

## Does Language Make a Difference? A Study of Language Dominance and Inhibitory Control

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**Introduction:** Although extensive research has been done to compare monolingual and bilingual children's executive function (Adesope et al., 2010; Carlson & Meltzoff, 2008; Foy & Mann, 2014; Martin-Rhee & Bialystok, 2008), there are fewer studies that have looked at the relationship between bilingual children's languages and executive function. The purpose of this study was two-fold; first, to compare inhibitory control (executive functioning) in monolingual versus bilingual children and second, to determine the relationship between vocabulary in the dominant and non-dominant language and inhibitory control in bilingual children.

**Methods:** Twenty monolingual (English) and 20 bilingual (English-Spanish) children between 8 and 12 years of age completed the bilingual Expressive One Word Picture Vocabulary Test (in English and Spanish) (EOWPVT-IV Martin & Brownell, 2010) and a task of inhibitory control (flanker task) (Eriksen, 1995).

**Results:** ANCOVAs revealed no significant differences between monolingual and bilingual children in reaction time or accuracy in the flanker task controlling for maternal education. Significant moderate to strong correlations were found between English vocabulary and inhibitory control reaction time and accuracy in bilingual children. No significant correlations were found between Spanish vocabulary and inhibitory control. Regression analyses showed that English vocabulary, but not Spanish, was a significant predictor of inhibitory control, suggesting that bilingual children probably use their dominant language over the non-dominant language when solving a task that requires inhibitory control.

**Conclusion:** The results of this study suggest that while monolingual and bilingual children may not differ in an inhibitory control task, bilingual children seem to use their dominant language over the non-dominant language when processing new information.

**Keywords:** bilingualism, inhibitory control, executive functions, dominant language, vocabulary

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