



Social Pragmatic Communication and Length of Bilingualism Predict Inhibitory Control in Bilingual Children

Caitlyn Slawny, Kimberly Crespo, Susan Ellis Weismer, & Margarita Kaushanskaya



Introduction & Background

- Development of executive function skills (EFs) is linked to structural language development in monolingual and bilingual children (e.g., Gooch et al., 2016; Iluz-Cohen & Armon-Lotem, 2013; Kaushanskaya et al., 2017)
- There is evidence of improved social pragmatic communication skills in bilingual children and bilingual advantages for inhibitory control (e.g., Bialystok, 2017; Green 1998)
- The role of social pragmatics in the development of EFs has not yet been investigated
- In bilinguals, pragmatic skills may be especially associated with EFs (over and above structural language skills)

Research Questions

1. Are social pragmatic skills associated with EFs in bilingual children?
2. Is length of bilingual experience associated with EFs in bilingual children?

Methods

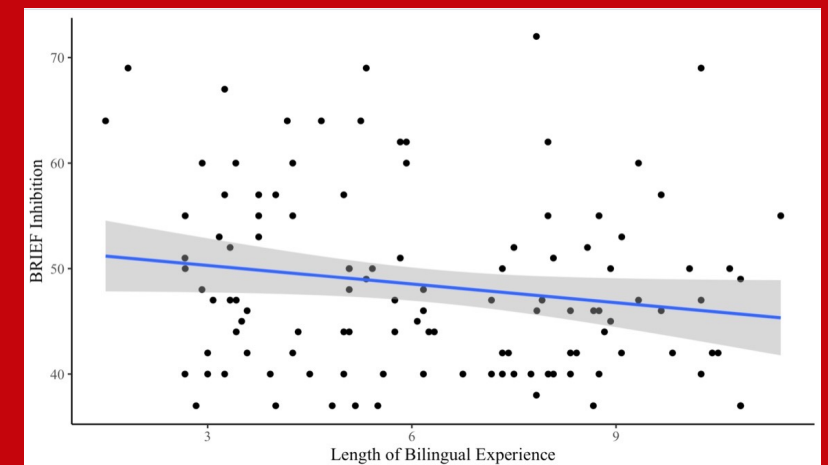
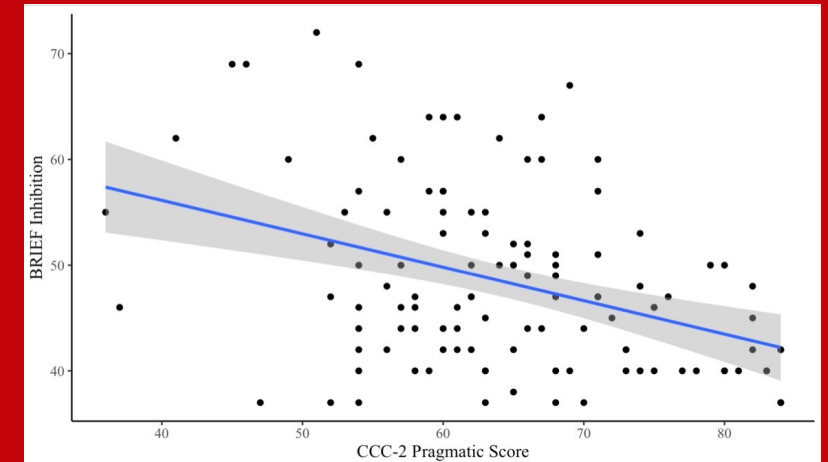
- Pragmatics measured via CCC-2 pragmatics scale scores (Bishop, 2006)
- EFs measured via BRIEF, specifically investigated inhibition scale scores (Roth et al., 2014)
- Bilingualism measured as length of bilingual experience (years exposed to both languages)

Participants	M	SD
N= 114	-	-
Gender= 57 boys, 57 girls	-	-
Age (years)	9.20	0.97
Mother's Years of Education	15.39	3.81
Initial English Exposure (months)	6.53	13.89
Initial Spanish Exposure (months)	28.65	31.07
Length of Bilingualism	6.27	2.54
Nonverbal IQ ¹	110.87	13.41
English Core Language ²	101.32	15.39
English Receptive Language ²	104.47	14.55
Spanish Core Language ³	83.70	21.71
Spanish Receptive Language ³	97.20	11.80
CCC-2 GCC ⁴	104.63	12.87
CCC-2 Pragmatics ⁴	64.53	10.42
BRIEF GEC ⁵	47.59	8.37
BRIEF Inhibition ⁵	48.37	8.55

¹Perceptual Reasoning Composite Score from the Wechsler Intelligence Scale for Children – 4th Edition (WISC-IV)
²Clinical Evaluation of Language Fundamentals – 4th Edition (CELF-4; Semel et al., 2003)
³Clinical Evaluation of Language Fundamentals – 4th Spanish Edition (CELF-4 Spanish; Wig et al., 2006)
⁴Children's Communication Checklist – 2nd Edition (CCC-2; Bishop, 2006)
⁵Behavior Rating Inventory of Executive Function (BRIEF; Roth et al., 2014)

Analyses & Results

- BRIEF inhibition scale scores were regressed on social pragmatic skills, length of bilingualism, and the interaction between social pragmatics & length of bilingualism, controlling for structural language ability
- **Children with better social pragmatics and longer bilingual experiences were reported to have better inhibition skills**
- Effect of structural language ability and the interaction between social pragmatics and length of bilingual experience were not significant ($p > .05$)



Conclusions & Implications

- Stronger social pragmatic skills were associated with stronger inhibition, over and above the effects of structural language skills
 - Longer bilingual exposure were associated with stronger inhibition, in line with prior work (e.g., Kroll et al., 2008), and extending to EFs in daily life
- Future directions:* Does this generalize to monolinguals? Does this effect hold for children outside of the typical range of performance in these domains?