

Title: Is the strength of the relation between early parent follow-in input and later child vocabulary size in infant siblings of children with ASD conditional on engagement state or communication disorders?

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Introduction: Younger biological siblings of children with autism spectrum disorder (sibs-ASD) are at a heightened risk for developing communication disorders, such as autism spectrum disorder or language delay. Identifying strategies to support language development early on in development can inform intervention approaches that can potentially positively alter developmental trajectories for sibs-ASD. One strategy that may be beneficial for sibs-ASD's language development is providing a special type of linguistic input (i.e., follow-in comments) in episodes of an engagement state called higher-order supported joint engagement (HSJE). But, it is possible that some sibs-ASD (i.e., those who go on to be diagnosed with communication disorders) may be more reliant on this special kind of linguistic input than other sibs-ASD. We thus asked: Is the relation between follow-in comments in HSJE and later child expressive vocabulary in sibs-ASD conditional on presence of a communication disorder?

Method: We conducted a longitudinal correlational design with two measurement periods spanning six months using a sample of 72 sibs-ASD and their parents. Half of the children were diagnosed with a communication disorder at the final time point. Communication disorder was defined by diagnosis of autism spectrum disorder based off of the Autism Diagnostic Observation Schedules (Lord, Rutter, DiLavore, Risi, Gotham, & Bishop 2012), and/or testing at or below the tenth percentile for expressive language on the Mullen Scales of Early Learning (Mullen, 1995). Fifteen-minute parent-child free play sessions from Time 1 were coded for parent follow-in comments and for engagement state. Child expressive vocabulary at Times 1 and 2 was estimated using the MacArthur-Bates Communicative Development Inventories (MCDI; Fenson, Marchman, Thal, Dale, Reznick & Bates, 2007). Generalized linear models using full maximum likelihood estimates of the coefficients and robust standard errors were utilized to test the relation between parents' follow-in comments in HSJE and later child expressive vocabulary.

Results: There was a significant statistical interaction between presence of a communication disorder and Time 1 follow-in comments in HSJE predicting Time 2 expressive vocabulary. The relation was only significant in non-communication disorder subgroup. However, we suspected this may have been due to the inclusion of five children in the communication disorder subgroup who had at- or near-zero vocabulary scores at Time 2. When the sample was filtered for children who had least some words in their expressive vocabularies at the final time point (i.e., at least five words reported on the MCDI, $n = 67$), the statistical interaction between communication disorder subgroup and follow-in comments in HSJE predicting later expressive vocabulary became non-significant. However, the relation between follow-in comments in HSJE and later expressive vocabulary in the full sample was positive and significant, and remained significant when controlling for follow-in comments in other engagement states or when controlling for Time 1 expressive vocabulary.

Discussion: This study was the first to the authors' knowledge to examine the potential differential relations between follow-in comments in various engagement states and later expressive vocabulary for sibs-ASD, and to test whether those relations were conditional on the presence of an eventual communication disorder. The significant and positive relation between follow-in comments in HSJE and later expressive vocabulary adds to a growing literature base supporting the importance of not only using follow-in comments, but using them in high quality episodes of engagement (i.e., HSJE). Further, these results suggest the potential utility of focusing parent training on strategies that may make HSJE more likely to occur, such as using follow-in directives and action imitation in turn-taking sequences.

References/Citations:

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