

Sing for me mama!

The role of singing in the early stages of language acquisition

Giuliana Genovese¹, Leonor J. Romero Lauro¹, Maria Spinelli¹, Giulia Castelletti², Mirco Fasolo², Simone Falk³, Fabia Franco⁴

¹Università degli studi di Milano-Bicocca, ²Università degli studi G. D'Annunzio Chieti-Pescara, ³Université Sorbonne Paris 3, ⁴Middlesex University London

g.genovese5@campus.unimib.it

Introduction: Several studies have shown that phonetic discrimination, prerequisite of language development, is supported by the prosodic characteristics of infant-directed speech, which would make the sounds more recognizable (Kuhl et al., 2008). However, the contribution of maternal singing was poorly investigated. The present study aims to explore the possible benefits of singing in the early stages of language acquisition thanks, for example, to its simple and repetitive rhythmic structure (Schön et al., 2008).

Method: Twenty-three healthy and full-term 4-6 months infants (12 F) were randomly assigned to the *Speech* or *Song* group and each one was familiarized with a native phonetic contrast, spoken or sung respectively (*familiarization phase*). Subsequently, each participant listened to both the familiar native phonetic contrast and a new non-native contrast; both phonetic contrasts were repeated four times in an alternate and counterbalanced sequence, for a total of eight trials (*test phase*). The *looking time* towards the sound source was recorded online. Finally, each mother filled the Italian version of the *Music@Home* questionnaire on familiar musical habits (Politimou et al., 2017).

Results: Analysis with linear mixed models highlighted how infants in *Song* group discriminate between new and familiar phonetic contrasts better than those in the *Speech* group ($F=6.626$; $p=.013$). Specifically, they tend to listen more to the new one.

Conclusions: Musical characteristics of singing, compared to speech, seem to enhance the process of sounds discrimination in the early stages of language development. This result emerges controlling the individual variability linked to the intrinsic attention abilities of each infant.

References:

- Kuhl, P. K., Conboy, B. T., Coffey-Corina, S., Padden, D., Rivera-Gaxiola, M., & Nelson, T. (2008). Phonetic learning as a pathway to language: new data and native language magnet theory expanded (NLM-e). *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 363(1493), 979-1000.
- Politimou, N., Müllensiefen, D., Stewart, L., & Franco, F. (2017). Music@Home: A new questionnaire for the assessment of informal musical experience in children's homes (in preparation).
- Schön, D., Boyer, M., Moreno, S., Besson, M., Peretz, I., & Kolinsky, R. (2008). Songs as an aid for language acquisition. *Cognition*, 106(2), 975-983.