

Predictors of Language Outcomes: a preliminary prospective longitudinal study in infants with low-risk and high-risk of developing language impairments

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There is a recent consensus that longitudinal investigations of developmental trajectories from early in development focusing on potential signs for language impairments are a critical step towards offering systematic measurement of early outcomes and their relation to later outcomes, as well as the identification of risk markers that might predict the development of language and communication impairments. However, prospective longitudinal studies that combine language assessment tools and experimental measures, covering low-risk and high-risk cohorts and following the same systematic approach are rare. The current study used longitudinal data for low risk/typically developing (TD) infants (n=181), infants at risk for language impairment (AR), namely with familial risk for ASD or LD, premature birth, or low birth weight (n=76), and infants with Down Syndrome (n=26). Early measures collected as potential language predictors up to 13 months of age included: the Communication and Symbolic Behavior Scales Developmental Profile Infant-Toddler checklist (CSBS), the CDI-I receptive and expressive vocabulary, the ProsoQuest parental report of developing receptive and expressive prosodic abilities, attention skills, speech segmentation skills, and stress and prosodic boundary discrimination abilities. The later language outcome was expressive vocabulary (percentile) measured from 18 to 23 months (short-term outcome, STO) and from 24 to 30 months of age (long-term outcome, LTO), using the CDI. Linear regression analyses showed that the CSBS, and the CDI-I receptive and expressive vocabulary were significant STO predictors for TD, whereas receptive prosodic skills were a significant STO predictor for AR. Significant LTO predictors were found for the AR group, namely the CSBS and CDI-I receptive vocabulary. These preliminary results suggest different predictors for different groups, highlighting the role of receptive prosody and receptive vocabulary, together with cross-domain communication skills, as potential markers of later language difficulties in infants at high risk of developing language and communication impairments.