



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

HORIZON EUROPE
PROJECTS FUNDED AT THE UNIVERSITY OF PADUA

IN-MIND - Infant verbal Memory in Development: a window for understanding language constraints and brain plasticity from birth

Although infants perform more poorly than adults on many cognitive tasks, they are more competent language learners. Newborns must have access to exceptional processing and memory systems where bits of the speech signal remain encoded. As yet, however, what characterizes the first cognitive and neural architectures of memory and if (and to what extent) these mechanisms constraint human language remain largely unexplained. IN-MIND proposes a fresh perspective that emphasizes the study of verbal memory as a journey in its development during infancy. The project aims to provide new insights into: i) how memories are formed at birth and sometimes stored for longer periods, ii) how infants' verbal memory capacities vary as their brain evolves in the first months of life, iii) whether verbal working memory capacities account for concurrent and later language outcomes in laboratory tasks and the real world. I will address these issues using an innovative approach that combines behavioural techniques, wearable neuroimaging, polysomnography, and naturalistic recordings in newborns, typically developing infants and infants at-risk for language impairments. The outcomes of this research may lay the foundation for identifying early vulnerabilities as well as the temporal windows in which eventual interventions might be more effective. From a theoretical perspective, IN-MIND will contribute to a more complete description of what makes an infant brain language-ready.

ERC Grantee: Silvia Benavides-Varela

Department: Developmental Psychology and Socialisation

Coordinator: Università degli Studi di Padova

Total EU Contribution: Euro 1.499.799,00

Call ID: ERC-2021-StG

Project Duration in months: 60

Start Date: 01/06/2022

End Date: 31/05/2027

Find out more: <https://cordis.europa.eu/en>