**TITLE: Predictors of Early Responders to Initial Intervention among Minimally Verbal Autistic Children**

Authors: Wendy Shih, Stephanie Shire, Ya-Chih Chang, Jonathan Panganiban, AIMASD Team and Connie Kasari

**Introduction**: Minimally verbal (MV) autistic children continue to be an understudied population. These children’s social communication skills can be complex and variable and there is a need for more tailored interventions for this population. Intervention studies have examined predictors of intervention outcomes, but few studies explore predictors for MV autistic children who responded well to initial interventions.

**Objectives:** This study explored whether independently assessed children’s early social communication skills at early response to exit predict children’s language at the end of study among MV autistic children who were early responders to initial intervention strategies.

**Method:** 97 MV autistic children (M=71.78 months old, SD=15.62; nonverbal mental age of 42.58 months), average of 9.42 distinct words and 15.9 socially communicative utterances enrolled in this study across 4 sites. Children were primarily male (75.3%), from diverse ethnic/racial backgrounds (47% non-Caucasian) with average ADOS severity scores of 7.29 (moderate).

This is a secondary data analysis based on an original Sequential Multiple-Assignment, Randomized Trial (n=194). For this study, only data from the children (n=97) who were considered *early responders* to initial intervention (based on Clinical Global Impression Scale-Improvement at Week 6-Early Response) were included. All assessments were collected at the major time-points (baseline, early response, and exit)

The Naturalistic Language Sample (NLS) is a 21-minute standardized, video-recorded, naturalistic adult-child interaction. Changes from early response to exit in total spontaneous socially communicative utterances (SCU) and the number of distinct word root (NDWR) are the primary outcomes.

The Early Social-Communication Scales were administered by blind assessors to assess children's social communication skills. The type and frequency of spontaneous initiations of joint attention skills (IJA) and behavioral requests (IBR) were coded as well as responding to joint attention (RJA).

Regression analyses were used to determine the association between changes in child behaviors from early response to exit with child’s language (SCU and NDWR) collected at early response and exit while controlling for site differences, child’s age and gender.

**Results:** 90.7% of these children were considered as at least marked, severe, or extreme in their CGI-Severity in terms of their social communication skills at baseline with only 15.9 SCU and 9.42 NDWR. By early response, only 54.6% of them remained at marked or severe. From early response to exit, these early responders to initial intervention children made significant improvements in their NDWR (p=0.011) by an average of 2.58 novel words. By exit, these children have an average of 22.94 SCU and 15.11 NDWR.

Increases in children’s social communication (IJA, IBR and RJA) from early responses to exit were associated with significantly more SCU at exit (p’s<0.05) and more improvements in SCU from early response to exit (p=0.001). Similarly, increases in children’s IJA and play diversity from early response to exit were associated with significantly more NDWR at exit (p’s<0.05) and more improvements in NDWR from early response to exit (p=0.02).

**Discussion:** The study highlights the importance of early social communication skills and play in predicting language outcomes for MV autistic children, who are responding to intervention. Notably, improvement in IJA and play diversity were significantly associated with both SCU and NDWR, reinforcing the role that IJA has on language development. Future studies should continue to explore tailored interventions that focus on early social communication and play to promote language acquisition in MV autistic children.

**References/Citations:**

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