Title: Comparing the Use of Decontextualized Language in Mothers of Children with Down Syndrome and Typical Development

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Introduction: Early parent-child interactions provide a rich environment for young children, particularly those with developmental disabilities, to comprehend and produce increasingly complex language (Warren & Brady, 2007). Given that children with Down syndrome (DS) have significant language deficits, it is critical to examine how differences in their early environments may impact their linguistic development. In typical development (TD), research has shown that parents use high-quality language, particularly decontextualized language, plays an important role in promoting both concurrent and later oral language and literacy skills (e.g., Rowe, 2012). Decontextualized language refers to language that is removed from the here and now (e.g., explanations, narratives, pretend talk). Although research indicates that mothers of children with DS adjust their communication to the developmental needs of their child (Sterling & Warren, 2014), it is unclear whether they differ from mothers of children with TD in their use of this particular dimension of high-quality input, and whether their use of decontextualized language is related to various child characteristics (i.e., language level, speech intelligibility, age). Thus, the present study aimed to answer the following questions: (1) do mothers of children with DS differ in their use of decontextualized language compared to mothers of children with TD?; and (2) is mothers use of decontextualized language related to children’s language ability, intelligibility, and chronological age?

Method: Participants included 22 mothers and their children with DS and 22 mothers and their children with TD. All children were between 22 and 63 months, and groups were matched on chronological age, t(42) = 0.37, p = .715, d = 0.11. Mothers of children with DS and TD were similar in their level of education, t(42) = -0.88, p = .383, d = 0.31. Parent-child language samples were collected from three activities: free play, book reading, and snack time. Language samples were transcribed using the Systematic Analysis of Language Transcripts software conventions (Miller & Iglesias, 2012), and coded for child and maternal linguistic input. Child language and speech variables included mean length of utterance in morphemes (MLUm), number of different words (NDW), and percent of intelligible words. Maternal input included the proportion of decontextualized and contextualized utterances. Using modified versions of published coding schemes (Rowe, 2012), each utterance was coded as decontextualized or contextualized, and measured as a proportion of the total number of analyzed utterances. Decontextualized utterances included: (1) narrative talk (reference to future or past events), (2) explanations (talk that requests/makes logical connections), and (3) pretend talk (talk during interactive pretend episodes). Proportions were also calculated to measure mothers’ use of these various subcategories (e.g., narrative utterances/contextualized utterances).

Results: An independent samples t-test revealed that mothers of children with DS used a smaller proportion of decontextualized language overall than mothers of children with TD, t(42) = -3.34, p = .002, d = 1.10. Of the decontextualized language being used, a MANOVA analysis indicated that mothers of children with TD used a higher proportion of narrative, F(1, 42) = 6.28, p = .016, ηp² = .13, and explanatory talk, F(1, 42) = 4.38, p = .042, ηp² = .09, compared to mothers of children with DS. In contrast, mothers of children with DS used a higher proportion of pretend talk, F(1, 42) = 8.40, p = .006, ηp² = .17 (Figure 1). Within-group repeated measures ANOVAs showed that both groups of mothers used narrative talk the least often, p ≤ .002. However, mothers of children with TD used pretend talk and explanatory talk at a similar frequency, p = .849, whereas mothers of children with DS used pretend talk more frequently than explanatory talk, p = .0001 (Figure 1). Correlations revealed that children with TD with longer MLUms heard a higher proportion of decontextualized input, r(20) = .45, p = .037. No other associations between maternal linguistic input and child characteristics (i.e., age, NDW, intelligibility) were found for either group. At time of presentation, more detail will be provided about mothers use of contextualized input.

Discussion: Our findings indicate that mothers of children with DS are not only utilizing less decontextualized language than mothers of children with TD during parent-child interactions, but when they are using it, it is qualitatively different. Results also suggest that mothers of children with TD may fine-tune their input in ways that reflect their child’s grammatical ability. Although this association was not present in the DS group, it may be that mothers of children with DS adjust their linguistic input based on other child characteristics that were not measured as part of this study (e.g., nonverbal communication, overall engagement); future work should investigate this possibility. Overall, these findings suggest that mothers of children with DS may benefit from parent coaching that teaches them strategies for incorporating more decontextualized language into everyday interactions.
References:


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