Frequency and Mean Duration of Joint Attention at 12 Months Independently Predict Expressive Vocabulary Growth at 18 and 24 Months

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Abstract

Joint attention (JA; coordinated visual attention with a social partner to an object), a foundation for language development, facilitates word learning by directing infant attention to a named object in the presence of other unnamed objects. Vocabulary growth trajectories reflect the rate of language development and predict later academic outcomes. The present study investigates relations between shared gaze in dyadic interactions as a predictor of vocabulary growth from 18-24 months.

Twelve-month-olds (N=22; M=12.01 months, SD=.21; 12 male) and their caregivers participated in an unstructured 8-minute lab-based parent interaction. Infant and caregiver gaze were coded frame-by-frame to derive the frequency and duration of JA to toys. At 18- and 24-months parents completed the MacArthur-Bates Communicative Development Inventory (Fenson et al., 2007) a parent-report vocabulary checklist. Vocabulary growth was calculated as the increase in vocabulary size from 18-24 months.

On average, caregiver-infant dyads engaged in 74.59 instances of JA (SD=21.78), each lasting 1.55 s (SD=.48). Average vocabulary growth was 251.14 words (SD=148.53). Poisson regressions indicated that both frequency and mean duration of shared gaze to toys at 12-months significantly and uniquely predicted vocabulary growth from 18-24 months (X^2s(1)=16.36, 24.94, *p*s<.005,$R^2_{deviance}$=.007, .010, respectively). This indicates that infants who experience longer, more frequent instances of shared gaze exhibit the greatest vocabulary gains from 18-24 months. Importantly, this remained true even when controlling for baseline vocabulary at 18 months.

The current study extends research on JA to unstructured caregiver-child interactions, and demonstrates that the frequency and duration of shared gaze to toys independently predict early expressive vocabulary growth.