

Music training effects on phonological awareness development in 3-year-olds with typical development and 3- to 6-year-olds with primary language impairment

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Music influence on human development has attracted great interest in the last decade in areas like musicology, neurology, cognitive sciences, linguistics, and music therapy. By engaging similar processing mechanisms (beginning with auditory temporal processing, going through higher cognitive functions and possible brain overlapping) language and music seem to be related in child development, since linguistic functions can be influenced by music training – influence already studied mainly in children between 4- and 9 years-old. In this randomized control study, with a test-training-retest methodology, phonological awareness skills of 49 children from 3- to 4-years-old were assessed prior and after an intervention period of a school-year with weekly Music Classes (experimental group, N=25) or Visual Art Classes (control group, n=24) in kindergarten. All ethical procedures were ensured, and informed consent was obtained from all caregivers prior to data collection. A language disordered group aged 3- to 6-years old (N=16) was also included under the same conditions. Phonological awareness results in typical development children showed no significant differences between groups in the pre-assessment ($p=0.331$). When comparing pre- and post-assessment, the results showed significant differences in the Visual Art Group ($p=0.019$). Music Classes' students outperformed the control group, showing extremely significant differences between the beginning and the end of the year ($p=0.000$). Significant differences ($p=0.006$) were also found between the groups in the post-assessment, showing that at this age music already influences phonological awareness development. In this study children were randomly assigned to training conditions, so this results seems to corroborate the hypothesis that there is a causal relation between music and language development, prior to the ages previously studied. In the presentation, the results from the disordered group will also be presented and discussed.