

## **PS2F01**

### **Parent Ratings of Emotion Regulation in Children with Word Reading Difficulty with and without Comorbid Language Disorder**

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Purpose: Emotional dysregulation is one known risk factor for mental health problems. Recent studies suggest that children with dyslexia have increased risk for emotion regulation difficulties. These may be related to general attention and executive functions or to co-occurring language impairment, as word reading difficulties and language impairment frequently co-occur. The purpose of this study is to compare the emotion regulation abilities of children with word reading difficulties (WRD) to children with comorbid word reading and language difficulties (CRD) and typically developing children (TD).

Method: Parents of 2nd grade children with WRD, CRD, and TD completed the Emotion Regulation Index of the Behavior Rating of Executive Function-Second Edition, Parent Report.

Results: Parents of children with CRD rated their emotion regulation as significantly worse than children with TD, but there were no significant differences between WRD and TD or between WRD and CRD.

Conclusion: Results will be discussed in relation to relevant theories of emotion regulation and recommendations for future research will be made. This study is part of Project WORD, funded by the NIH - NIDCD, R01DC017156.

## **PS2F02**

### **Frequencies and Functions of Communicative Vocalizations and Gestures in the Second Year**

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Recent quantitative studies suggest that gesture in the first year is infrequent compared to rates of communicative vocalization. During the second year of life, published empirical research has tended to suggest children display a moderate preference for gestures over words. But we do not know the extent to which frequencies and functions of vocalizations and gestures may differ in the second year. This study aimed to extend previous research comparing voice and gesture by assessing vocal and gestural communicative behaviors in the second year. We evaluated rates of communicative gestures and vocalizations in 12 infants at 13, 16, and 20 months of age using parent-infant laboratory recordings. We report that in laboratory recordings of infants and their parents, infants tend to produce >2 times more vocalizations compared to gestures in the second year. The results suggest vocalization, not gesture, continues to be the predominant mode of communication in the second year. This work was supported by the Plough Foundation and NIH R01DC011027 grant from the National Institute of Deafness and Communication Disorders awarded to D. Kimbrough Oller.

## **PS2F03**

### **Parent Responses or Directives: Their Association with Child Communicative Bids in Different Measurement Contexts and Child Age Groups**

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Research has shown that parental responsivity, characterized by timely and semantically related responses to a child's communication bids and activities, is positively associated with language development in typically developing children and children with developmental disabilities (Deveney et al., 2016; Yoder et al., 1998; Shimpi & Huttenlocher, 2007). This study investigates the association between parent responses/directives and child communicative bids in different measurement contexts and child age groups among children with autism. The research is in progress; however, we expect that parent responses are more likely to support contingent child communicative bids compared to directives. We also expect that the sequential associations of parent responses or directives and child communicative bids will be different in free play compared to structured play. Implications for parent-child communication intervention studies will be discussed. (Funding sources: Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) 6R41MC42776-01-04)

#### **PS2F04**

##### **Exposure Matters: Item Response Theory Analysis of Spanish-English Assessment Using the BESA-ME**

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Speech and language assessments are only valid for the purpose of identifying impairment to the extent that the items making up the assessment measure the skill of interest equally across individuals. In bilingual assessment, there are numerous factors that can affect an individual's performance on test items, and it is the responsibility of the test developers to account for these factors to ensure valid, reliable, and unbiased assessment of performance. We examined item-level performance on the developmental version of the Bilingual English Spanish Assessment-Middle Extension (BESA-ME) for bilingual Spanish-English speaking children between the ages of 7 and 12. Rasch item response theory (IRT) analysis was used to determine whether language ability status (developmental language disorder or typical language) and bilingual exposure status (Functionally Monolingual English or Spanish, Spanish or English Dominant, Balanced) had a significant effect on the measurement of Spanish and English semantics and morphosyntax abilities. Item-level results and implications for bilingual assessment development will be discussed.

Funding: R21HD053223, R01DC010366

#### **PS2F05**

##### **The Role of Semantic Richness in Novel Word-Form Learning in Children with DLD**

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Children with developmental language disorder (DLD) show deficits in word-form learning. The aim of the present work is to evaluate whether the inclusion of sparse or relatively rich semantic cues would influence phonological and articulatory learning of nonword forms. Children practiced six nonwords over three separate sessions and across three conditions: nonwords with no semantic cues, nonwords with lexical referents (sparse semantic cues), and nonwords presented within a story (rich semantic cues). Children with DLD showed more errors than their typical peers. Further, only for children with DLD, errors were influenced by condition, with more errors in the rich than the no semantic cue condition. Findings suggest interactivity across semantic, phonological, and articulatory domains in word-form learning, with children with DLD especially sensitive to semantic factors.

Supported by R01DC016813 and R01DC04826

### **PS2F06**

#### **Caregiver Experiences with Oral Bilingualism in Children who are Deaf or Hard of Hearing in the U.S.**

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Best practices recommend promoting the use of the home language and allowing caregivers to choose the language(s) they want to use with their child who is deaf or hard of hearing (DHH). We examined (1) whether Spanish-speaking caregivers of children who are DHH receive recommendations on oral bilingualism that follow best practices and (2) whether professional recommendations, caregiver beliefs, and language practices had an impact on child language(s) proficiency. Sixty caregivers completed a questionnaire on demographics, language(s) use and recommendations, beliefs on bilingualism, and child language proficiency measures in English, Spanish, and American Sign Language. We found that only 23.3% of the caregivers were actively encouraged to raise their child orally bilingual. Language practices predicted child proficiency in each language, but professional recommendations and caregiver beliefs did not. Our results revealed that most caregivers received recommendations that do not follow current best practices. Professional training is needed to promote bilingualism and increase cultural competence when providing services to caregivers who speak languages different from English. This project was funded by National Science Foundation and the Latino Medical Students Association West.

### **PS2F07**

#### **The Relationship Between the Motor Complexity and Social Sophistication of Point Gestures in Autistic Children**

Adrienne De Froy; The University of Texas at Dallas

Pamela Rosenthal Rollins; The University of Texas at Dallas

Gesture provides a unique window into the interplay of social and motor skills in young children. This is of particular interest for autism researchers, as both social and motor skills are often impaired in young autistic children. However, little is known about the relationship between social and motor skills during gesture production. In this secondary analysis of data from 80 young autistic children, we examined the relationship between the social sophistication and motor complexity with which points are produced. We analyzed point gestures within a

naturalistic parent–child interaction and a structured clinician–child interaction. Points were coded for social sophistication (i.e., level of communicative intent) and motor complexity (using a novel coding scheme). Results indicated the relationship between motor complexity and social sophistication was not linear. Rather, motor complexity was more closely related to the intentionality of child communication. These findings suggest motor and social skill in gesture may not be interconnected and highlight the need to consider the intentionality of child communication. Funding source: The Texas Higher Education Coordinating Board’s Autism Grant Program (Dr. Pamela Rollins, PI).

## **PS2F08**

### **Which one should you choose? An umbrella review of interventions used by speech-language pathologists to support autistic children and youth**

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Janis Oram Cardy; University of Western Ontario

Speech-language pathologists (SLP) have reported using over 30 different interventions to support autistic children and youth. SLPs’ busy schedules limit their time to review the research literature to support their clinical decision-making. This registered umbrella review aimed to evaluate the quality of evidence for, and compare the efficacy of, autism interventions SLPs commonly use. Multiple databases were searched to find systematic reviews that included randomized controlled trials. Outcomes in SLPs’ scope of practice were extracted, summary tables were developed, reviews were assessed for risk of bias using the Joanna Briggs Institute Checklist for Systematic Reviews, and quality of the evidence was evaluated using the Grading of Recommendations, Assessment, Development and Evaluations framework. Six intervention models and six commercialized interventions were examined within the 23 included reviews. Although some commercialized interventions had high-quality evidence for some outcomes, most evidence was rated low or moderate quality. Future research directions include methodological considerations and the critical need for more research on interventions for autistic youth. This research was funded by an Ontario Autism Program Workforce Capacity Fund Grant.

## **PS2F09**

### **Towards less-biased language assessment: Exploring dynamic and processing-based assessments in diverse bilingual children**

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Lizbeth Finestack; University of Minnesota - Twin Cities

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Eugene Wong; University of Minnesota - Twin Cities

Rationale: Dynamic assessments and processing-based assessments hold promise for reducing the influence of prior language-learning experience within language assessment, leading to less-biased approaches for bilingual children. This presentation reports initial results from a project to develop and validate these alternative assessments in children with varied home languages.

Methods: Children from four different home language backgrounds (Malayalam, Mandarin, Somali, Spanish) completed a test battery including standardized assessments of English

language comprehension, narrative and morphological dynamic assessments, and linguistic and nonlinguistic processing. Analyses compared task performance across different home languages and examined relations among tasks.

Results: Four tasks (sentence repetition, processing speed, working memory, and morpheme learning) were not significantly different across home language groups, but three tasks (nonword repetition, narrative dynamic assessment, and sustained attention) differed by home language.

Partial correlations with age removed yielded seven significant relations between different dynamic and processing-based tasks, providing evidence of convergence.

Conclusions: Dynamic and processing-based tasks may provide alternatives to index language-learning skills, but tasks should be carefully examined in diverse groups of children.

Funding Sources: University of Minnesota internal funding

## **PS2F10**

### **The Role of Child Attachment Style in Expressive Language Development**

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Research over the past decade highlights the power of contingent adult-child interaction in the development of language. Numerous caregiver and dyadic features nurture language development via these rich, timely synchronous interactions. One such feature that is understudied with respect to language development is child attachment style. Some research has suggested a connection between attachment and language development, but none has investigated these in the context of contingent interaction. Bowlby described four styles of attachment: anxious, secure, avoidant, and disorganized. Based upon this characterization, secure attachment should set the stage for contingent, synchronous interactions. Therefore, we asked: Does secure attachment predict expressive language above and beyond contingent interaction quality? We conducted a secondary analysis of the Study of Early Child Care and Youth Development project. Attachment was measured at 15 months (Strange Situation Task), contingency was measured at 24 months using the Joint Engagement Rating Inventory, and expressive language was measured at 54 months (PLS-3). Hierarchical regression analysis holding child sex, race, income-to-needs ratio, and contingency constant indicated a significant relationship between secure attachment on expressive language outcomes. Funded by NICHD.

## **PS2F11**

### **Bilingual Children's Self-assessment of Bilingual Proficiency: A Longitudinal Study**

Janelle Flores; University of Houston

Anny Castilla-Earls; University of Houston

This study explored Spanish-English bilingual children's self-perception of proficiency changes over time. Given the variability among bilingual children's proficiency and experiences, it is recommended that language data be obtained from multiple sources to better understand language skills. Insights regarding language proficiency and experiences may assist in improved assessment procedures for speech-language pathologists, particularly when distinguishing between language differences vs. language disorders. Data were drawn from The Houston-Q, a self-reporting measure of bilingual children's proficiency and experience. The measure was administered annually for a two-year period to assess 113 Spanish-English bilingual children, ages 4-8. A multilevel modeling analysis was completed using longitudinal data. Analyses revealed a decrease in bilingual children's perception of Spanish proficiency as age increased. No significant changes in English self-reported proficiency were observed. Additionally,

bilingual experiences were observed to moderate self-ratings of proficiency: as English experiences increased, self-ratings of Spanish proficiency decreased. Results of this study support the use of self-reporting proficiency and experience measures to understand language changes that occur over time. This project was funded by a K23 grant from NIDCD awarded to Dr. Castilla-Earls.

### **PS2F12**

#### **Preliminary examination of the stability of sequential associations between the talk of educators and autistic preschoolers using generalizability theory**

Andrea Ford; University of Cincinnati

Marianne Elmquist; University of Wisconsin - Madison

Sampling educators' and children's talk during language learning interactions requires careful consideration of factors that may impact measurement reliability and resultant inferences. Our presentation will describe a preliminary study that used generalizability theory to understand the contribution of two measurement conditions—occasions and raters—on estimates of sequential associations between educator talk and autistic preschooler talk. We video-recorded four 15-minute occasions of educator-child interactions for 11 autistic preschoolers during free play in their inclusive classroom. Two trained raters coded all videos for preschooler talk and type of educator talk (i.e., opportunity to respond [OTR], statement, other). We conducted two generalizability studies on sequential association estimates for two directions (e.g., preschooler talk following educator OTR and educator talk following preschooler talk). We had unstable estimates in our current methodological approach, with raters accounting for minimal error and occasions accounting for considerable error. Using the decision study results, we will share recommendations and implications for future investigations to estimate sequential associations within preschool language learning interactions.

Funding sources: NICHD T32 DC005359 (PI: Hartely), P50HD105353 (Waisman Center Core grant), IES #R324A170032 (PI: Johnson)

### **PS2F13**

#### **Between shifting and feedback processing in the Wisconsin Card Sorting Task in children with Developmental Language Disorder**

Kristina Giandomenico; MGH Institute of Health Professions

Lauren Baron; MGH Institute of Health Professions

Asiya Gul; MGH Institute of Health Professions

Yael Arbel; MGH Institute of Health Professions

While evidence suggests children with developmental language disorder (DLD) demonstrate deficits in executive functioning, the nature of these deficits is not well understood. This study sought to investigate behavioral and electrophysiological correlates of set-shifting and feedback processing among children with and without DLD using the Wisconsin Card Sorting Task (WCST). Behavioral measures of overall accuracy, shift trial performance, and responses to feedback were compared. ERP components examined included the P3a, P3b and the Feedback-Related Negativity (FRN). Findings suggest that poorer behavioral outcomes by children with DLD were accompanied by distinct trends in electrophysiological responses. An interaction between group and first negative and first positive feedback events suggests the cue to switch sets elicited a more robust P3b response for TD participants, while for participants with DLD, this was seen for the cue to stay with a current set rule. Patterns in the FRN response among

participants with DLD suggest that feedback leading to a response change was associated with a more typical feedback processing ERP.

This work was funded by an NIH NIDCD grant (R01DC018295) awarded to Yael Arbel.

## **PS2F14**

### **Minoritized autistic individuals are underrepresented in studies pertaining to language impairment: A systematic review**

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**Purpose:** Autism research systematically excludes racially and ethnically minoritized (REM) autistic individuals, limiting the evidence available to characterize and diagnose language impairment. This systematic review examines reporting for participant sociodemographics in studies pertaining to language impairment in autistic school-age individuals that used age-referenced assessments.

**Method:** This preregistered systematic review followed the PRISMA protocol. Database searches took place in August of 2021 and included Linguistics and Language Behavior Abstracts, PsycINFO, PubMed, and the Directory of Open Access Journals from 1980 to 2021. Search terms included three essential concepts: autism, language, and age. Two coders screened and evaluated articles, discussing disagreements until they reached consensus.

**Results:** Of qualifying studies (n = 60), 17 (28%) reported any information on race and ethnicity; in these studies, participants were at least 77% white. Thirty-one studies reported gender or sex (52%). Ten studies (17%) reported socioeconomic status using multiple indicators.

**Discussion:** Findings indicate insufficient adherence to reporting guidelines and systematic exclusion of REM. Limitations and future directions are offered.

This work was supported by an ASH Foundation New Investigators Research Grant, T32DC000052, T32DC017703, P50DC018006, R01DC001803 & R01MH112678.

## **PS2F15**

### **Spoken Language Outcomes of Children who have Unilateral Hearing Loss With and Without Hearing Aids**

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Janis Oram Cardy; School of Communication Sciences and Disorders, The University of Western Ontario

Marlene Bagatto; School of Communication Sciences and Disorders and National Centre for Audiology, The University of Western Ontario

**Rationale:** The impact of pediatric unilateral hearing loss on spoken language development is not well understood and has received limited attention. The current study aims to compare the spoken language abilities of children with UHL to normative samples and examine if there are differences between those fitted with hearing aids and those without. **Methods:** N=53 children with UHL aged 11-64 months were evaluated using the PLS-5. They were divided into two groups based on the provision of hearing aids (n=37 with hearing aids and n=16 without), and their scores were compared with normative data and between the two groups. **Results:** all

children combined, and the groups with and without HA separately had similar age WEPTA and overall language abilities. The groups did not differ in standard scores on either the Auditory Comprehension or Expressive Communication scales, and they had similar distributions of children who performed within age expectations, in the borderline range, and below average. Conclusions: This study reports preliminary evidence that children with UHL appear to achieve overall spoken language commensurate with normative samples regardless of amplification status.

## **PS2F16**

### **Effects of face masks on novel word learning in preschool-and kindergarten-age children**

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Tina Grieco-Calub; Rush University

Different types of face masks worn by talkers variably compromise the speech signal children use to learn language. Thus, there is debate about which type of mask will be support language learning in young children. Although clear masks provide more visual access to the talker's face than surgical masks, they distort the acoustics of the speech signal more than surgical masks. Our goal is to understand the effects of different face masks on word learning in preschool-age and kindergarten-age children. Thus, we are comparing children's novel word learning in conditions that simulate the ways that different mask types distort acoustic and visual speech cues.

Children's performance is quantified by the number of words learned and the phonological precision of words learned. We will compare children's word-learning across conditions and evaluate the influence of individual factors such as visual speech reading skills, verbal working memory, and vocabulary knowledge on children's performance in the various conditions. These results will inform strategies implemented to support word learning in young children in educational and childcare settings when masks are used. Funding provided by NIH-NICHD.

## **PS2F17**

### **Using Active Implementation to Enhance Comprehensive Assessment: Usability and Facilitative Administration**

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Speech-language pathologists (SLPs) are guided to complete comprehensive language assessments that include multiple types of assessments, yet SLPs primarily rely on norm-referenced tests. Successful implementation of comprehensive assessments requires careful consideration across several levels of the school district. The goal of this exploration study was to learn how comprehensive assessment could be better supported and more usable (Active Implementation; Fixsen et al., 2019). We completed four focus groups with 15 Lead SLPs and used Deductive Qualitative Analysis to identify potential modifications to the assessment methods and materials that could make them more usable (i.e., Usability). Major themes



included clear administration guidelines, efficient analysis practices, and straightforward interpretation. The data were further analyzed to determine how district administrators could support assessment practices (i.e., Facilitative Administration). Major themes included more time for assessment, recognition of the importance of different types of assessment data, improved access to materials and training, and increased consistency in assessment practices across the district. We will discuss how these data can inform subsequent implementation efforts. Funded by the US Department of Education & Wisconsin Department of Public Instruction.

### **PS2F18**

#### **Effects of Language Ability and Construction Type on Bilingual Children's Syntactic Productions**

Javier Jasso; University of Houston

Anny Castilla-Earls; University of Houston

Amanda Owens Van Horne; University of Houston

Children with DLD have difficulties with complex syntax not explained by utterance length, which has theoretical implications for the nature of this disorder. While much of this work has focused on monolingual English children with DLD, difficulties with complex syntax are seen across languages (Georgiou & Theodorou, 2022). Yet, the effects of language ability on syntactic development in bilingual language learning contexts are not well described. The current study used a cross-sectional experimental design with pre-registered hypotheses to examine the continuous effect of language ability on 39 five- to nine-year-old Spanish-English bilingual children's production of four syntactic constructions: conditionals, subject relative clauses, object relative clauses, and passives. Overall, model results showed a significant effect of language ability and construction type, with conditional items being significantly easier than the other tested constructions. This study offers evidence that well-documented TD-DLD differences in syntactic performance in monolingual children are also evident in bilingual children. This project was funded by a K23 grant from NIDCD awarded to Dr. Castilla-Earls.

### **PS2F19**

#### **Identifying Monolingual and Bilingual Children at Risk for Developmental Language Disorder: Evidence from a Response-speed Judgment Task**

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The study investigates whether adults' judgment of bilingual children's response speed can be used to identify culturally linguistically diverse (CLD) preschool children at risk for developmental language disorder (DLD). Young adult participants ( $n = 180$ ) were randomly assigned to the response speed interval and speaking rate groups. Stimuli were developed using 42 language samples of Spanish-English, Cantonese-English, and Mandarin-English bilingual children with and without DLD and monolingual Vietnamese-speaking children with and without DLD (mean age = 60.17;  $SD = 7.69$ ). Results showed that children with DLD were significantly slower than their age-matched typically-developing peers when responding to adults in interactive narrative contexts. Regression analysis showed that adults' judgments significantly identified the DLD-TD differences, and there were no differences between L1 and L2. In addition, adult judgments were significantly correlated with the actual DLD-TD difference (in seconds) in response speed across all groups ( $ps < .05$ ). The results suggest that a response-speed

judgment task, along with other screening tests, can be used to identify bilingual preschool children at-risk for DLD.

## **PS2F20**

### **The Role of Orthography and Phonology in the Development of Reading**

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Kristi Hendrickson; UNIVERSITY OF IOWA

There is a long-standing debate regarding the role of phonology in reading. Recent research with adults suggests that phonology is activated early and robustly during written word recognition. However, the extent to which children who are learning to read access phonology compared to orthography is still largely unknown. In the current study, we tested monolingual children aged 11-14-years (n=18) using a novel version of the visual world paradigm (VWP). Participants heard a word referring to one of four pictures while their eye-movements were tracked. We compared fixations to phonological anadromes (words matched for sounds but not letters [e.g., JAB-BADGE]) and orthographic anadromes (words matched for letters but not sounds [e.g., LEG-GEL]). Phonological anadromes showed significant activation; however, there were no significant differences between orthographic anadromes and unrelated items. These preliminary results have an implication for reading instruction for children by providing evidence that phonology is paramount for reading.

## **PS2F21**

### **“Nothing About Us Without Us”: Data validation of individuals guided by autistic community members**

John Kim; University of California, Berkeley

Karen Zyskind; University of Oregon

Marina Crain; University of Oregon

Lois Umali; Texas State University

Maria Resendiz; Texas State University

Farzan Irani; Texas State University

This study will analyze twenty-five comprehensive voices of individuals, families, and school teams (n=25) in the autism community. Through the process of inter-rater validation via investigator triangulation, field notes of interview transcripts will be circulated and analyzed. Reoccurring themes and elements will be established and stratified via thematic analysis. The aim of this validation will highlight the ableist approaches to language treatment practices and challenge our current trends of inquiry into language intervention. This process will also introduce the value of participatory action research as well as the emancipatory inquiry of DisCrit (Disability Studies and Critical Studies) to promote neurodiversity through the lens of the social model of disability.

## **PS2F22**

### **Are they building blocks? The Relationship between English Morphosyntax Structures in Bilingual School-age Children**

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Lisa Bedore; Temple University

Elizabeth Peña; University of California Irvine

Brown's stages of morphosyntactic development (1973) provided a framework to understand typical monolingual English morphosyntax development from age one to five. However, children continue to develop morphosyntactic skills during school-age to meet academic demands, and the age of acquisition for Spanish-English bilingual children was found to be different to monolingual English-speaking children. Thus, this study adopted a relatively larger dataset to model the morphosyntax development in school-age bilingual children. Participants were 827 Spanish-English bilingual children aged from six to twelve. Participants completed the morphosyntax cloze subtest of the Bilingual English–Spanish Assessment—Middle Extension. With reference to the percentage of accuracy and repeated measures ANOVA, the 11 morphosyntax structures were grouped into four stages of development, which generally follow Brown's stages. Structural equation modeling yielded an excellent fit model, which suggests early stages of morphosyntax structures were associated with the development of later and complex morphosyntax structures. This result provides evidence for the relationship between the development of various morphosyntax structures and assists clinicians in selecting appropriate intervention targets. Funding: R21HD053223, R01DC010366 (Peña)

### **PS2F23**

#### **Teacher-assigned report card grades and standardized test scores in young children: Do results align?**

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Daniel Ansari; University of Western Ontario  
Janis Cardy; University of Western Ontario  
Lisa Archibald; University of Western Ontario

Teacher-assigned report card marks and standardized measures of achievement are both supposed to be measures of achievement. However, there might be concerns that report cards are more subjective than standardized tests. Therefore, the purpose of this study was to examine the relationship between grades and standardized tests across the domains of language, reading, and mathematics. In addition, gender and school differences were examined. High correlations between the measures indicate a considerable overlap between grades and standardized scores, but the relationship did depend on the (i) domain: scores aligned better for math than language and literacy; (ii) gender: girls earned higher grades, whereas boys had higher standardized test scores; and (iii) school: discrepancies existed in grade 1 but not by grade 2. Understanding the degree of alignment between measures could bolster the use of teacher assessment as a reliable index of performance.

This study was funded (in part) by NSERC Discovery Grants awarded to each of Marc Joanisse, Daniel Ansari, Janis Cardy, and Lisa Archibald

### **PS2F25**

#### **Exploring a Novel Measure of Parent Certainty when Completing Vocabulary Checklists in Young Autistic Children**

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Alex Hanania; Michigan State University  
Jennifer Johnson; Michigan State University  
Ryan Bowles; Michigan State University  
Madeline Klotz; Michigan State University  
Courtney Venker; Michigan State University

Many young autistic children struggle to learn language and measuring early receptive language in this population poses a number of challenges. This study investigated the utility of parent certainty ratings of child vocabulary knowledge in autistic children. Twenty-one autistic children (ages 2-5 years) participated. Parents completed the MacArthur-Bates Communicative Development Inventory (MCDI) Words and Gestures form and a custom vocabulary checklist including 24 nouns from the MCDI. Within the custom form, parents indicated whether their child understood, understood and said, or neither understood nor said each noun, and reported their certainty on a five-point scale. Children completed a looking-while-listening (LWL) word comprehension task including a subset of words from the custom measure. We measured language skills and autistic traits via standardized assessments. Parent certainty was higher for words parents reported the children understood and said compared to understood only or neither understood nor said. Certainty ratings were positively associated with language scores. LWL analyses are ongoing. Parent certainty provides critical information on early vocabulary skills in autistic children. Funding: NIDCD grants R21 DC016102 (Venker) and R01 DC020165 (Venker)

### **PS2F26**

#### **Just Write! Evaluating the Impact of Spoken Language on Writing Ability in Spanish-English Bilingual Children**

Stephanie McMillen; Syracuse University

Danelly Urrutia; Syracuse University

Yhanelly Ruiz; Syracuse University

Cynthia Garcia; Syracuse University

Writing is key for long-term academic success; however, there is limited information on how spoken language knowledge supports writing ability in bilingual children. The purpose of this study is to investigate young children's narrative writing in Spanish and English. Children's spoken language was evaluated over two telehealth visits. After testing was complete, children wrote short stories in each language based on provided prompts. Results indicate that language exposure, age, Spanish vocabulary, and morphosyntactic knowledge in Spanish and English were related to linguistic complexity of written stories. Importantly, Spanish morphosyntactic knowledge emerged as the key variable related to writing ability in both Spanish and English. This points to the important role of the home language in supporting writing development across languages and has implications for clinical assessment and educational programming for bilingual children. Funding for this project was provided to the students who contributed to this project by the Syracuse Office of Undergraduate Research and Creative Excellence.

### **PS2F27**

#### **Parents' Perceptions of a Virtual Parent-Mediated Program**

Katarina Miletic; Western University

Lauren Denusik; Western University

Michelle Servais; Thames Valley Children's Centre, Western University

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Anne McDade; The Hanen Centre

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More Than Words® is delivered internationally by speech-language pathologists to teach parents strategies to support their child's social communication and play skills. The COVID-19 pandemic required The Hanen Centre to rapidly shift to a virtual version of this program without previous empirical research. Between 2020 and 2021, over 2000 families participated in virtual

More Than Words® through government-funded services for autistic children in Ontario. Our program evaluation explored parents' perceptions of the virtually delivered program, with a focus on how experience and outcomes differed depending on the child's social communication stage. Using stratified sampling, we selected 31 families and analyzed their Final Reflection and Evaluation form using a mixed-methods approach. Many parents reported their child's communication improved a lot, and all parents indicated they would recommend the program to other families. Through thematic analysis of ten open-ended questions, six themes were identified to capture parents' perspectives. These findings offer new insight into how experiences in the virtual More Than Words® program may differ depending on the child's social communication stage. This work was funded by Western University.

## **PS2F28**

### **Grammatical Morpheme Production and Complex Syntax Effects in Children with and without SLI**

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Children with specific language impairment (SLI) are known to have deficits in tense-marking grammatical morphology (Leonard, 2014). In a study of children with SLI, Weiler and Schuele (2012) found that regular past tense marking in dependent clause utterances was more vulnerable to omissions than regular past tense marking in utterances containing single or multiple independent clauses. In our study, we compared the regular third-person singular -s (3s), copula BE and auxiliary BE verb (aux/copula BE) omissions of 11 five-year-old children with SLI to the third-person singular -s (3s), copula BE and auxiliary BE verb (aux/copula BE) omissions of same-aged peers with typical language development. We explored whether these grammatical morphemes were more vulnerable to omission in dependent clause utterances than utterances containing only independent clauses. When considering children with SLI, clausal dependency makes regular third-person singular -s more vulnerable to omission. These complexity effects were not present in the grammatical morpheme omissions of children with typical language development.

This study was supported by a Preparation of Leadership Personnel grant from the US Department of Education (H325D140087).

## **PS2F29**

### **Quantifying Recruitment Efforts in Family-Centered Early Language Research**

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Translational early language clinical trials with families are critical to informing practice, but can present disproportionately high barriers to participant recruitment. One component of successful recruitment planning is accurate estimation of the outreach efforts and time required to attain an adequately powered study sample. In this project, we will use data from an ongoing clinical trial (NIH/NIDCD K23DC017763) with caregiver-child dyads to quantify recruitment, screening, and enrollment efforts based on the Consolidated Standards of Reporting Trials (CONSORT) participant flow diagram (Schulz et al., 2010). First, we will calculate the total number of caregivers contacted per dyad that completed study screening (1a) and enrollment (1b). We will also examine whether a \$5 screening completion incentive significantly impacted outreach

required for dyads to complete screening (2). Then, we will estimate the amount of researcher outreach time required per dyad that completed screening (3). Our findings will support investigators in planning proposals and funding requests for child language research.  
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### **PS2F30**

#### **Communication Initiations and Breakdowns in Infants with Elevated Likelihood for ASD**

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Infants initiate interactions to get their wants and needs met; but sometimes their communication is not effective and they are misunderstood by caregivers. When this happens, they must recognize the communication breakdown and make repairs. Neurotypically developing infants acquire these skills during the first two years, but little work has investigated communication breakdowns and repairs in infants with known social communication difficulties. Here we explored communication initiations, breakdowns, and repair strategies using naturalistic observations of 18-month-old infants with elevated likelihood (EL) or typical likelihood (TL) for ASD. EL infants, including those diagnosed with ASD, initiated with caregivers, experienced breakdowns, and made repairs at similar rates to TL infants. However, the types of behaviors differed. EL infants exhibited a relative strength in making behavior regulation bids. Additionally, EL-ASD infants used developmentally appropriate repair behaviors (i.e., addition, substitution) but a larger proportion of repairs that are less helpful to interlocutors (i.e., simplification). Identifying patterns in EL infants’ communication with caregivers and capitalizing on strengths could improve interventions focused on social communication. Funding sources include Autism Speaks and the National Institutes of Health.

### **PS2F31**

#### **Exploring Patterns in the Difficulty of Test Items for an Adolescent Social Communication Assessment**

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William Boone; Miami University

Jan Petru; Elmhurst University

This study evaluated patterns in the difficulty of test items for a new criterion-referenced assessment of adolescent social communication, the Transition Pragmatics Interview (TPI). Criterion-referenced assessment scores are often interpreted by reference to what children are typically able to do at a given age, aiding selection of intervention targets. Adolescent social communication lacks well documented developmental milestones. In the absence of milestones, we explored whether scores could be interpreted by reference to a developmental theory or by observing patterns in the progression of empirical item difficulty. Developmental levels based on an adapted Situational-Discourse-Semantics (SDS) model were evaluated as predictors of item difficulty, as were patterns based on which facet of social communication items were designed to assess. Rasch analyses facilitated the computation of item difficulty. SDS model developmental levels did not correspond to Rasch item difficulty. Rasch item difficulty varied depending on the facet of social communication ability that items were designed to assess. Patterns in the progression of item difficulty may help to indicate appropriate intervention targets. Supported by NIDCD award R15DC020521; content solely the responsibility of the authors.

## **PS2F32**

### **How children with and without Developmental Language Disorder infer word meaning from written and spoken texts**

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Rationale: Children with Developmental Language Disorder (DLD) are less successful than their peers with typical language development (TLD) at inferring word meaning from spoken language. The current project investigates how well children with DLD infer word meaning from written texts. Methods: 9- to 11-year-old children with DLD (n=18) and TLD (n=39) read paragraphs and listened to an examiner read paragraphs. They were tasked with inferring words that were removed from each paragraph. Results: Children in the DLD group were less accurate (M = 41.11%) than children in the TLD group (M = 65.47%). Children were similarly accurate when reading (M = 57.31%) and listening (M = 58.25%). The gap in performance between groups (DLD < TLD) was similar for both reading and listening contexts. Implications: Children with DLD were less successful than their peers with TLD at inferring the meanings of words from text. Critically, this difficulty was not due to their poor reading; inferring while listening was equally compromised. Interventions improving oral inferential comprehension may improve reading outcomes for children with DLD. Funding: NIH-NIDCD R01 DC011742.

## **PS2F33**

### **Effects of Home Literacy Activities and Classroom Quality on Children's Vocabulary: Secondary Analysis of 2014 FACES Dataset**

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Vocabulary skills provide the foundation for school readiness and promote cognitive, social, behavioral, and literacy development for young children. The purpose of this study was to examine associations between home literacy activities and classroom quality and children's vocabulary over an academic year in a sample of 1,923 preschool children enrolled in Head Start. We analyzed data from the Head Start Family and Child Experiences Survey (FACES 2014) and found that parents' reading three or more times to children at home in the past week was positively associated with children's expressive and receptive vocabulary. Measures of classroom quality were not associated with children's vocabulary. Findings suggest the importance of parents' providing more opportunities to have conversations at home by reading to children to support their vocabulary development.

## **PS2F34**

### **Do stimulant medications improve DLD symptoms?**

Sean Redmond; University of Utah

Andrea Ash; University of Utah

Yue Zhang; University of Utah

Four groups of children (ADHD, ADHD+DLD, DLD, TD) were administered a psycholinguistic battery twice to examine potential medication and practice effects across tasks (n=62). Children with ADHD and concomitant ADHD+DLD who had been prescribed stimulant medications were assessed on- and off-medication, with order counterbalanced across participants. Examiners were unaware of children's clinical status during assessments or when they were testing children who had received medication. Significant medication effects among ADHD cases exceeding standard errors of measurement (SEM) were observed on sentence recall and receptive vocabulary measures. Medication benefits were more robust for the ADHD than the ADHD+DLD group. Significant practice effects among non-ADHD cases were observed on narrative comprehension and reading measures, but these effects did not exceed SEM. Results suggest underlying deficits in inattention, hyperactivity, impulsivity, and/or executive functioning might contribute to suboptimal test-taking behaviors that can lead to diagnostic errors with sentence recall and receptive vocabulary measures. Funding source: NIDCD R01CD017153.

## **PS2F35**

### **Morphosyntactic features of child Pidgin in Hawai'i: First steps towards developing a linguistic profile to inform clinical decision making**

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Speakers of non-standardized language varieties including Pidgin (Hawai'i Creole) continue to be at-risk of misdiagnosis of developmental language disorder. The language development of child speakers of Pidgin has never been well described. In response, this study aims to provide a rich description of morphosyntax features used in child Pidgin. Results will serve in developing linguistic profiles for more accurate identification of child Pidgin speakers. The study draws upon a corpus of children's narrative retellings across Hawai'i. Self-identifying adult Pidgin-speakers rated audio-samples (grades K-3rd) on a Likert-type scale and the 16 most consistently Pidgin-rated (PR) and 16 most English-rated (ER) files were transcribed and analyzed. Mean number of Pidgin-tokens/utterance (Pidgin Density Measure) was higher among PR than ER children (Welch's  $t(30)=-5.71$ ,  $p<.001$ ). Listener-ratings were also strongly correlated to PDM ( $r(30)=-.85$ ,  $p<.001$ ), indicating the value of listener judgments in identifying Pidgin-speaking children. Findings from this small-scale study provide a rich description of morphosyntax in child Pidgin and have implications for reducing bias in language assessment for this historically underserved population.

Funding: American Speech-Language Hearing Association Multicultural Activities Award, Fiestas, 2013.

## **PS2F36**

### **A Characterization of Word-Level Differences in Young Autistic and Non-Autistic Children**



Stanley West; Louisiana State University  
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Christopher Cox; Louisiana State University

Recent work has reported differences in early vocabulary composition between young autistic and non-autistic children. This work has indicated that, although autistic children are learning from their environment, they may be processing their input differently and may be biased to learn different words. The current study examined whether young autistic children and non-autistic toddlers are biased to learn different words. The current study analyzed the expressive vocabularies of 200 autistic children (M<sub>age</sub>=48.14 months) and 2,647 non-autistic children (M<sub>age</sub>=20.73 months), matched on expressive vocabulary size. First, binomial analyses were used to indicate the likelihood of word production in the autistic group based on the probability in the non-autistic group within a certain vocabulary bin. We found 301 words that differed in production between groups. Next, effect size was computed for each word by looking at the probability of production across vocabulary size. Of the 301 words, 129 had a large effect size (>1 logit difference). These findings further quantify word-level learning differences between autistic and non-autistic children.

Funding source: LA Board of Regents RCS LEQSF(2020-23)-RD-A-05

### **PS2F37**

#### **Adolescents' Production of Past Tense Counterfactual Sentences: Elicitation Tasks and Response Modalities**

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Past tense counterfactual sentences (e.g., if you had watered the plant, it would not have died) have been receiving increasing attention in research. However, previous studies reported mixed findings regarding the production of PTCF sentences. One possible reason may be that previous studies used different elicitation tasks and response modalities. To align these mixed findings and better understand the developmental trajectory of PTCF sentences, the present study employed a 2 x 2 design incorporating two elicitation tasks (sentence priming and story retelling) and two response modalities (spoken vs. written) to examine if the production of PTCF sentences varies with tasks and modalities. The study included 27 English-speaking adolescents (mean age = 16.3). We found that adolescents' production of PTCF sentences varied systematically with elicitation tasks and response modalities, with higher accuracy in a sentence priming task than in a story-retelling task and in spoken production compared to written production. These findings indicate the importance of considering the effects of tasks and modalities when assessing children's production of specific types of complex sentences.

Doctoral research grant at Steinhardt, New York University

### **PS2F38**

#### **Attention-Getting Strategies Used by Deaf and Hearing Parents with their Autistic Children**

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Grace Koenig; Miami University

Episodes of joint attention have long been regarded as rich opportunities for language learning. Deaf parents have considerable advantages over hearing parents in their ability to regulate their

deaf children's visual attention; here we ask if this advantage extends to autism. We investigated how Deaf and hearing parents of autistic children ages 3-5 regulate their children's visual attention during a play-based protocol. We analyzed six dyads of Deaf and hearing parents interacting with their young autistic children (3 hearing and 3 Deaf dyads). A coding scheme was developed through qualitative exploration of the data; 25 types of attention-getting and attention-maintenance strategies were identified in the visual, auditory, and tactile modalities. Data are currently being coded with the goal of identifying differences between Deaf and hearing parents in their attempts to gain and maintain their autistic children's visual attention. This pilot study will then lay the groundwork for future studies in which the success of different kinds of attention-getting strategies can be measured and compared. Funding was provided by Miami University's College of Arts and Science Dean's Scholar Program.

### **PS2F39**

#### **Do Bilingual Books Actually Work? Parents' Language Choice During Shared Book Reading**

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Margarita Kaushanskaya; University of Wisconsin-Madison

Bilingual storybooks are designed to be read in two languages and might be a promising way to support the emerging language skills of bilingual children (Castro et al., 2011). However, limited research has investigated how bilingual parents and children actually use bilingual storybooks during shared book readings: Do they use both languages or read in a single language? Do parent and child language profiles predict language choice during book readings? The current project begins to address this gap in the literature by recording 44 Spanish-English bilingual parent-child dyads reading bilingual storybooks. Most parents ( $n = 35$ , 80%) read in a single language instead of in both languages. Pairwise comparisons between parents who used one vs. two languages during shared book reading revealed significant differences in socioeconomic status, language dominance, and language proficiency. The next step is to assess whether children's language use aligns with parents' language use at the utterance level, and whether certain book characteristics are more likely to elicit use of two languages. Together, this work will reveal how language characteristics affect bilingual families' shared reading practices.

Funding source: National Institutes of Health Grant R01DC016015

### **PS2F40**

#### **The development of spoken and written word recognition**

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Emily Phalen; University of Iowa

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Word recognition is a process by which words that partially match the target are activated in parallel and compete for recognition (e.g., when hearing a target, "candle", competitors like "candy" are considered). Previous work in spoken and written word recognition characterizes this process in adults and specifies what words compete and when (McClelland & Rumelhart, 1981). We investigate this process in children and adolescents. Two groups (7-year-olds:  $n = 23$ ; 12-year-olds:  $n = 26$ ) completed a Visual World Paradigm (VWP) task, replicating the experimental design of a recent study on adults by Hendrickson, et al. (2022). For spoken words,

both groups showed evidence for activation of competitors with matching initial phonemes (i.e., cohorts), affirming that children are sensitive to temporal order. In written word recognition, there was evidence for activation of anadromes (e.g., cat/tack) activation in the 12-year-old group but not the 7-year-old group, suggesting that the trajectory of reading skill development may contribute to less rigid reliance on spatial order. Overall, word recognition system appears to become more flexible throughout development. This study is funded by NIH DC008089.

## **PS2F41**

### **Quién lo dijo mejor (QLDM) “Who said it best”- Developing phonological awareness assessments for Spanish-speaking preschoolers in the U.S.**

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Yessy Medina; University of Oregon

Tony Daza; University of Oregon

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Lillian Durán; University of Oregon

Phonological Awareness (PA) is an important aspect of language development that predicts later literacy outcomes. The expected progression of PA for bilingual children is less researched demonstrating the need for appropriate measures to be developed for use for bilingual children under the age of 4. This study reports preliminary results from a new measure titled ¿Quién lo dijo mejor? (QLDM), which measures emergent PA for children between 36 and 54 months with varying levels of exposure to Spanish and English. Data collection is taking place in preschool classrooms across the U.S. with bilingual preschool children and bilingual data collectors. A descriptive statistics analysis will be run to determine the PA abilities of bilingual children, while Rasch modeling will be used to estimate item level statistics that would describe the ability range of participants. This study aims to develop appropriate measures that will yield a deeper understanding of the mechanisms underlying PA and their breakdown in children with language difficulties. This study is funded by the Institute of Educational Sciences.