also create psychological risk. Audiological measures alone are insufficient for predicting social, emotional, educational, adaptive, and quality-of-life post-operative outcomes, which are highly variable in this population and can also be impacted by a secondary diagnosis. Extending beyond audition to consider the "whole child" through neuropsychological evaluation may produce a sharper picture of potential outcomes, with or without surgical/audiological intervention. Given recent FDA approval for CI in children with UHL, more are receiving this elective surgery despite difficulties predicting who will experience significant benefit. Here we describe neuropsychological profiles of children with UHL who underwent CI candidacy evaluation at a tertiary pediatric hospital.

Participants and Methods: During pre-operative clinical care, CI candidates completed targeted neuropsychological evaluation to identify patient- and family-level factors that could impact CI use and outcomes from surgery. Cognitive, language, attention/executive, visuoperceptual/visuomotor, academic, adaptive, and emotional/behavioral functioning were assessed. Evaluations integrated history, observations, caregiver report forms, and performance-based test data.

Results: 18 individuals were evaluated (age 7-months to 16-years). Most had left-sided UHL (67%) and were male (61%). Known hearing loss etiologies were congenital cytomegalovirus (n=5), enlarged vestibular aqueduct (n=1), traumatic brain injury (n=1), meningitis (n=1), cholesteatoma (n=1), neurofibromatosis type 1 (n=1), and Waardenburg syndrome (n=1). Indices of general cognitive ability were generally low average to average. Patterns of cognitive impairment were not restricted to language-based tasks (e.g., Beery VMI-6 range 56-109, M=89.42, SD=16.27). Standardized parent ratings of everyday executive functioning, social/emotional/behavioral functioning, and adaptive skills were collected. Eight (44%) had a behavioral health diagnosis: Attention Deficit Hyperactivity Disorder (n=2), Global Developmental Delay (n=2), Unspecified Neurodevelopmental Disorder (n=2), Autism Spectrum Disorder (n=1), and Depression (n=1). Thirteen (72%) received or will receive a CI, of whom 38% had a behavioral health diagnosis. Average Area Deprivation Index (a marker of socio-economic status) was lower for individuals who ultimately received CIs (M=18%tile) compared to those who did not (M=25%tile).

Conclusions: There may be increased rates of neurodevelopmental/psychological conditions among children with UHL, especially when the etiology involves the central nervous system. Albeit preliminary, results align with findings from bilateral hearing loss samples. Findings highlight the importance of routine neuropsychological screening in children with UHL and close interdisciplinary collaboration for optimal outcomes. Socio-economic disparities among those who do and do not receive CI need further exploration as those who did not receive CIs tended to be from less resourced neighborhoods. Additional research is warranted to understand the full range of risk and protective factors for children with UHL and how these relate to outcomes for those who opt for cochlear implantation.

Categories:
Assessment/Psychometrics/Methods (Child)
Keyword 1: pediatric neuropsychology
Keyword 2: sensory integration
Keyword 3: cytomegalovirus
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71 Profiles of Parent Ratings on the Behavior Assessment System for Children-Third Edition in Children with Autism Spectrum Disorder who are Deaf and Hard of Hearing

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Objective: Standardized assessment measures can provide data to inform a diagnosis of Autism Spectrum Disorder (ASD). Most measures assessing ASD characteristics rely on some degree of behavioral response to sound (e.g., responding to name, demonstrating listening response), and are often not appropriate for use with children who are Deaf and Hard of Hearing (DHH), especially with individuals who use signed languages. Few studies have reported on

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the Behavioral Assessment System for Children, Third Edition (BASC-3) for DHH children, and we aim to describe BASC-3 profiles in children with ASD who are DHH.
Participants and Methods: Participants include eight DHH patients diagnosed with ASD through interdisciplinary team evaluations by developmental-behavioral pediatricians, speech-language pathologists, and neuropsychologists with expertise in DHH child development. Demographics include a mean age of 6.17 years, and 62.5% were Male. Self-reported racial distribution was 75% White, 12.5% Black and 12.5% declined to answer. Average Area Deprivation Index (marker of socioeconomic status) was 32.13%tile. As a part of the evaluation, parents rated their children using the BASC-3. Languages include spoken English (75%) and American Sign Language (25%). Relevant co-occurring neurodevelopmental/psychological diagnoses include Global Developmental Delay (n=1), Moderate Intellectual Disability (n=1), and Depression (n=1). Types of hearing loss include sensorineural (75%), conductive (12.5%), and mixed (12.5%). Three participants had different degrees of bilateral hearing loss in each ear: mild sloping-severe, moderate rising-mild (n=1), profound, moderate rising-normal level (n=1), and profound, moderate (n=1). Four participants had the same level of hearing loss in both ears: moderate-moderately severe (n=1), moderately severe-severe (n=1), severe-profound (n=1), and profound (n=1). One child had a unilateral moderate hearing loss. Technology utilized: unilateral hearing aid (n=2), bilateral hearing aids (n=2), unilateral cochlear implant (n=1), bilateral cochlear implants (n=2), and bimodal technology (n=1). BASC-3 scales of interest in this study were the developmental social disorders scale (DSD), Autism probability index (AUI), clinical scales, and adaptive scales. BASC-3 scores were standardized using General Combined norms and means were plotted.
Results: BASC-3 mean scores on clinical scales were elevated (T>60) on Atypicality (M=71), Hyperactivity (M=63), Withdrawal (M=63), and Attention Problems (M=65) in children with ASD who are DHH in this sample. BASC-3 mean scores on adaptive scales were below threshold (T<40) on Social Skills (M=37), Functional Communication (M=39), and overall Adaptive Skills (M=39). DSD scores were in the at-risk (T>60<70) range for 2 out of 8 cases and clinically significant (T>70) for 5 out of 8 cases. The AUI was clinically significant for 2 out of the 3 cases within the age range for reporting AUI data.
Conclusions: In this preliminary sample of DHH children with a confirmed diagnosis of ASD by comprehensive specialized interdisciplinary clinical evaluations, parent ratings on the BASC-3 were consistent with what is known about BASC-3 profiles in hearing children diagnosed with ASD. Our findings suggest it may be helpful to review the DSD, AUI, clinical scales, and adaptive skills scales profiles when assessing DHH children at risk for ASD. Further research, including a larger sample size and assessment of language differences among participants, is necessary.

Categories:
Assessment/Psychometrics/Methods (Child)
Keyword 1: pediatric neuropsychology
Keyword 2: autism spectrum disorder
Keyword 3: sensory integration
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72 Bringing Neuropsychology to the Community: Adaptation of a Rey Osterreith Complex Figure Scoring System for Use in Large-Scale Community-Based Clinical Trials

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Objective: The Rey Osterreith Complex Figure (ROCF) is a neuropsychological task used to measure visual-motor integration, visual memory, and executive functioning (EF) in autistic youth. The ROCF is a valued clinical tool because it provides an insight into the way an individual approaches and organizes complex visual stimuli. The constructs measured by the ROCF such as planning, organization, and working memory are highly relevant for research in, but the standardized procedures for scoring the ROCF can be challenging to implement in large scale clinical trials due to complex and

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