

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

Correspondence: Rachel Landsman, PsyD
Boston Children's Hospital/ Harvard Medical
School rachel.landsman@childrens.harvard.edu

72 Bringing Neuropsychology to the Community: Adaptation of a Rey Osterreith Complex Figure Scoring System for Use in Large-Scale Community-Based Clinical Trials

Rebecca Handsman, Alyssa Verbalis, Alexis Khuu, Andrea Lopez, Lucy S McClellan, Cara E Pugliese, Lauren Kenworthy
Center for Autism Spectrum Disorders,
Children's National Hospital, Washington, DC,
USA

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

lengthy scoring rubrics. We present preliminary data on an adaptation to an existing scoring system that provides quantifiable scores, can be implemented with reliability, and reduces scoring time.

Participants and Methods: Data was taken from two large-scale clinical trials focusing on EF in autistic youth. All participants completed the ROCF following standard administration guidelines. The research team reviewed commonly used scoring systems and determined that the Boston Qualitative Scoring System (BQSS) was the best fit due to its strengths in measuring EF, the process-related variables generated, and the available normative data. Initially, the BQSS full scoring system was used, which resulted in comprehensive scores but was not feasible due to the time required (approximately 1-1.5 hours per figure for research assistants to complete scoring). Then, the BQSS short form was used, which was successful at solving the timing problem, but resulted in greater subjectivity in the scores impacting the team's ability to become reliable. Independent reliability could not be calculated for this version because of the large number of discrepancies among scorers which included 2 neuropsychologists and 4 research assistants. A novel checklist was then developed that combined aspects of both scoring systems to help promote objectivity and reliability. In combination with this checklist the team created weekly check in meetings where challenging figures could be brought to discuss. Independent reliability was calculated amongst all research assistant team members (n=4) for the short form and novel checklist. Reliability was calculated based on (1) if the drawing qualified for being brought to the whole team and (2) individual scores on the checklist.

Results: Independent reliability was calculated for 10 figures scored utilizing the novel checklist by a team of 4 trained research assistants. All scorers were able to achieve 80% reliability with a high average (80-86%). Study team members reported that scoring took less time taking on average 30-45 minutes per figure.

Conclusions: Inter-rater reliability was strong on the checklist the study team created, indicating its potential as a useful adaptation to the BQSS scoring system that reduces time demands, making the tool feasible for use in large-scale clinical research studies with initially positive reliability factors. The checklist was easy to use, required little training and could be completed quickly. Future research should

continue to examine the reliability of the checklist and the time it takes to complete. Additionally, the ROCF should be studied more broadly in research and examined as a potential outcome measure for large scale research studies.

Categories:

Assessment/Psychometrics/Methods (Child)

Keyword 1: autism spectrum disorder

Keyword 2: executive functions

Keyword 3: assessment

Correspondence: Rebecca Handsman Center for Autism Spectrum Disorders, Children's National Hospital rebecca.handsman@du.edu

73 Examining the Associations Between Sentence Repetition and Other Cognitive Abilities in a Clinical Sample of School-Aged Children

Rebekah E Taylor, Joseph E Casey, Ava M Flanagan
University of Windsor, Windsor, Ontario, Canada

Objective: Sentence repetition (SR) task performance is related to various cognitive abilities and not just learning and memory, as is commonly considered (e.g., Baron, 2018). Bartlett (2018) was the first to examine the associations among SR performance and other cognitive abilities within a single study, using a normative sample. Bartlett (2018) found that SR performance was predicted by language, auditory verbal working memory, processing speed, and nonverbal cognitive ability of which only language abilities and auditory verbal memory significantly added to the prediction. However, no study to date has examined the associations between SR and other cognitive abilities in a clinical sample of school-aged children. The present study sought to determine the extent to which language, working memory, nonverbal abilities (visuospatial processing and fluid reasoning), and processing speed predict children's SR in a clinical sample.

Participants and Methods: Children 6 to 14 years of age ($N = 191$; 65% males) were included in the present study. Participants were drawn from two separate archival data populations of children referred for neuropsychological assessment in southwestern Ontario. SR scores were obtained from