

# **Exploring the rhythmic abilities of Greek-speaking children with Specific Language Impairment: Evidence from correlational and priming studies**

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A link between rhythm and grammar skills has been speculated. More specifically, studies in developmental disorders have shown that children with dyslexia and specific language impairment (SLI) have difficulties in detecting amplitude modulations, beat perception and sensorimotor entrainment. These difficulties are correlated with performance on language and literacy tasks (Corriveau & Goswami, 2009; Corriveau, Pasquini, & Goswami, 2007; Cumming, Wilson, & Goswami, 2015; Cumming, Wilson, Leong, Colling, & Goswami, 2015). A correlation between typically developing children's performance on a rhythm perception task and a morphosyntax connected speech task has also been found, with implications for language-impaired children (Gordon et al., 2014; Gordon, Jacobs, Schuele, & McAuley, 2015). Furthermore, priming studies with metrically regular rhythm primes seem to facilitate SLI children's performance on grammaticality judgment tasks (Bedoin, Brisseau, Molinier, Roch, & Tillmann, 2016; Przybylski et al., 2013). Will the performance of Greek-speaking children with SLI on rhythm assessment batteries be correlated with their performance on language tasks? Also, will metrically regular rhythm primes facilitate their performance on a relative clause comprehension picture-selection task? Twenty children with SLI aged 5; 6-6; 6 will be recruited. Two control groups of equal participant numbers for language and age matching will be employed. The correlational study will include linguistic and rhythmic tasks. The linguistic tasks will look into phonological awareness skills as well as perception and production of age-appropriate morphosyntactic and syntactic phenomena (Stavrakaki & Tsimpli, 2000). For the assessment of rhythm perception and production, the BAASTA battery will be administered (Dalla Bella et al., 2017), as well as an anticipation/imperative tapping task. Firstly, a group effect is hypothesized; that is, the performance of SLI children on both linguistic and rhythmic tasks will be significantly worse than the performance of typically developing children. An interaction between the performance on the linguistic and rhythm tasks is also expected.

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