Title: Advances in Measuring the Community Language Environment Children with Autism Spectrum Disorder Experience

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Introduction: The community settings families visit can encompass a myriad of routines and contextual features that can be capitalized on by parents to foster child development. For young children with autism spectrum disorder (ASD), enhanced language environments within community settings (e.g., grocery store) have the potential to positively affect developmental difficulties (Warren, & Yoder, 2004). However, it unknown how much caregivers are naturally talking with their children across differing community contexts and whether this differs when their child has ASD. Research is needed to uncover specific components (i.e., settings, amount of language, parent & child characteristics) that can best be targeted to inform family-centered intervention approaches (i.e., those that focus on expertise that is embedded into families’ activities as well as routines and strategies that support families’ priorities) (Boyd et al., 2010). Therefore, we used the Language ENvironment Analysis (LENA) and Qstarz GPS to better understand the adult language (i.e., words from adults and adult-child conversational turns) that children with ASD versus those with typical development experience in the community.

Method: In this pilot investigation, we used a concurrent observational design to determine social communication exchanges across different community settings. We included 10 families of young children (3-8 yrs old) with (n=5) and without ASD (n=5). The LENA consists of a digital language processor capturing adult and child talk and interactions, and the Qstarz BT-Q1000XT provides real-time location estimates. The LENA speech estimates and GPS location estimates were synchronized using MATLAB. Employing a QGIS vector analysis tool (Points in Polygon), we associated the data points with the identified clusters of language activity. Aggregating the data into grouped locations allowed us to analyze the specific language environments of each activity location. Descriptive statistics have and will be used to analyze adult-child talk within community settings.

Results: To date, we have collected the data for all children and examined one participating child with ASD data. This child experienced most adult-directed language at a grandparent’s home and the least amount of language at a restaurant. The highest number of conversation turns occurred at the grocery store. The remaining children’s data (n=9) will be analyzed and presented prior to this conference.

Discussion: If we can understand the language environments across differing community settings, we can better inform interventions that are meaningful to caregivers of children with ASD and, in turn, increase their participation in community settings. Our results will inform existing intervention approaches to promote children’s participation in the community. This outcome will support practitioners in implementing flexible, individualized, and tailored intervention approaches that support parent competence and use family interests and routines.

References/Citations: