intervention for children with developmental disorders and delays. In striving toward earlier recognition and treatment of developmental concerns, it is crucial to have a universal system to monitor infant and toddler development over time. This system should comprehensively assess the desired areas of development, be based on normative data from large samples, and have strong psychometric properties. While a few developmental monitoring tools are currently in use, they lack many of the aforementioned qualities. The current study reports on the cross-sectional psychometric properties of PediaTrac, which is a novel caregiver-report measure of infant and toddler development. Specifically, this study focuses on psychometric properties of PediaTrac's social/communication/cognition (SCG) domain during the first 9 months of life.
Participants and Methods: The current sample included 571 caregiver-infant dyads recruited into term (n=331) and preterm (n=240) groups. Participants were from the PediaTrac multisite, longitudinal study and were socioeconomically (41.9% below median income) and racially (33.6% Black, 47.6% White, 11.0% multiracial/other) diverse. Data included caregiver reports of infant development from the SCG domain of PediaTrac at 5 sampling periods (newborn, 2, 4, 6, and 9 months). Item response theory (IRT) graded response modeling was used to estimate theta, an index of the latent trait, social/communication/cognition. Exploratory factor analysis (EFA) was used to further examine the underlying structure of the SCG domain.
Results: Mean theta values could be reliably estimated at all time periods and followed a linear trend consistent with development. At 9 months, theta values were statistically different between the term and preterm groups, indicating that term infants demonstrated more advanced SCG abilities. Item parameters (discrimination and difficulty) could be modeled at each time period across the range of ability. Reliability of the SCG domain ranged from 0.97 to 0.99. Results of the EFA suggested a two-factor solution (affect/emotional expression, social responsiveness) at the newborn period accounting for 43% of the variance, a three-factor solution (affect/emotional expression, social responsiveness, imitation/emerging communication) at the 2-, 4-, and 6-month periods accounting for 43%, 34%, and 34% of the variance, respectively, and a four-factor solution (affect expression, social responsiveness, imitation/communication, nonverbal/gestural communication) at the 9-month period accounting for 34% of the variance.
Conclusions: The PediaTrac SCG domain has strong psychometric properties, including reliability estimates higher than other existing caregiver-report measures of SCG abilities. EFA analyses demonstrated that the structure of affect/emotional expression and social responsiveness remains relatively stable and may reflect affective and regulatory aspects of temperament. Conversely, the quality and type of communication continually develops and becomes more differentiated throughout the time periods of interest. Notably, parents appear to be capable of observing and reliably reporting on their infants' abilities in these areas. The use of a universal screening tool developed with rigorous psychometric methods, such as PediaTrac, could transform the way that clinicians identify infants in need of early intervention.

Categories:
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70 Uncovering Comorbid Neuropsychological Disorders in Children with Unilateral Hearing Loss Under Consideration for Cochlear Implantation

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Objective: Children with unilateral hearing loss (UHL) have difficulty hearing in noisy environments and localizing sounds, impacting learning and social opportunities across contexts. Using a visible device like a cochlear implant (CI) may improve functioning but can

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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:
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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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