

The PLOs Project: Predictors of Language Outcomes in infants and toddlers at risk for language impairment

Sónia Frota¹, Marina Vigário¹, Kai Alter², Marisa Cruz¹, Cátia Severino¹ & PLOs Research Team

¹University of Lisbon, ²Newcastle University/University of Oxford

Workshop on Early Language in Neurodevelopmental Disorders (NeuroD-WELL), November 8, 2019





Predictors of Language Outcomes
Preditores de Desenvolvimento de Perturbações da Linguagem e Comunicação

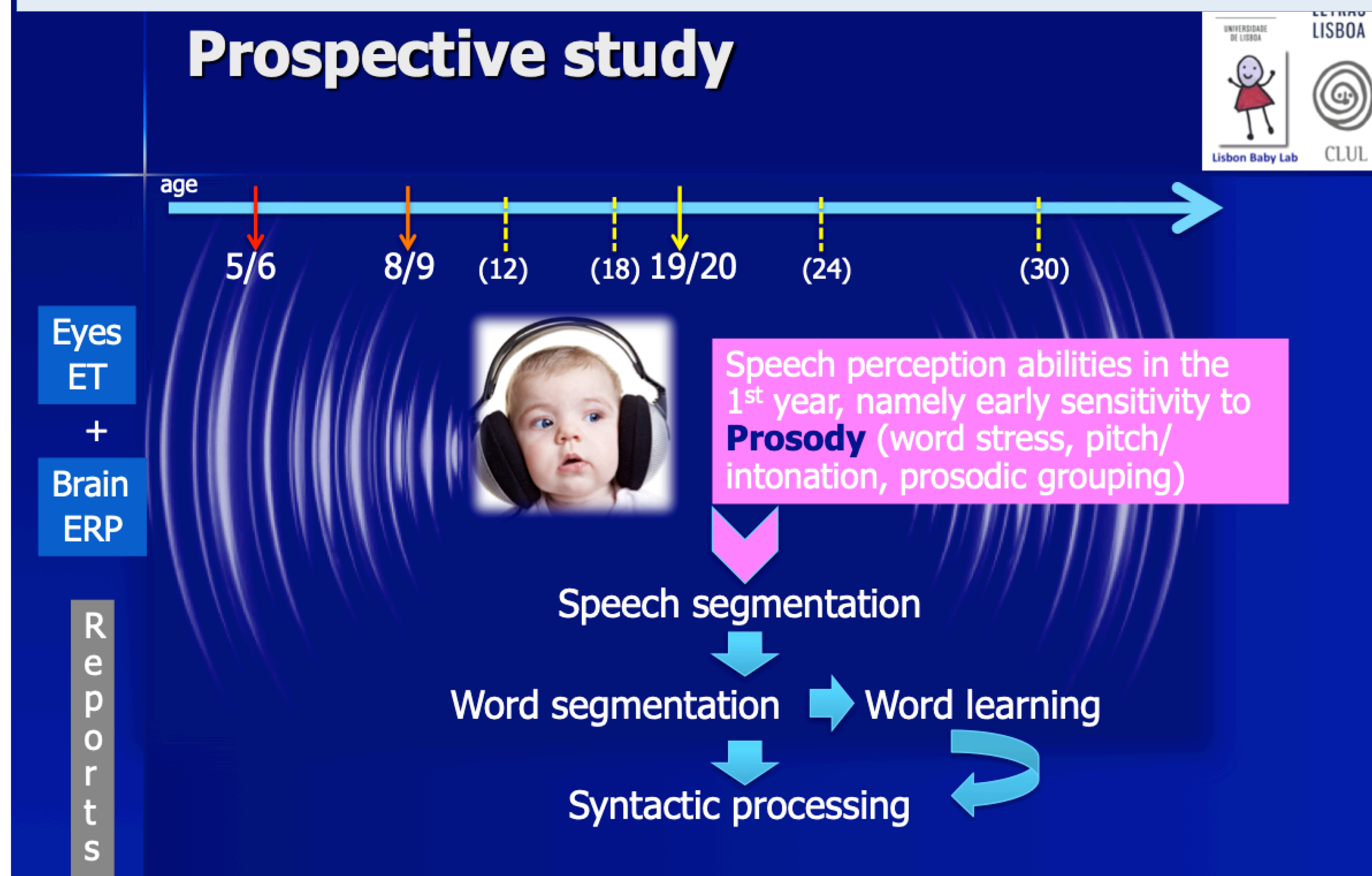
PTDC/LLT-LIN/29338/2017; 2018-2021
PI: Sónia Frota; Co-PI: Marina Vigário



FCT Fundação para a Ciência e a Tecnologia
Lisb@2020 PORTUGAL 2020



GOAL: Early predictors of language impairments



WHO



At-risk groups

- Familial risk for neurodevelopmental disorders (LD, ASD, SCD)
- Premature birth (< 37 weeks)
- Low birth weight (< 2500 g)
- Late talkers (< 10th percentile in the CDI before/at 24 mos)

Prevalences of 8-16%

Exclusion criteria

- Uncorrected hearing or vision problems
- History of seizures, neurologic sequelae, or other medical or neurologic disorders

WHAT

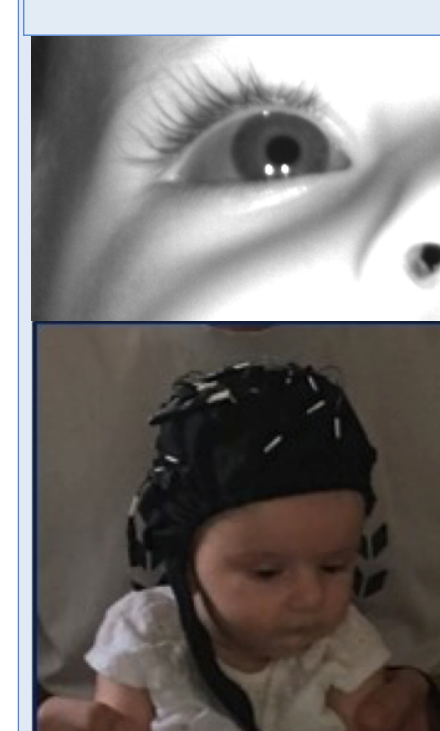
Auditory and visual processing in infant speech perception

- Processing of stress patterns
- Perception of intonation
- Processing of prosodic boundaries
- Word segmentation
- Word learning
- Eye gaze to faces and non-social stimuli

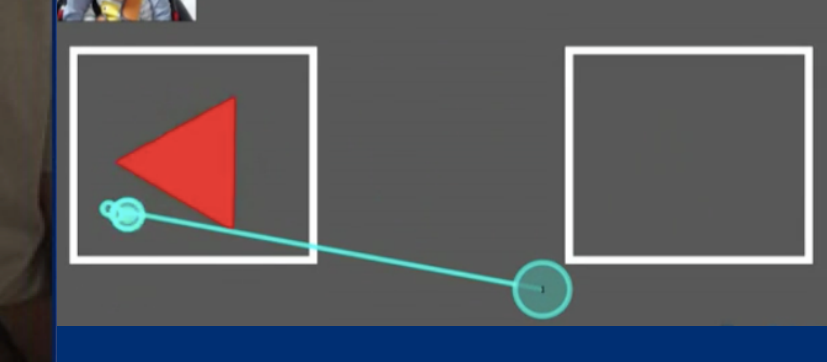
↕

Later outcomes

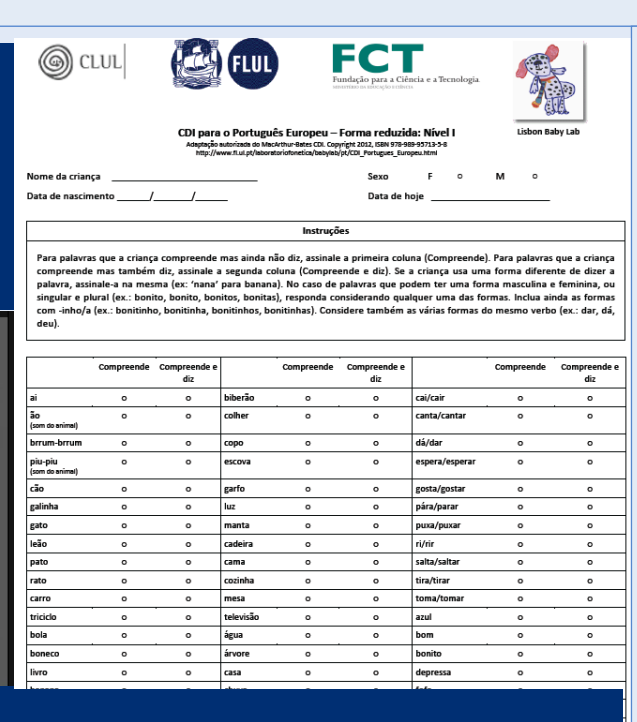
HOW: Methods and Protocol



Eye gaze



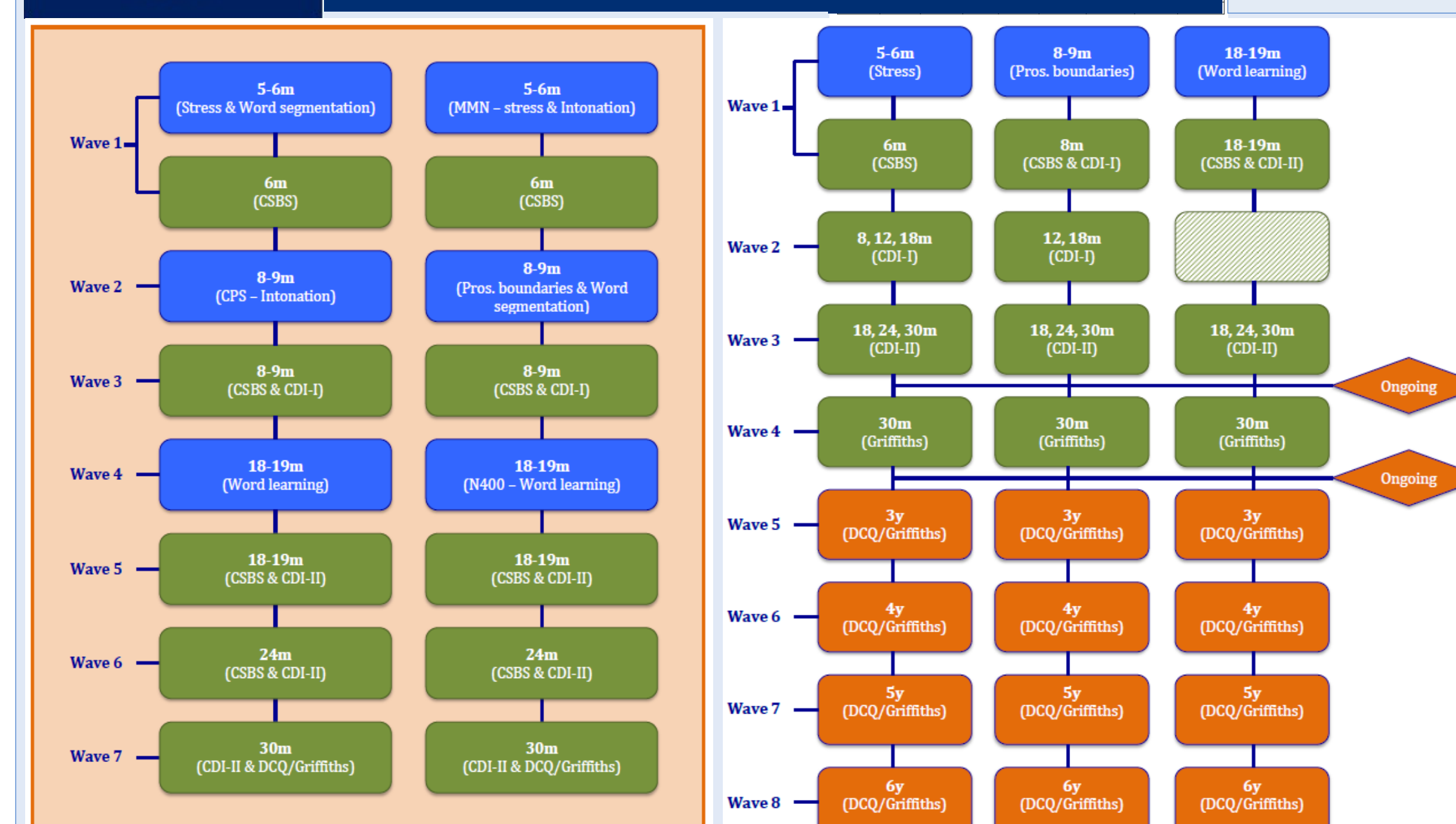
Griffiths scales



Remote Eye-tracking

Parental reports

EEG



Flowchart of the prospective longitudinal design of the PLOs-EBELA sample. PLOs language assessment follow-up in orange. Columns indicate different groups of participants

Flowchart of the prospective longitudinal design of the PLOs-EBELA sample. PLOs language assessment follow-up in orange. Columns indicate different groups of children.

5-6 months → 30 months → 5-6 years

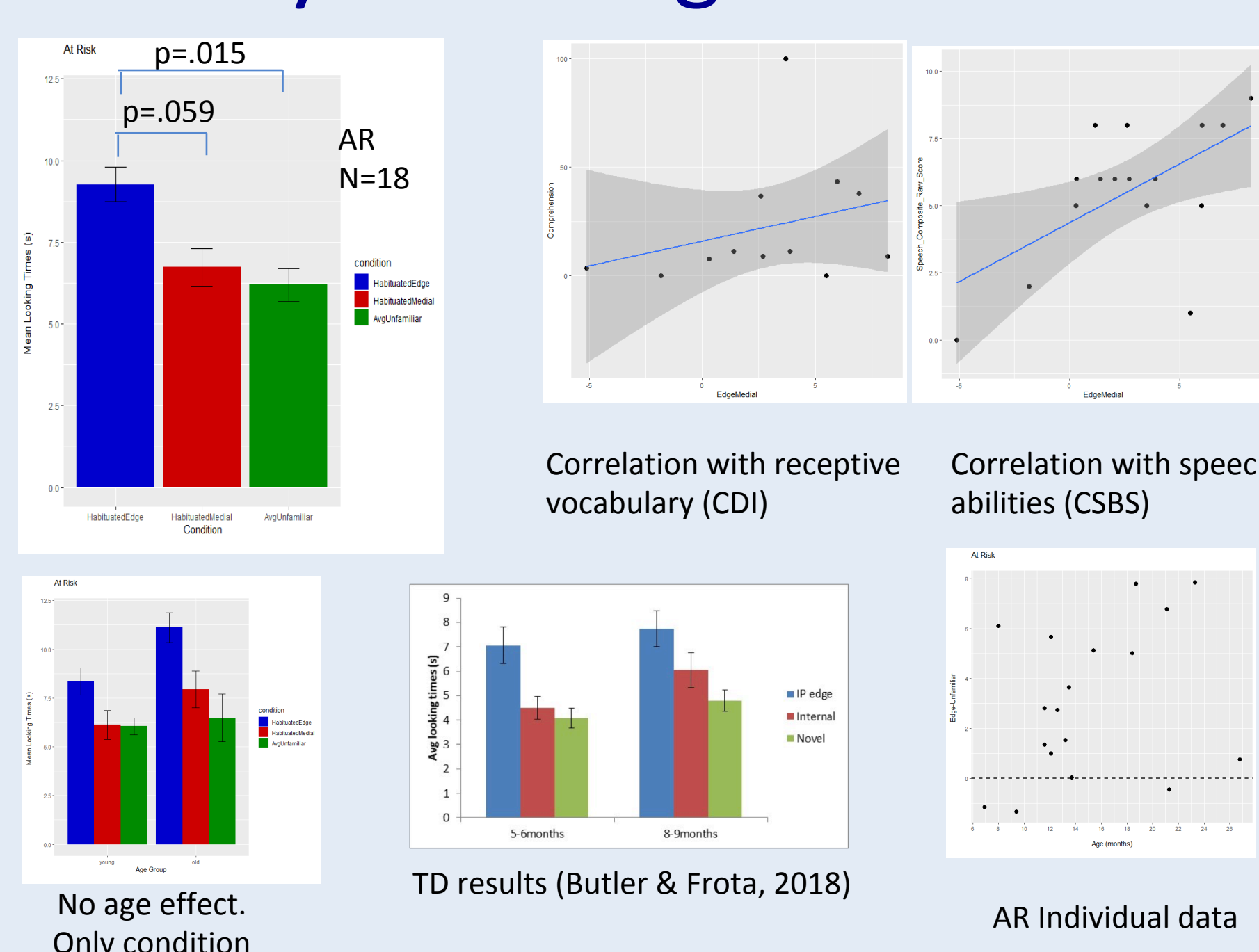
WHY

Early identification of risk markers that can predict later language outcomes will promote more effective methods of **screening, prevention, early intervention and diagnosis**, with social, individual and economic benefits.

Supporting the development of language and communication abilities is critical to meet the needs and challenges of (more) inclusive societies.

PRELIMINARY FINDINGS

Early word segmentation



CDI

