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The Role of Age of Acquisition and Proficiency on Nonword Rhyming in 6- to 8-year-old Bilingual Children

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Speech signals change rapidly and timing differences as small as 50 ms can be critical for distinguishing between minimal pairs (e.g., bat-pat). Thus, fast phonological processing is important for understanding speech. Strong and positive relationships between phonological awareness (PA, e.g., the ability to recognize rhymes) and vocabulary size have been widely reported in both monolingual and bilingual children. Though PA has been explored with behavioral studies in bilingual children, online processing of phonology has not. ERPs were measured in 6- to 8-year-old native Spanish speaking children with English as their second language listening to rhyming and nonrhyming pairs of nonsense words with English phonology. Nonwords were used to help children focus on phonological rather than semantic processing. Though bilingual 6- to 8-year olds were expected to recognize rhymes, neurocognitive measures of rhyme processing failed to establish the anterior effect (an increased negativity for rhyming targets) previously reported in monolingual children. Further, the posterior rhyming effect (a decreased negativity for rhyming targets) was evident only in the group with higher English proficiency, within the normal range for monolingual children. In this group the posterior rhyming effect had a longer latency than what was observed in younger monolingual children. The results suggest that even though bilingual children do well on behavioral tests of PA, processing of sub-syllabic phonology is slowed and more variable in their second language. Proficiency and age of acquisition are more important for mature phonological processing than previous behavioral studies have suggested.

Topic Area: LANGUAGE: Other