

## **Examining the linguistic, cognitive, and socio-cognitive factors driving language development trajectories using the Early Language in Victoria Study**

Hannah Louise Grimes, Cristina McKean, Faye Smith  
Newcastle University, Newcastle upon Tyne, United Kingdom

### **Abstract**

Children's language trajectories are heterogeneous and experimental studies have suggested numerous potential child factors which drive these individual differences. Existing large-scale, longitudinal studies have examined a range of biological and social/environmental factors predicting persisting difficulties, and improving and declining language abilities (McKean et al., 2015; Taylor et al., 2013). However, these predictors (e.g., family history, social disadvantage) explain only a small proportion of variance, so exactly what is driving individual differences in children's language trajectories is currently unknown. Meanwhile, small scale studies have identified that early individual differences in linguistic symptomatology, cognitive, and/or socio-cognitive factors may predict language outcomes or trajectories. While often motivated by specific explanatory theories of language disorders, such studies have small and unrepresentative samples, limited follow-up, and restricted measures. This means that robust conclusions cannot be drawn from them as these characteristics do not allow examination of specifically which factors are or are not associated with individual differences across a population.

To evaluate how linguistic, cognitive, and socio-linguistic factors may predict individual differences in language trajectories, detailed data is required. The specialist language longitudinal community cohort the Early Language in Victoria Study (ELVS; Reilly et al., 2018) has these characteristics, with repeated measurement of language, cognitive, and socio-cognitive factors within a large representative sample, and starting early in communicative development.

Using data from 1910 children, analysis of variables collected from between 8 months and 4 years is underway, using growth modelling methods to predict language development trajectories from 4 to 11 years old. Aspects of early social communication such as joint attention and gesture, multiple facets of temperament, vocal communication in infancy and preschool age speech, phonological awareness, and a range of linguistic factors including comprehension, vocabulary composition, morphology, and syntax are some of the factors being considered as predictors. Analysis adjusts for potential confounding variables, including birthweight, maternal education, parental responsiveness, non-English speaking background and others.

Results from this study will be presented that are relevant to the early identification of developmental language disorder and more broadly to informing targeting and design of services to support robust language development for all children.