

Abstract EFAS/DGA 2007

Peripheral and Central Hearing Disorders in Persons with Intellectual Disability

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Background/Aims:

Persons with intellectual disability are at an increased risk for hearing impairment. During the 2004 German Special Olympics Summer Games 38.0% of 755 athletes with an intellectual disability failed a hearing screening. 32.8% were assumed to have a permanent hearing loss. These percentages exceed those from the international Special Olympics database (30.9% fails) and those of the 2005 World Winter Games (20.5% assumed threshold hearing loss). Thus, data replication and a more exact assessment of the auditory status of people with intellectual disability including a distinction between peripheral and central part of a detected hearing disorder are required.

Methods:

During the 2006 German Special Olympics Summer Games 542 intellectually disabled athletes received a hearing screening including otoscopy, measurement of otoacoustic emission, and optionally tympanometry and pure tone audiometry. 20 athletes completed a test battery of discrimination thresholds for frequencies, tone amplitude modulation, and tone duration with both interaural and dichotic protocols.

Results:

Even under improved sound protecting conditions 22.7% of the tested athletes were assumed to have a permanent hearing loss. All 20 athletes who received tests for central auditory processing had higher than normal thresholds for tone duration, 15 for amplitude modulation, and 14 of 19 for frequency discrimination in the dichotic protocol reflecting a considerable proportion of central auditory processing disorders in this population.

Conclusion:

International standards for regular audiological assessment, observation, and treatment of the hearing disorders in this disadvantaged minority are required.

