

Poster Session #3 – Saturday, June 1 at 9:00 a.m. Community Terrace

PS3S01

Maternal oral reading expressiveness in relation to late-talking and typically-developing toddlers' concurrent language skills

Kelsey Davison; Boston University

Laura Doherty; Boston University

Brittany Manning; Northwestern

Lauren Wakschlag; Northwestern

Elizabeth Norton; Northwestern

Jennifer Zuk; Boston University

Caregiver-child shared reading is understood to provide a rich platform for language exposure in early childhood. Accordingly, shared reading is commonly targeted in early intervention to facilitate language skill development among children with language difficulties. Yet, it remains unknown whether caregivers' oral reading expressiveness may serve as a component of shared reading that relates to children's language skills. As a first step, this study examined whether acoustic measures of caregivers' oral reading expressiveness (mean fundamental frequency (fo), rate) during shared reading differed between mothers of late-talking versus typically-developing toddlers. Findings indicated no differences in oral reading expressiveness between groups. We then examined oral reading expressiveness in relation to toddlers' concurrent language skills across the whole group. Mean fo related to toddlers' receptive language skills while controlling for income-to-needs and maternal education. These findings suggest that oral reading expressiveness is associated with children's early emerging language skills. Future work is needed to determine how oral reading expressiveness relates to broader aspects of children's home language environments. This work was supported by NIDCD Grant R01DC016273, NIMH Grant R01MH107652, and The Dyslexia Foundation.

PS3S02

Measuring phonological structure of children's vocabularies using a lexical decision task

Ron Pomper; Boys Town National Research Hospital

Karla McGregor; Boys Town National Research Hospital

Mike Vitevitch; The University of Kansas

Rationale: Children with Developmental Language Disorder (DLD) differ from their peers with typical language development (TLD) in vocabulary size and structure. This project uses a lexical decision (LD) task to measure the phonological structure of children's vocabularies. Methods: 16 5- to 10-year-old children with TLD completed a LD task that was verbally administered over Zoom. Using only the words each child knew on the LD task, we calculated individual clustering coefficients, C, to measure levels of interconnectivity in their vocabularies. Results: The average structure of children's vocabularies was similar to adults' vocabularies (i.e., if all words in the LD task were known). Relative to older children, however, younger children's vocabularies had higher C values (more densely connected), especially for neighborhoods with low C values when all words are known. Implications: Prior research examined vocabulary structure using large corpora of spontaneous productions or parent-report checklists. We demonstrate that a lexical decision task is a low-tech, easy to implement alternative. Future work will include children with

DLD, a step that could ultimately enable earlier identification and more precise interventions.
Funding: 1F32DC020344

PS3S03

Children with Specific Language Impairment and the Imitation of Sentential Complement Sentences

Violet Tirado; California State University, Los Angeles

Ian Morton; California State University, Los Angeles

Christina Gallegos; California State University, Los Angeles

Preschool and early school-age children with specific language impairment (SLI) produce more grammatical errors within complex syntax utterances, such as sentential complement sentences (Marinellie, 2004). Diessel (2004) asserted that early-emerging sentential complement sentences (e.g., containing matrix clauses with fixed word-pairings like I think) precede true sentential complement sentences (e.g., containing matrix clauses that consist of varied subjects and verbs overtly marked for tense and agreement, like She remembered). Children with SLI may be delayed in producing true sentential complement sentences compared with same age typically developing (TD) peers.

Five-year-old children with and without SLI completed a sentence imitation task. We conducted two 2 x 2 ANOVAs with dependent variables of percent sentential complement sentence imitated and percent matrix clauses imitated. Language Impairment Status (language impaired, typical language) was the between-subjects factor and Matrix Clause Status (true matrix clause, formulaic matrix clause) was the within-subjects factor.

There was a significant language impairment status x matrix clause status interaction. Our results support the notion that true matrix clauses pose a significant challenge for preschool children with SLI.

No funding source to report.

PS3S04

How do SLPs diagnose DLD in schools?

Anne C. Reed; Florida State University/Florida Center for Reading Research

Kelly Farquharson; Florida State University/Florida Center for Reading Research

Karla K. McGregor; Boys Town National Research Hospital

Lizbeth H. Finestack; University of Minnesota Twin Cities

Speech-language pathologists (SLPs) in public schools are responsible for the data sources used to make eligibility decisions for students with developmental language disorder (DLD). States vary in their operational definitions of eligibility, which can cause confusion for education professionals, including SLPs, who must make these decisions as a part of the evaluation team. This study sought to determine what data sources are used in eligibility determination for DLD. Associated factors including consideration of home language, provision of response-to-intervention (RTI), and standardized testing requirements were also explored. Survey results from 665 school-based SLPs indicated an average of 6.32 data sources are considered with

standardized tests, record review, and teacher questionnaires used most and literacy assessment least. Implications for preservice training, school-based practice, and continuing education are discussed.

Funding was supported, in part, by a grant from FSU's Institute of Politics and through the Institute of Education Sciences, U.S. Department of Education Grant R305B200020 to the Florida Center for Reading Research at Florida State University. Opinions expressed are those of the authors and not the Institute or the U.S. Department of Education.

PS3S05

Divergent Vocabulary Development in Autistic Children: A Network Growth Analysis

Eileen Haebig; Louisiana State University

Stanley West; Louisiana State University

Christopher Cox; Louisiana State University

Autistic children are typically late to develop their expressive vocabulary, but little is known about their early word learning process. The current study compared three network growth models on their ability account for typical trajectories of expressive vocabulary acquisition in autistic and non-autistic children. Using vocabulary checklists from the Communicative Development Inventory (CDI), we estimated the words autistic and non-autistic children produce and the vocabulary size at which half of the children in each group is expected to produce each word. We then expressed the CDI words as a network, with edges (links between words) defined by the learning environment (estimated using word association and child-directed natural language corpora), and vocabularies as sub-networks with potential for growth. Both groups appear to preferentially acquire words that are connected to many other words in the learning environment. However, autistic children appear to have a particular preference for acquiring words that have many connections with words they already know. Thus, both groups leverage semantic structure in the learning environment for vocabulary development, but may have different learning biases.

Funding Source: LEQSF(2020-23)-RD-A-05

PS3S06

Exploring Nonword Repetition for Farsi and Farsi/English-Speaking Children Using a Quasi-Universal Task

Tahmineh Maleki; Louisiana State University

Janna Oetting; Louisiana State University

Nonword repetition (NWR) tasks are reliable clinical assessments used in various languages, but their effectiveness in assessing bilingual children is inconclusive. Chiat and Polišenská (2016) created the Cross-Linguistic NWR (CL-NWR) task to accommodate several languages. This study examines the clinical utility of CL-NWR with monolingual Farsi- and bilingual Farsi/English-speaking children, addressing whether CL-NWR scores differ between groups and if they correlate with age. Nine bilingual Farsi/English-speaking, and seven monolingual Farsi-speaking, aged four to seven years completed the CL-NWR task. The task was conducted on Zoom in an activity where children added a bead to a necklace upon repeating each nonword. Responses were recorded and scored using Chiat and Polišenská's (2016) system, evaluating consonant and vowel accuracy. Preliminary analyses suggest no difference in CL-NWR scores

between monolingual and bilingual children; the correlation between the children's age and CL-NWR scores approached significance ($r = .39$). The CL-NWR task holds promise as an unbiased clinical tool.

Funding: The first author is supported by a departmental teaching assistantship.

PS3S07

Learning Outcomes and Error Processing during Statistical Learning in Children With and Without Developmental Language Disorder

Kelsey Black; MGH-IHP

Aditi Parikh; MGH-IHP

Asiya Gul; MGH-IHP

Lauren Baron; MGH-IHP

Yael Arbel; MGH-IHP

Children with Developmental Language Disorder (DLD) demonstrate difficulties acquiring and processing syntactic and morphosyntactic rules. Learning these skills requires implicit learning; specifically, sensitivity to statistical regularities. Previous research has found that statistical learning plays an integral role in language acquisition, yet the learning mechanisms in DLD remain understudied and debated. The aim of the present research is to address this gap by evaluating learning outcomes, error patterns, and neurophysiological responses to errors in a visual artificial grammar learning task in children with and without DLD. Behavioral results show that children with DLD were sensitive to underlying patterns in the grammar but achieved a lower accuracy than children with TD. Planned ERP analysis will compare group differences of the P600 in response to nongrammatical strings. This work was funded by an NIH NIDCD grant (R01DC018295) awarded to Yael Arbel.

PS3S08

Feasibility of Varying Objects to Teach Toddlers Colors: A Single Subject Experimental Design Study

Katrina Nicholas; Nevada State University

Morgan Anderson; California State University, East Bay

Danielle Hu; University of Wisconsin - Madison

Chelsea Miller; California State University, East Bay

Rationale: Research on adjective learning is relatively limited. Informative contrast, in which children are presented with a target adjective alongside a contrasting non-target adjective, facilitates young children's learning of binary adjectives (e.g., opposites – big vs. small; Tribushina et al., 2013). Input variability, in which children are presented the same target adjective while the objects vary (Mintz & Gleitman, 2002), may be better for non-binary adjectives, such as color. Our study investigates the feasibility of applying input variability, a well-established intervention technique used for teaching other word classes (Alt et al., 2014; Nicholas et al., 2019, 2023, 2024), to teach colors to a two-year-old.

Methods: A 28-month-old boy participated in a single subject experimental design. Colors were taught using varying objects. Pre- and post-treatment probes were compared.

Results: Visual inspection and a Tau effect revealed expressive gains of target color words.

Conclusions: Preliminary results suggest input variability may be a viable teaching method for non-binary adjectives, such as colors.

Funding Sources: California State University, East Bay Research, Scholarly, and Creative Activities (RSCA) Grant and Center for Student Research Scholar's Program.

PS3S09

The role of chunked determiner phrases in syntactic bootstrapping

Huanhuan Shi; New York University

Sudha Arunachalam; New York University

Children can learn verb meanings from their linguistic context if the context is informative, but not too demanding for children to process. Previous research suggested that preschoolers struggle to learn verbs in informative contexts with modified determiner phrases (e.g., the tall boy is pillking) due to processing difficulties. This study assesses if chunking the informative elements beforehand reduces processing load and thus supports verb learning. Monolingual English-speaking children (N = 194) aged 30 to 41 months (mean = 33.2 months) participated in a verb-learning task. Novel verbs were introduced in contexts with modified determiner phrases, but presentation was preceded by one of two types of pre-exposure. In the Chunked condition, children first heard the determiner phrases (e.g., the tall boy) as a chunk before hearing the verb. In the Jumbled condition, they heard the words "the," "tall," and "boy" in different phrases but never as one chunk.

Children did not learn better in the Chunked than the Jumbled condition. This suggests that the process of chunking did not effectively reduce the processing load of modified determiner phrases in verb learning.

NIH R01 DC016592

PS3S10

A Multi-State Look into Early Intervention Speech-Language Pathologists' Confidence Identifying and Diagnosing Autism

Adelaide Parr; Northern Illinois University

Allison Gladfelter; Northern Illinois University

Although autism can be reliably diagnosed by 18 months of age, long wait times and limited access to qualified providers prevent families from obtaining diagnostic services. Trained speech-language pathologists (SLPs) are qualified to diagnose autism, ideally as part of a multidisciplinary team. SLPs working on early intervention (EI) teams are well-situated to help close this diagnostic wait time gap. The purpose of this survey study was to explore EI SLPs' confidence in identifying and diagnosing autism, experiences serving autistic children on their caseloads, and potential barriers/facilitators to increasing diagnostic confidence. 287 EI SLPs from 23 states responded to survey questions about experience, beliefs, and confidence in diagnosing autism. Results indicated that an overwhelming majority felt confident in their ability to identify autism in toddlers. However, reported confidence in ability to diagnose autism was much lower. Greater awareness of diagnosis as within our scope of practice, promoting autism acceptance (reducing caregiver resistance), and access to diagnostic tool training and diagnostic experts would reportedly increase confidence. Funding: NIU Enhance Your Education Grant and Center for the Interdisciplinary Study of Language and Literacy.

PS3S12

Caregiver Reports of Spanish-English Bilingual Children's Grammatical Productivity

Alicia Escobedo; SDSU/UCSD

Sonja Pruitt-Lord; SDSU

Caregiver reports are an integral part of language assessment and offer insight into language abilities in a variety of language domains. For bilingual children, caregiver reports allow for unique insight into children's home language. The current study aims to investigate how caregiver reports of children's grammatical productivity in the home language provides information on bilingual children's emerging skills. This study specifically investigates bilingual children's grammatical productivity, a measure of breadth and diverse use of grammatical structures. In the current study, we examine the productivity of articles and direct object clitics from the reports of caregivers and compare this measure with children's Spanish language samples. We will examine the relationship between children's reported grammatical productivity and language sample measures. Additionally, we will examine the cultural validity of this measure, in alignment with the Cultural Adaptation Process model. The results of this study will contribute to research on culturally-responsive measures for language assessment in diverse populations. This work was funded by an NIH F31 fellowship (1F31HD111303-01).

PS3S13

Kinematic analysis of preschool-aged children's sequential pattern learning during a manual serial reaction time task

Leah Sack; The University of Texas at Dallas

Hiranya Kumar; The University of Texas at Dallas

Sébastien Hélie; Purdue University

Janna Berlin; Boys Town National Research Hospital

Lisa Goffman; Boys Town National Research Hospital

Certain domain-general cognitive processes, such as sequential pattern learning, may underlie the myriad deficits exhibited by children with developmental language disorder (DLD). The Serial Reaction Time task (SRTT) is an approach used to assess sequence learning, but it is limited by its reliance on reaction time averages by block to index learning. In this methodological study, we drew on measures used to assess spatiotemporal stability in speech production (i.e., spatiotemporal index, STI) to a modified SRTT to capture more nuanced indices of manual sequence learning. Twenty typically developing (TD) preschoolers completed a simple SRTT comprised of a local deterministic pattern. Results showed increased motor stability in the second exposure to the patterned block compared with the first, evidencing motor learning. This study confirms the feasibility of using motion capture to assess sequential pattern learning during SRTTs among typically developing preschoolers and has potential to enhance our understanding of the possible mechanisms underlying DLD. Funded by NIH NIDCD R01 DC016813.

PS3S14

Developmental language disorder at adolescence: variability in communication skills, social skills, and perception of self-efficacy

Chantal Desmarais; Université Laval
Élody Ross-Lévesque; CIRRIIS
Marie-Catherine St-Pierre; Université Laval
Francine Julien-Gauthier; Université Laval

Profiles of individuals with developmental language disorder (DLD) vary greatly. Yet, this variability has not been examined in adolescents with DLD. Here, we determined if statistically different subgroups could be identified in 49 adolescents with DLD using scores on measures of language, social skills, and perception of self-efficacy. To that effect, a hierarchical cluster analysis was conducted using the results to the CCC-2, the Social Skills Rating System, and a self-efficacy scale. The analysis identified three clusters, or subgroups, with different combinations of characteristics. In cluster 1, the 20 participants presented with weak scores on all measures. In cluster 2, the 21 participants presented with low language scores and higher social skills and self-efficacy scores. In cluster 3, the 8 participants had the highest language scores but low social skills and more behavior problems. These distinct profiles point to different intervention priorities that may ultimately inform planning for services for these youth, especially in a response to intervention approach. This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.

PS3S15

The relationship between objective and subjective measures of student dialect use and teacher ratings of student language ability

Franchesca Arcy; University at Buffalo
Alison Hendricks; University at Buffalo

The accuracy of identification of developmental language disorders (DLD) among students that are culturally and linguistically diverse (CLD) is complicated by the linguistic bias present in language assessments and broader societal bias. Teachers play an important role in improving the referrals for language assessments because of the extensive time they spend with their students as well as the training in language development. Previous research has demonstrated the limitations of teacher reports of student language ability. The current study examines the relationship between teacher ratings of language and literacy and two measures of dialect use from an informal language sample. As part of a larger study, students in grades K-2 (n = 71) completed a set of standardized assessments and language samples. Objective and subjective measures of dialect were explored by computing two variables from an informal semi-structured conversation with a research assistant. Preliminary results suggest that both objective and subjective measures of student dialect use are significantly correlated, but these measures were not significantly correlated with teacher ratings of ability. The dialect use measures should be considered by researchers and clinicians.

PS3S16

Examining Potential Mediators of the Relationship between DLD and Executive Function Performance

Leah Kapa; University of Arizona

The relationship between developmental language disorder (DLD) and executive functioning is complicated by the fact that many other variables are related to executive function performance.

Previous research has reported positive relationships between executive functioning and receptive vocabulary, IQ, and socioeconomic status (SES). Comparisons of children with and without DLD have found group differences on these same variables. Therefore, reports that children with DLD have poorer executive functioning relative to typically developing peers may be due to the mediating effects of other related variables as opposed to a direct effect of DLD status on executive functioning. Parallel mediation analysis revealed that receptive vocabulary (PPVT-4) and non-verbal IQ (K-ABC-II) were significant mediators of the relationship between DLD and executive function performance (DCCS) when maternal education was included as a covariate. However, DLD status continued to have a significant direct effect of executive functioning when the mediators and covariate were included in the model. These findings highlight the inter-related nature of these variables and indicate that after accounting for mediating variables, DLD status remains a direct predictor of children's executive function performance. Funding: NIDCD F32DC014188

PS3S17

Narrative Macrostructure Across Bilingual Groups

Danyang Wang; University of California - Irvine
Alexander Choi-Tucci; University of California - Irvine
Joseph Hin Yan Lam; University of California - Irvine
Chin SHen Chan; Gallaudet University
Giang Pham; San Diego State University
Lisa Bedore; Temple University
Elizabeth Peña; University of California - Irvine

This study examined narrative macrostructure performance in 27 early school-age bilingual children divided into three groups of 9 by their first language: Spanish, Vietnamese, or Mandarin. Children were matched on age and language experience. All children completed tasks of story tell and retell in English and their home language. Results showed that children performed higher on English than the home language in total production and comprehension measures, but performed similarly on episode structure measures across languages. Across groups, children performed similarly on most macrostructural measures, except for three home language measures (tell production, tell comprehension, retell comprehension) and one English measure (retell comprehension). Lastly, children performed higher on story retell than story tell on English production measures, aligning with previous research showing better performance on story retells than tells. Results suggest that episode structure is an appropriate measure to assess bilinguals given that it is less affected by language (English vs. home language) and group (Spanish vs. Vietnamese vs. Mandarin bilinguals). Culture- and sample-related differences in narrative experiences and structures will be examined to explain across-group differences. Funding: R01DC018329 (Peña).

PS3S18

Social Drivers of Health Associate with Communicative Outcomes of Minoritized Autistic Adolescents and Young Adults

Teresa Girolamo; San Diego State University
Alicia Escobedo; San Diego State University
Tyler Hicks; University of Kansas

Purpose: Language and environment are important for outcomes in autism, but little is known about social drivers of health (SDOH). This study examines whether language and SDOH (sense of community, unmet service needs, barriers to services) associated with SRS-2 social communication impairment t-scores or VABS-3 communication domain scores.

Method: Minoritized autistic adolescents and adults (N = 62) completed a behavioral assessment protocol including language and NVIQ. Bivariate and partial correlations examined associations between communicative outcomes, language scores, and SDOH.

Results: SRS-2 social communication impairment t-scores significantly associated with sense of community, unmet needs, and barriers to services but not language or services received. These relationships were slightly greater when controlling for NVIQ and language. VABS-3 communication domain scores significantly associated with language, services received, unmet needs, and barriers. These SDOH relationships were slightly weaker when considering NVIQ, and some were non-significant when considering NVIQ and language.

Conclusions: Findings support the relevance of SDOH and language in communicative outcomes. Larger analyses are needed to understand how language intersects with SDOH to shape aspects of communicative experiences and trajectories.

Funding: ASHFoundation (Girolamo)

PS3S19

Exploring Maternal Language Use on Bilingual Children's Self-reports of Proficiency and Experiences

Janelle Flores; University of Houston
Anny Castilla-Earls; University of Houston

This study explored maternal language use and its role in bilingual children's self-reports of proficiency and bilingual experiences over time. Prior research indicates maternal language is associated with bilingual children's language outcomes. , However, few studies have investigated the role of maternal language on bilingual children's self-reports of proficiency and experiences. Maternal language use data were drawn from a parent questionnaire. The Houston-Questionnaire (Houston-Q) was used to obtain self-reported data on language proficiency and experiences at four-time points. Longitudinal data were utilized to conduct a multi-level modeling analysis for n = 111 Spanish-English bilingual children. Analyses revealed increased Spanish self-reports of proficiency over time and significant differences in self-reports of proficiency based on maternal language use. For English, significant differences were only observed between self-reports of proficiency and maternal language use. For bilingual experiences, significant findings for changes over time and differences based on maternal language use were found. Study results provide further evidence on maternal language use and changes in bilingual children's self-reported experiences and language proficiency over time. Project funded by NIDCD K23 grant awarded to Dr. Castilla-Earls.

PS3S20

Adults With Developmental Language Disorder Exhibit Competition Resolution Difficulties During Complex Sentence Processing

Stewart McCauley; University of Iowa

Zara Harmon; Max Planck Institute for Psycholinguistics

Si On Yoon; New York University

Philip Combiths; University of Iowa

J. Bruce Tomblin; University of Iowa

Kristi Hendrickson; University of Iowa

While recent decades have seen efforts to characterize the sentence-level language abilities of children and adolescents with developmental language disorder (DLD), sentence processing in adults with DLD has received limited attention. Here, we present findings on complex sentence processing in adults with and without DLD. Eye-gaze was recorded as part of a visual world paradigm experiment in which participants heard object-relative clause sentences. E.g., Last week, the reporter[NP1] [that the senator[NP2] attacked] admitted[main verb] the error. Importantly, successful comprehension requires resolution of interference between the head noun (NP1) and subject of the relative clause (NP2) to reactivate NP1 upon encountering the main verb. Adults with DLD exhibited comprehension difficulties as well as greater competition between NP1 and NP2 after hearing the main verb. Adults with DLD also exhibited an initial delay in fixation to NP2 which gradually corrected over the course of the experiment (a learning effect). We discuss the extent to which these patterns stem from relative inexperience with OR sentences versus general processing mechanisms tied to inhibition and competition resolution.

Supported by NIH grant R01DC020143 awarded to KH.

PS3S21

Phonological and Lexical Processing Skills on Oral Reading Ability

Adrian Bradley; University of Iowa

Kristi Hendrickson; University of Iowa

Emily Zrostlik; University of Iowa

Si On Yoon; New York University

Stewart McCauley; University of Iowa

J. Bruce Tomblin; University of Iowa

Philip Combiths; University of Iowa

There is overlap between the cognitive and linguistic mechanisms that support language development and those that support skilled reading. However, the nature and extent of this overlap remains to be fully understood. Further, a nuanced understanding of this relationship may be crucial in identifying shared or dissimilar etiologies in developmental language and reading impairments. In the current study, adults in their mid-30s, with and without a history of developmental language disorder (DLD), were recruited from the individuals who participated in the Iowa Longitudinal Study (e.g., Tomblin et al., 1997). Participants completed a comprehensive assessment battery targeting language and reading skills, including tests of real- and nonword oral-reading, nonword repetition, and picture naming. Analysis of the relationships between participants' raw scores on assessment tasks found nonword reading to be most strongly

correlated with oral-reading ability. These relationships and analysis of phonetic transcriptions of their productions in the same tasks are then related to underlying processes that may influence language and reading ability into adulthood for individuals with and without a history of DLD.

This research was supported by NIH grant NIDCD R01DC020143 awarded to KH.

PS3S22

The home literacy environment actively shapes reading outcomes throughout the school-age years: Evidence from a large longitudinal dataset

Melissa Hill; University of Iowa

Stewart McCauley; University of Iowa

While home literacy environment (HLE) is correlated with early literacy, long-term effects of on reading comprehension (RC) have not been widely examined. This study aims to explore the relationship between HLE and RC outcomes throughout grade school and to determine if HLE continues to exert active influence on later RC outcomes, separate from early reading outcomes. We draw from a rich longitudinal dataset on a variety of developmental measures collected from over 400 children throughout grade school. Regression model comparisons were used to examine the longitudinal relationship between HLE at kindergarten and RC outcomes at second grade, fourth grade, eighth grade, and tenth grade.

Model comparisons demonstrate that HLE not only accounts for unique variance (over and above a range of pre-literacy skills) in early RC abilities, but continues to account for unique variance through the 8th grade, even when RC abilities from previous grade levels are included as model predictors.

These findings underscore the influence of HLE on RC outcomes, suggesting that HLE continues to actively shape RC outcomes through adolescence.

PS3S23

Investigating the Real-Time Components Underlying Children's Passage Reading

Charlotte Jeppsen; University of Iowa

Jamie Klein-Packard; University of Iowa

Keith Apfelbaum; University of Iowa

Bob McMurray; University of Iowa

While fluency assessments predict reading outcomes in children, they do not specifically capture silent reading or isolate specific factors that may underlie efficient reading. In contrast, traditional eye-tracking indices during passage reading, such as first fixation duration (FFD) and regressions, (Rayner, 1997), precisely characterize underlying processes supporting efficient silent reading. These indices change with age, yet the components contributing to their variance remain unspecified in children. We investigated the contribution of age, lexical access, language, and reading outcomes to changes in eye movements during passage reading in 156 children in Grades 2-4. Eye-movements were collected while participants silently read passages, and lexical access captured using the Visual World Paradigm. Commonality analyses revealed unique variance of decoding ability, age, and lexical access on many eye-tracking indices. A Principal Component Analysis of the eye-tracking indices generated two components specified by the Simple View of Reading (Hoover & Gough, 1990). Thus, efficient lexical access, language

ability and age are some components that underlie efficient passage reading in developing readers. This work was supported by the National Institutes of Health Grant DC 0008089.

PS3S24

Noisier Speech Categorization in Children with Language and Reading Disabilities

Hyoju Kim; University of Iowa
Jamie Klein-Packard; University of Iowa
Eldon Sorensen; University of Iowa
Jacob Oleson; University of Iowa
J. Bruce Tomblin; University of Iowa
Bob McMurray; University of Iowa

Both Developmental Language Disorder (DLD) and dyslexia have been proposed to derive in part from low-level speech perception deficits which may affect downstream language/reading processes. However, DLD and dyslexia are highly comorbid, raising questions of whether speech perception deficits in one group are driven by the other. Moreover, methodological limits of the traditional forced-choice categorizations create uncertainty as to the nature of the deficit. We examined speech categorization in 3rd-grade children with language (LD) and reading disabilities (RD), using a visual analog scaling (VAS) task that overcomes these limits. In the VAS task, participants hear tokens from a speech continuum (e.g., beach-peach) and indicate the degree of correspondence between the stimulus and each word by selecting a point on a continuous rating scale. Results revealed noisier categorization in LD and RD than typically developing peers, suggesting deficits in lower-level cue encoding and mapping input onto categories in LD and RD. These findings underscore the need for a new approach to understanding speech categorization in this population.

This work was supported by the National Institutes of Health Grant DC 0008089.

PS3S25

More and Less Social Listening Comprehension: A Pilot Study

Meghan Davidson; University of Kansas
Randi Hutto; University of Kansas
Kandace Fleming; University of Kansas

In this study, we examined typically developing (TD) children's (n = 27, 4-11 years) listening comprehension of stories containing more and less social information to determine if TD children bootstrap their story understanding to social world understanding. Parents completed questionnaires about their child social communication and language abilities. Children completed a listening comprehension task, where they listened to more and less social stories and answered literal, physical inferential, and socioemotional inferential comprehension questions. Using a generalized mixed-effects model, we found that more social compared to less social stories had higher comprehension. Literal comprehension was better than inferential comprehension, and physical was better than socioemotional inferential comprehension. Older children had higher comprehension, especially for inferential questions, and children with higher social communication had higher comprehension. This pilot study supports previous conjectures that TD children bootstrap their story understanding to their social world understanding and

paves the way for future studies larger samples of TD children and autistic children for whom social information in stories may be particularly difficult. A New Investigator Research Grant from the University of Kansas funded this study.

PS3S26

Differences in word learning from predictable versus unpredictable input in autistic and non-autistic children

Janine Mathee-Scott; University of Wisconsin-Madison

Jenny Saffran; University of Wisconsin-Madison

Susan Ellis Weismer; University of Wisconsin-Madison

The predictive impairment in autism hypothesis has shown promise for explaining some phenotypic characteristics of autism spectrum disorder (ASD). The utility of this theoretical framework for explaining difficulty with language learning, however, remains largely unclear. Given that children learn words in their natural, often unpredictable environments, difficulty tracking unpredictable stimuli might have profound impacts on word learning. The current study examined how difficulties aggregating unpredictable input might impact novel word learning in ASD. Thirty autistic and 31 non-autistic, cognitive-ability-matched children participated in an eyegaze word learning task. Four novel words were taught, two with the same adjective at every exposure (predictable condition) and two with variable adjectives (unpredictable condition). Findings suggest that both groups were able to learn novel words taught in both predictable and unpredictable sentence contexts. However, groups differed significantly in their ability to predict upcoming novel words based on predictable adjectives. Autistic children looked significantly more to target during the anticipation window in the predictable condition, whereas the NT group did not show a significant difference in anticipation between the two conditions. Funding: NIDCD R01DC017974; NIDCD F31DC020902.

PS3S27

A Cultural Adaptation Process of the Eliciting Language Sample Analysis (ELSA)

Protocol: Bilingual administration with Latinx autistic children

Nancy Garcia; University of Massachusetts Amherst

Ada López González; University of Massachusetts Amherst

Iris Sosa; ABC Familias community advisory board

Megan Gross; University of Massachusetts Amherst

The current project adapts the Eliciting Language Samples for Analysis (ELSA, Barokova et al., 2021) protocol to measure bilingual communication in Latinx autistic preschoolers. In the first phase of the Cultural Adaptation Process model (Domenech Rodriguez et al., 2011), the research team met with a community advisory board consisting of local parents, speech language pathologists (SLP), community leaders, and autistic adults, to gather their perspectives and feedback on modifications. In the second iterative piloting phase, bilingual SLPs and parents provided additional feedback following trial administrations of the protocol with Latinx preschoolers. The Framework for Reporting Adaptations and Modifications-Enhanced (FRAME, Wiltsey Stirman et al., 2019) was used to document adaptations to the administration, language, and content of activities during both phases. By documenting the adaptation process, we hope

that other researchers may be able to make use of this Spanish/English bilingual adaptation of the ELSA or follow a similar process for their own linguistic and cultural context.
[Funding: NIH K23DC020224, Dean's Fellowship, departmental PhD support]

PS3S28

Exploring the Social Validity of a Parent-Implemented Early Intervention for Children with Language Delays in Puerto Rico

Ada López González; University of Massachusetts-Amherst

Nitza Rodríguez; Albizu University-San Juan

Megan Gross; University of Massachusetts-Amherst

Parent-implemented interventions have been studied primarily with the Non-Hispanic White population, creating a critical gap in addressing Latine children with language delays. Our goal was to gather information from stakeholders in Puerto Rico to better understand the cultural and linguistic context to later adapt a parent-implemented early intervention. A mixed methods approach was used, including a focus group with speech-language pathologists, and a survey for caregivers with young children. Additionally, a small subset of caregivers participated in follow-up interviews, observations, and a language assessment. SLPs participating in the focus group emphasized family as one of the most important components in early intervention. Preliminary survey data from caregivers of children with language delays reflected a high level of interest in parent coaching but limited experience with this practice. These results underscore the importance of increasing interventions for this population. Tailoring these interventions to their cultural and linguistic context by considering the strategies that are most relevant is crucial to obtaining the best results possible when implementing the intervention. [Funding: UMass-Amherst SPHHS Dean's Ph.D. Fellowship, Graduate School Pre-Dissertation Grant & NIH K23DC020224]

PS3S29

Acoustic characteristics of third-person singular -s in interventionist models during grammatical language intervention

Elizabeth Ancel; University of Minnesota

Benjamin Munson; University of Minnesota

Lizbeth Finestack; University of Minnesota

Speech-language pathologists (SLPs), like other adults, adapt their speech to meet specific conversational needs, such as when directing their speech toward children. Because of their clinical role and motivation, SLPs may make nuanced adjustments to their speech while addressing children in clinical settings to highlight a specific sound or grammatical element. To better understand this variability, in this study, we analyzed the speech of three SLPs as they administered a sentence imitation task during a therapy session targeting the third-person singular -s (e.g., "the boy kicks" or "the cat looks"). The results indicate the extent to which each examiner varied the duration, pitch, and intensity characteristics of the target verb and the third-person singular -s sound. The variability between the three SLPs and the variability of each individual SLP speaking to different children has important implications for understanding how SLPs may be leveraging their speech production to drive child outcomes in intervention settings. This research is funded by NIH grant R01 DC019374 awarded to LF.

PS3S30

Explicit-added Language Treatment for Bilingual Children with DLD: A Single-Case Design Study

Miriam Kornelis; University of Minnesota Twin Cities

Lizbeth Finestack; University of Minnesota Twin Cities

Kerry Ebert; University of Minnesota Twin Cities

Despite the need for evidence-based treatment approaches for bilingual children, few studies have considered grammatical language treatments for this population. This study examined the effectiveness of a grammatical intervention program for Spanish-English bilingual children with Developmental Language Disorder (DLD) that is designed to be feasible for monolingual providers to deliver. Three 4–8-year-old Spanish-English speaking children with DLD participated in this single-subject nonconcurrent multiple-baseline design study. An explicit-based grammatical intervention, targeting past tense -ed and present tense -s, was adapted to include cross-linguistic connections between Spanish and English, which were pre-recorded to ensure the feasibility of this approach for monolingual providers. Tau-U effect sizes indicated medium effects on both grammatical targets, although visual evidence of a treatment effect is limited. This is the first investigation of an explicit-based language treatment with Spanish-English bilingual children with DLD and provides initial evidence for the effectiveness of this approach. Future investigations will examine whether there is evidence of carryover effects from English to Spanish. Adaptations of this approach should consider the impact of target verb difficulty on the acquisition of the targeted grammatical forms.

PS3S31 (MOVED to Poster Session 2, PS2F15)

Racial Identity Perception, Social Affiliation, and Sentence Repetition in Children

HaeJi Lee; University of Minnesota, Twin Cities

Elizabeth Ancel; University of Minnesota, Twin Cities

Benjamin Munson; University of Minnesota, Twin Cities

Speech-language pathologists (SLPs) often use sentence repetition (SR) tasks to screen for childhood communication problems like developmental language disorders (DLD). SLPs produce sentences and ask a child to repeat them verbatim. This task taps into children's ability to hear, understand, process, and recall the information accurately. However, the influence of sociolinguistic factors on SR performances in children are unexplored. This study examined two sociolinguistic factors on SR: the racial identity of the person producing the sentences and the children's perception of social affiliation with the person being repeated. Social affiliation was assessed by asking children a series of questions about their perceived social proximity to the talkers. Three- to eight-year-old children (n=135) participated in a SR task in audio-only and audiovisual modalities. Three talkers with different racial identities produced the stimuli. Data were collected in a county fair in rural Northern Minnesota and the Minnesota State Fair in the Twin Cities. Data analyses are ongoing. Preliminary analyses show expected developmental trends, and large differences in accuracy across the three talkers. This research is funded by an internal funding source.

PS3S32

Language-related brain function in developmental language disorder: A preliminary study

Caroline Larson; University of Missouri

Hannah R. Thomas; of Connecticut

Jason Crutcher; University of Connecticut

Michael C. Stevens; Yale University School of Medicine

Rationale. Although behavioral language deficits are well characterized and there is longstanding evidence of a neural basis of developmental language disorder (DLD), neural mechanisms underlying language processing are insufficiently characterized. This preliminary study examined language-related neural function in DLD relative to neurotypical peers (NT).

Methods. Participants were individuals with DLD (n = 5) and age-matched NT peers (n = 12; mean age = 17 years). We administered a validated language task during functional magnetic resonance imaging to elicit language-related neural activation, and we administered standardized language and cognitive assessments.

Results. At a medium effect size for the DLD versus NT group contrast, the DLD group presented with hypo-activation in left and right hemisphere Broca's complex and posterior temporal regions, and hyper-activation in left and right hemisphere anterior temporal regions.

Conclusions. This preliminary study demonstrates mixed patterns of activation in left hemisphere language-related neural regions and right hemisphere homologue regions in DLD relative to NT peers. These findings suggest the possibility of widespread differences in brain organization for language in DLD.

IBACS Seed Grant; ASHF New Investigators Research Grant; NIMH R01MH112687-01A1

PS3S33

A longitudinal study of nonword repetition in bilingual typically-developing children and children with Developmental Language Disorder

Melissa Kluglein; University of Rhode Island

Alisa Baron; University of Rhode Island

Vanessa Harwood; University of Rhode Island

Connie Summers; Brigham Young University

Lisa Bedore; Temple University

Elizabeth Peña; University of California, Irvine

Purpose: To investigate nonword repetition (NWR) performance longitudinally in Spanish-English bilingual children with and without Developmental Language Disorder (DLD).

Method: Two hundred and thirty typically-developing (TD) children and 41 children with DLD were followed longitudinally for 2-4 years between kindergarten and fifth grade.

Results: When comparing rates of change between TD and DLD groups (slopes), there was not a statistically-significant difference in either language. Both groups showed improvement in NWR performance over time in English and Spanish. Linear mixed effects models will include ability status, age, age of first exposure to English, percent of current language use, semantics, and morphosyntax.

Implications: A better understanding of how NWR performance changes over time across TD and DLD groups will support future diagnostic accuracy of NWR tasks in bilingual children.

Funding sources: R01 DC007439 & R01 DC010366

PS3S34

Significant differences for MLU calculated using CLAN, SALT, and SUGAR conventions in children with typical language and DLD

Amy Wilder; University of Utah

Sean Redmond; University of Utah

Mean length of utterance (MLU) is the most commonly used language sample measure. However, there is no consensus on how MLU should be calculated for clinical purposes. This study examined different MLU measures from 50-utterance play-based conversational language samples collected on a community-based sample of K-1st grade children (n = 111) with typical language (TL) and developmental language disorder (DLD). MLU was calculated using Computerized Language Analysis (CLAN), Systematic Analysis of Language Transcripts (SALT), and Sampling Utterances and Grammatical Analysis Revised (SUGAR). Results showed statistically significant differences for the three MLU conventions [$F(2,96)=96.88$, $p<.001$], with absolute differences ranging from (0-3.68), suggesting MLU values calculated using CLAN, SALT, or SUGAR conventions were not interchangeable. ROC curve analysis indicated diagnostic accuracy increased with age for all three MLU measures. The analyses showed similar diagnostic accuracy across the three MLU conventions for ages 5-6, and higher diagnostic accuracy with 7-year-olds for MLUCLAN and MLUSUGAR compared to MLUSALT, suggesting including derivational morphemes and keeping independent conjoined clauses together may increase MLU diagnostic accuracy in older children. Funding source: NIDCD R01DC011023.

PS3S35

Differential Performance of School-Age Children on Oral Comprehension and Retell across Fictional, Nonfictional Narratives and Expository Passages

Jissel Anaya; University of Virginia

Nahar Albudoor; Ohio State University

Kerry Shea; University of Virginia

Khara Turnbull; University of Virginia

Emily Solari; University of Virginia

This study investigated children's oral language comprehension and retell performance across three genres of texts: fictional narratives, nonfictional narratives, and expository texts. The research questions examined how age and task type (retell versus comprehension questions) interacted with genre to influence students' comprehension scores.

The participants were 3,181 students aged 5-10 years old. Students completed an oral language assessment with fictional, nonfictional, and expository passages matched for difficulty level. After each passage, students completed a retell task followed by a set of 8 comprehension questions.

Generalized mixed-effects models examined the effects of age, genre, and task type on test scores. There was a significant three-way interaction, whereby the relation between task type and genre varied by age. For expository texts, students performed similarly on comprehension

questions and retells across ages. But for fictional and nonfictional narratives, younger students scored higher on comprehension than retells, while older students had similar scores.

The findings indicate developmental differences in how genre and task demands relate to oral comprehension abilities.

Funding provided by Virginia Department of Education

PS3S36

The efficacy of social skills interventions within a community clinic: Considering the child's perspective

Theresa Pham; University of Western Ontario; Boomerang Health

Boomerang Health Group; Boomerang Health

Lisa Archibald; University of Western Ontario

Social skills play a pivotal role in children's lives. However, social differences in some neurodiverse individuals as well as neurotypicals may make everyday social interactions and communication difficult. Social skills interventions have historically been developed to support neurodiverse children in understanding social differences. However, neuro-affirming practices highlight a pressing need to rethink how social skills interventions are evaluated and designed. In partnership with a local clinic, we will conduct a program evaluation to examine the efficacy of two social skills interventions—Conversation Club and Social Skills and Self-Regulation. The groups are offered to both neurodiverse and neurotypical children in grades 4-8. The research is in progress. Outcomes will be measured from both the perspective of the child and parent. Changes will be captured in terms of whether the programs met the child's initial goals and expectations in addition to learning the specific social skills knowledge taught. Further, the child's input and feedback will be invaluable in designing future social skills interventions. Funded by SSHRC Explore Grant.

PS3S37

Expressive and Receptive Grammaticality in Boys with Fragile X Syndrome

Tiffany Chavers Edgar; University of Wisconsin-Madison

Bailey Finch; University of Wisconsin-Madison

Marianne Elmquist; University of Wisconsin-Madison

Audra Sterling; University of Wisconsin-Madison

Males with fragile X syndrome have variable language and behavioral phenotypes. Due to the heterogeneity of the population, there are no clear recommendations for the most accurate language assessment tools for clinicians. Therefore, the purpose of this study was to determine the relationship between expressive and receptive grammaticality through administration Test of Early Grammatical Impairment (TEGI) in boys with FXS, and characterize unscorable responses provided by boys with FXS during the administration of the TEGI. Forty-two boys with FXS between the ages of 9 and 18 years were administered the TEGI. A repeated measures correlation will be utilized to determine the relationship between expressive and receptive grammaticality. It is expected that there will be a moderate relationship between expressive and receptive grammaticality. Preliminary findings indicate that participants primarily produced unscorable

responses characterized as other verb tenses. Outcomes from this study suggest that assessment context can influence language performance in boys with FXS.

Tiffany Chavers-Edgar: T32 HD007489

Audra Sterling: K23 DC016639, R03 DC011616

PS3S38

Measuring representative language in autistic boys and boys with fragile X syndrome+ autism: A generalizability study.

Marianne Elmquist; University of Wisconsin - Madison

Andrea Ford; University of Cincinnati

Amy Banasik; University of Wisconsin - Madison

Audra Sterling; University of Wisconsin - Madison

Most autistic individuals and individuals with a co-diagnosis of autism and fragile X syndrome (FXS+autism) have communication impairments and benefit from language interventions. To maximize intervention outcomes, we must have representative measures of the communicative behavior of interest. However, there is a lack of outcome measures for these two clinical groups that are representative of an individual's communicative ability. We conducted a generalizability and decision study on 19 boys with FXS+autism and 18 autistic boys. We measured four variables – lexical diversity, grammatical diversity, talkativeness, and intelligibility - across three language sampling contexts. Implications related to improving language samples to evaluate the efficacy of language intervention will be discussed.

Funding: NIDCD R03 DC011616 (Sterling), NICHD U54 HD090256 (Chang)

PS3S39

Are parents of school-age SLI children valid reporters of their children's grammatical skills?

Megan Dillon; Vanderbilt University

Jane Eppstein; Vanderbilt University

Johanna Hearn; Vanderbilt University

C. Melanie Schuele; Vanderbilt University

Researchers and clinicians use parent-report scales to gather data about children's language. Children's Communication Checklist (CCC-2; Bishop, 2006) is a parent-report instrument for school-age children with 70 items with 10 Scales. The CCC-2 manual provides very limited data to support that CCC-2 parent ratings align with child skills. This study involved secondary analysis of CCC-2 and language sample data collected for an assessment study of children with specific language impairment (SLI; Schneck, 2016) Mothers completed the CCC-2. A researcher (SLP) listened to language samples and completed items which could be scored from language sample data. Scaled scores for the Speech Scale and Syntax Scale were derived for each child by rater. We correlated the scaled scores by Scale across the parent and SLP raters. Parent ratings on Speech strongly correlated ($p < .05$; $r = .89$) with SLP ratings, whereas parent ratings on Syntax did not correlate with SLP ratings. Parents overestimated their children's grammatical skills. Results suggest that parent report of speech behaviors may be valid, whereas the same may not be true for syntax (H325D220072).

PS3S40

Beyond Vocabulary: Defining the Unique Characteristics of Children who are Late-to-Talk and their Families

Meaghan Lewcock; Western University

BJ Cunningham; Western University

Purpose: Differentiating between late talkers who will catch up from those who will exhibit enduring language difficulties is an ongoing challenge for researchers and clinicians alike. This study assesses the language skills of late talkers in greater detail and examines the psychosocial characteristics of this population to contribute to a more precise description of these children.

Method: Thirty-three late talkers and their parents participated in a virtual study using online surveys, formal and informal assessment measures administered by SLPs. Correlational and cluster analyses were employed to determine the relationships between psychosocial factors and late talkers' language skills and to identify possible subgroups. **Results:** We anticipate that children's performance will be divided into a minimum of two subgroups: one subgroup of children expected to recover, and one subgroup of children expected to exhibit enduring language difficulties based on weaker performance across language measures. **Conclusions:** Characterizing the early language and psychosocial profiles of late talkers will assist with clinical decision making and further investigation of this population.

This study is funded by the Western Strategic Support for SSHRC Success Seed Grant.