

# Music effects on phonological awareness in children

Maria Manuel Vidal<sup>1</sup>, Marisa Lousada<sup>2</sup>, Marina Vigário<sup>3</sup>

The relation between music and language has been extensively studied in recent years. Research has revealed that both domains engage similar processing mechanisms, including auditory processing and higher cognitive functions, and recruit partially overlapping brain structures. It has been argued that both are related in child development and that linguistic functions can be positively influenced by music training above 4-years-old. Our aim was to study music influence in phonological awareness at ages prior to those already investigated, specifically, in 3-year-olds.

In this randomized control study, 44 children (3–4 years old) were included. All participants were from two different kindergartens from Aveiro. The experimental group had weekly music classes, 45 min/class ( $n = 23$ , mean age = 3;5 years old), and the control group ( $n = 21$ , mean age = 3;6 years old) had weekly visual arts classes, 45 min/class.

When comparing pre- and post-assessment, results showed significant differences in both groups, but music classes' children outperformed the control group, showing larger differences between the beginning and the end of the intervention.

Improvement in both groups is expected due to general developmental factors. However, the fact that children following music classes show greater improvement, indicates that music lessons has influenced phonological awareness.

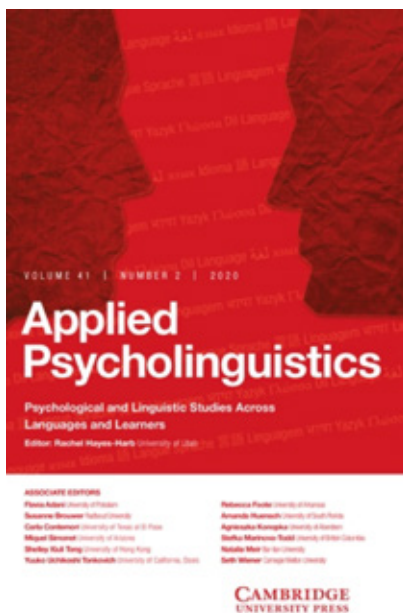
Our results support the hypothesis that music training may promote language abilities, specifically phonological awareness, prior to the ages previously studied. This finding is particularly relevant considering that phonological awareness is a fundamental skill for early reading success. By promoting phonological awareness, music lessons may help reading and writing learning.

In 2020, this study was published in one of the most relevant journals in the areas of linguistics, speech and hearing and psychology.



- 1 – Center of Linguistics (CLUL), University of Lisbon
- 2 – School of Health Sciences & CINTESIS, University of Aveiro
- 3 – School of Arts and Humanities & Center of Linguistics (CLUL), University of Lisbon

**FIGURE 1**  
Music classes.



**FIGURE 2**  
Cover page of the issue of the journal Applied Psycholinguistics where the paper was published (2020).