

The role of early gesture and touch for later vocabulary

Tove Nilsson Gerholm^{1*}, Stina Andersson¹, Tatjana von Rosen²

¹*Department of Linguistics, Stockholm University, Stockholm, Sweden*

²*Department of Statistics, Stockholm University, Stockholm, Sweden*

*Corresponding Author E-mail: tove@ling.su.se

ABSTRACT

Within developmental literature, a child's activity level, curiosity and own initiative to interaction has been highlighted as important for future development not only in the motoric area but also in relation to language (Adolf & Franchak, 2016; Andalò et al., 2022). Parental speaking time has in recent big data-studies also been related to vocabulary size in children (Bergelson et al., 2023). In the present study we investigate if early motoric behaviour in interaction with a parent can predict concurrent (12 m o a) and later language competence (36 and 40 m o a) and to what degree parental speech and context influences any relationships.

Data consists of 22 parent-child dyads recorded at 6, 9 and 12 m o a. Child gestures (deictic, emblem, action, show/offer, iconic), child touch (comfort, stimulate, action), parental speaking time, and context (play object, play peekaboo, play singing, play book, play non-toy, other) was annotated and related to CDI measures at 12, 36 and 48 m o a. The children are part of the MINT-data set and were selected based on CDI-measures at 3 years of age: 11 with high scores and 11 with low scores. Based on the developmental literature on motor development, the hypothesis is that children who early on are motorically active and prone to interaction with the parent through touch and gesture will also have an advantage language wise. Statistical modelling will be used to determine whether there are parent-child activities that influence significantly CDI over time; to identify factors that predict the odds of having high (or low) score on CDI at 3 years of age; and to explore two groups with high/low CDI with respect to various characteristics.

The results will be discussed in relation to developmental theory in general and the relation between modalities in language acquisition in particular.

Keywords: Gesture; Touch; Parental talkativeness; Language Acquisition.

References:

- Adolph, K. E. & Franchak, J. M (2016). The development of motor behavior, in WIREs Cogn Sci, 2017, e1430, doi: 10.1002/wcs.1430.
- Andalò, B., Rigo, F., Rossi, G., Majorano, M., Lavelli, M. (2022). Do motor skills impact on language development between 18 and 30 months of age?, *Infant Behavior and Development*, Volume 66, <https://doi.org/10.1016/j.infbeh.2021.101667>.
- Bergelson E, Soderstrom M, Schwarz IC, Rowland CF, Ramírez-Esparza N, R Hamrick L, Marklund E, Kalashnikova M, Guez A, Casillas M, Benetti L, Alphen PV, Cristia A. (2023). Everyday language input and production in 1,001 children from six continents. *Proc Natl Acad Sci U S A*. 26;120(52).