

MILD AND UNILATERAL HEARING LOSS: PSYCHOSOCIAL

REFERENCE	DESIGN	RECRUIT- MENT	CASE DEFINITION	SUBJECTS	ASSESSMENT TOOLS	RESULTS	AUTHOR'S CONCLUSIONS
Newman CW, Jacobson GP, Hug GA, Sandridge SA. Perceived hearing handicap of patients with unilateral or mild hearing loss. <i>Ann Otol Rhinol Laryngol.</i> 1997;106(3): 210–4.	Questionnaire <i>Research Objectives:</i> To quantify self-perceived “hearing handicap” in a sample of adults with unilateral or mild bilateral hearing loss using the HHIA.* To identify specific emotional and social- situational problems assessed by the HHIA.	Outpatients from Henry Ford Hospital in Detroit, MI.	<i>Mild:</i> PTA* .5, 1, 2 kHz* of ≤40 dB* HL* in the better ear (mean 22.8 dB HL). Two sub- samples: (1) <i>Unilateral normal:</i> 43 subjects (68%) with 0–25 dB HL in better ear; mean 15.8 dB; SD* 7.3 (≤ 40 dB in affected ear). (2) <i>Mild bilateral:</i> 20 (32%) subjects with 26–40 dB HL; mean 32 dB; SD 4.6.	Total: N = 63 With hearing loss: N = 63 Controls: N/A 63 adults 18– 64 years (mean age 48.7 years; SD 11.6 years) No record of prior hearing aid use. No evidence of conductive hearing loss through pure tone air and bone conduction audiometry, tympanometry, and otoscopic examination.	HHIA: a standardized test that quantifies self- perceived handicap using a 25-item scale composed of a 13-item emotional subscale and a 12-item social- situational subscale. Possible scores range from 0 (no perceived handicap) to 100 (significant perceived handicap).	Mean HHIA score for unilateral normal subjects was 33.5 (SD 21.8), and mean HHIA score for subjects with mild bilateral hearing loss was 41.9 (SD 33.5). High SD shows that there is great variability in perceived handicap among individuals with both unilateral normal and mild bilateral hearing loss. 75% of subjects with unilateral normal and mild bilateral losses reported some degree of communication and psychosocial problems. For subjects with unilateral normal hearing loss, items related to feeling frustrated, upset, and left out had the three highest scores For subjects with mild bilateral hearing loss, items associated with irritability, feeling upset, and feeling left out were perceived as the 3 greatest emotional consequences of hearing loss.	Adults with unilateral normal or mild bilateral hearing loss should be considered candidates for audiologic rehabilitation, including at least patient–family counseling regarding communication strategies and the option to evaluate the potential benefits from amplification.

* HHIA = Hearing Handicap Inventory for Adults; PTA = pure tone average; kHz = kilohertz; dB = decibel; HL = hearing level; SD = standard deviation

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Stein D. Psychosocial characteristics of school-age children with unilateral hearing losses. J Acad Rehabil Audiol 1983;16:12–22.	<p>Case studies compared to norms on standardized tests.</p> <p>Systematic investigation of specific psychosocial characteristics, such as behavior and self-esteem, and measurements of academic and linguistic skills of children with UHL.*</p> <p><i>Research Objective:</i> To clarify some possible effects of UHL on classroom learning, social adjustment, development of peer relationships, and vocational achievement.</p>	Subjects identified from files at various clinics, agencies, and private practices in the Louisville area.	<p>Aged: 5–12 years.</p> <p>PTA* .5, 1, 2 kHz.*</p> <p>In good ear, ≤15 dB* HL.*</p> <p>In affected ear, ≥30 dB HL.</p> <p>UHL for at least 2 years.</p> <p>Enrollment in regular classroom, child has no known learning disabilities or other educational, mental, or physical handicaps.</p> <p>2/3 children with UHL had right ear loss.</p> <p>68% had severe-to-profound losses.</p>	<p>Total: N = 19</p> <p>With hearing loss: N = 19</p> <p>Controls: N/A</p> <p>19 children 5 years, 6 months–11 years, 7 months.</p>	<p><i>Behavioral measures:</i></p> <p>-CBCL* -TRF* -RCBP* -PRS*</p> <p>A Total Behavior Problem Score was derived for each child from the CMBC and recorded on the RCBP. Each score was determined to be within “clinical” or “normal” limits established by the authors.</p> <p><i>Measures of self-esteem:</i></p> <p>-Piers-Harris Children’s Self-Concept Scale (The Way I Feel About Myself).</p> <p><i>Measures of academic and linguistic skills:</i></p> <p>-CELF* -PRS</p> <p>“...in lieu of formal tests of intelligence and school achievement...teacher judgments of children’s classroom performance and intellectual status were obtained using a Teacher’s Information Sheet.”</p>	<p><i>Behavioral measures:</i></p> <p>42% (8 of 19) showed behavior problems based on the RCBP.</p> <p>Ratings for teachers and parents were not consistent for 7 of 19 children.</p> <p><i>Measures of self-esteem:</i></p> <p>All but two children scored within the norm.</p> <p><i>Measures of academic and linguistic skills:</i></p> <p>The children showed scores on PRS subscales indicating interpersonal and social adjustment problems. 37% (N = 7) scored below acceptable levels. 5 of 7 rated by parents and/or teachers as having excessive behavior problems on CBCL. Data showed better class performance associated with fewer behavioral problems. 8 children referred for language screening on basis of low scores on one or more of the subscales on PRS.</p> <p><i>Demographic Variables:</i></p> <p>No differences.</p>	<p>Results suggested children performed adequately academically and had good self-esteem.</p> <p>Author suggested that 8 children might have undiagnosed language learning problems not related to hearing loss.</p>

* UHL = unilateral hearing loss; PTA = pure tone average; kHz = kilohertz; dB = decibel; HL = hearing level; CBCL = Child Behavior Checklist; TRF = Teacher’s Report Form; RCBP = Revised Child Behavior Profiles; PRS = Myklebust Pupil Rating Scale Revised; CELF = Clinical Evaluation of Language Function Screening Test

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Watkin P, Baldwin M, Laoide S. Parental suspicion and identification of hearing impairment. Arch Dis Child. 1990;65(8):846 -50.	<p>Questionnaire/case study; observational.</p> <p>The Waltham Forest Health Authority sent questionnaires to all parents of children referred for audiologic services, including the question, "Do you think your child has any problem with his/her hearing?"</p> <p>Sensitivity of parental suspicion was calculated by percentage of parents who correctly identified hearing loss before audiologic assessment divided by all children diagnosed with hearing loss.</p> <p><i>Research Objective:</i> To measure the contribution that parental suspicion has made in the identification of childhood deafness.</p>	<p>Waltham Forest Health Authority in East London.</p> <p>From 1973-1988 the Waltham Forest Health Authority collected information on audiologic referrals and assessments on children with permanent hearing loss.</p>	<p>Permanent hearing losses were classified according to the British Society of Audiology recommendations:</p> <p><i>Mild bilateral:</i> 21-40 dB* HL* (N = 39).</p> <p><i>Moderate bilateral:</i> 41-70 dB HL (N = 33).</p> <p><i>Severe bilateral:</i> 71-95 dB HL (N = 17).</p> <p><i>Profound bilateral:</i> >95 dB HL (N = 22).</p> <p><i>Unilateral:</i> >55 dB HL in one ear (N = 60).</p>	<p>Total: N = 171</p> <p>With permanent hearing loss: N = 171</p> <p>Bilateral N = 111</p> <p>Unilateral N = 60</p> <p>Controls: N/A</p> <p>All lived in the district in 1989 and were born after January 1973.</p>	Questionnaire.	<p>25% of children with permanent hearing loss identified as a result of parental concern; 60% of children with permanent hearing loss identified through screening; 15% noticed by a person other than parent.</p> <p>Parental suspicion noted in 30% of children with unilateral hearing loss, 19% for mild or moderate bilateral loss, and 26% with severe or profound bilateral loss.</p> <p>Screening responsible for identification of 57% of children with unilateral hearing loss, 71% of mild or moderate bilateral hearing loss, and 46% of children with severe or profound bilateral loss.</p> <p>Person other than parent noticed hearing loss for 13% of children with unilateral loss, 10% of mild or moderate bilateral loss, and 28% with severe or profound bilateral loss.</p>	<p>Early identification of hearing loss through both parental vigilance and sensitive hearing screening programs should continue.</p> <p>The probability of a parent suspecting a hearing loss increases as the child's age increases, but the sensitivity of parental suspicion even in older preschool children was less than 50%.</p>

* dB = decibel; HL = hearing level