

Children's beat gestures predict the subsequent development of their oral skills

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A study published on 21 May in *Child Development* shows that the early

production of beat gestures with the hands predict better oral narrative skills. These gestures usually associated with emphasis, which do not represent the semantic content of speech, were observed in infants between 14 and 58 months of age in natural interactions with their caregivers. They were found to predicts that in their later development, nearing the age of five, these children would obtain better results in their oral narrative skills.

However, the study did not find these same effects when [children](#) produced other types of gestures, such as iconic gestures (gestures that visually represent the semantic content of discourse, such as moving the hands in the shape of a ball to express "ball") and hand flip gestures (gestures made by twisting the wrist, for example to express "don't know" with uncertainty while raising the shoulders).

The study is the result of collaboration between the UPF Prosodic Studies (GrEP) group and the Department of Translation and Language Sciences and the Goldin-Meadow Lab at the University of Chicago (Illinois, USA), research carried out by Ingrid Vilà-Giménez (UPF and UdG) and Pilar Prieto (ICREA, UPF) with the researchers Natalie Dowling and Susan Goldin-Meadow (University of Chicago, USA) and Ö. Ece Demir-Lira (University of Iowa).

Through a longitudinal methodology, the study analyzed data at different points in the children's [development](#). The data belong to a large longitudinal database on [language development](#) belonging to the University of Chicago. The researchers analyzed [speech](#) and the production of three types of [gesture](#) of 45 children aged between 14 and 58 months while interacting with their carers at mealtime or during games sessions or other activities such as reading books. Specifically, they examined the predictive value of beat gestures, compared with flip gestures of the hands and iconic gestures. At 5 years of age, the same children participated in a narrative task in which they had to tell a story

from a cartoon without sound.

The results showed that beat gestures produced by children aged 14 to 58 months play a very important role in narrative development at later stages because they can predict improvements in children's oral skills some years later. Although the results of the study do not provide empirical evidence as to whether such beat gesture simply reflects that the child has the ability to structure speech or multimodally mark elements of speech associated with prominence of speech (i.e., to mark emphasis), the researchers argue that this kind of gesture plays a very important pragmatic role in children's early speech.

It should be noted that these pragmatic functions of beat gestures are related with the function of structuring narrative discourse. Therefore, as the study results would suggest, the authors highlight that it can be stated that the pragmatic functions of beat gestures in children's early narrative speeches may be highly important for the development of their initial speech as well as for developing their oral narrative skills at a later age.

This study contributes significantly to strengthening prior [empirical evidence](#) published by some of the same researchers on the benefits of a short intervention to improve the oral skills of children aged 5 and 6 years, in which they are asked to observe or produce beat gestures (Vilà-Giménez et al., 2019; Vilà-Giménez and Prieto, 2020; see also Vilà-Giménez and Prieto, 2021). Similarly, other complementary studies have also shown the positive impact of these gestures on other more complex language skills of children, such as understanding stories (Llanes-Coromina et al., 2018).

More information: Ingrid Vilà-Giménez et al, The Predictive Value of Non-Referential Beat Gestures: Early Use in Parent–Child Interactions Predicts Narrative Abilities at 5 Years of Age, *Child Development* (2021). [DOI: 10.1111/cdev.13583](https://doi.org/10.1111/cdev.13583)

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