS in the Philippines significantly manifested varying degrees of hearing loss and otologic abnormalities. There is a positive association between EAC stenosis and IC with abnormal SAM. The Educational Hearing Game with Sound Awareness Module may detect hearing problems and suggest the need for further evaluation in such persons.

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All messages will be sent ONLY to the corresponding author, please check very carefully your e-mail address			
Title of the abstract	Educational hearing game with sound awareness module for hearing screening of preschool children in the Philippines: a preliminary survey		
Authors	Carrillo RCC ^{1,3} , Jimena GLM ¹ , Tantoco MLC ² , Reyes-Quintos MRT ^{1,2} , Lapeña JF ¹		
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TEXT:

While the incidence of hearing loss may increase from newborn to preschool age, the screening tools for early detection of hearing loss are not readily available. The Educational Hearing Game with Sound Awareness Module (SAM), a listening game with 3 calibrated animal sounds and picture cards (cow, rooster, bird) was designed by Janusz Nowosielski, PhD (E.R.A. Centre Pty Ltd, Melbourne, Australia) to detect potential problems in children 18 months and above. Its application in the preschool and community setting in other countries can allow teachers and parents to detect hearing and cognition delay. This study aimed to determine intra-observer and inter-observer agreement in the use of SAM in preschool children in the Philippines.

Methods: Preschool (crèche) children with parental consent were subjected to mass conditioning to animal sounds. 15 subjects were subsequently tested for recognition of specific sounds by pointing to associated animal pictures by 3 different teachers using the SAM. Inter-observer and intra-observer variations and environmental conditions were determined using the Kappa statistic.

Results: Three recognizable animal sounds (cow, rooster and bird) representing low, medium and high frequencies were easily imparted through mass conditioning in preschool children. Children (n=15) with mean age of 4 yrs old (range 3-5) were cooperative. There was poor inter-observer and intra-observer agreement, attributed to varying ambient noise throughout the day.

Conclusion: The application of SAM for preschool hearing screening is feasible. Environmental noise should be controlled by the use of noise attenuating devices or by appropriate timing of tests. A headset-integrated SAM has been developed following this trial. Further studies are recommended.