

Relationship between Home Language Exposure and Child Language Proficiency: A Pilot Study in Head Start Preschools

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INTRODUCTION

- Bilingual children often score higher on assessments of receptive language than expressive language in their first language (L1), which is known as the *receptive-expressive gap* (Gibson, Oller, Jarmulowicz, & Ethington, 2012)
- While the gap is well-documented in studies of bilingual development, few studies have examined it explicitly, so the mechanisms are unknown (Gibson et al., 2012; Gibson et al., 2014; Yan & Nicoladis, 2009)
- It is possible that children's home language environment—namely the relative ages of and languages spoken by their siblings—may be a factor in the receptive-expressive gap (Hoff, 2016)

AIMS & RESEARCH QUESTIONS

In the current pilot study, we provide further evidence for the receptive-expressive gap and begin to investigate the relationship between preschool children's bilingual language proficiency in English and Spanish and their exposure to English and Spanish in the home. We address two questions:

- RQ1: Do Spanish-English bilingual preschool children demonstrate a receptive-expressive gap?
- RQ2: To what extent is a preschool child's bilingual language proficiency related to the number and age of their siblings?

METHODS

Participants for Pilot Study

- Participants are four- to five-year-old children ($n = 56$) from 12 Head Start preschool classrooms in Northern Los Angeles County
 - Mean age = 4 years, 9 months ($SD = 4$ months)
 - 29 girls; 27 boys
- Children are a part of a larger ongoing research study ($n = 124$)

Data Collection

- Participants' language proficiency in English and Spanish was assessed using the *preLAS* (Duncan & De Avila, 1998), which is an oral language assessment for children aged four- to six-years-old
- The subtests measure both receptive and expressive language, thus providing an advantage over measures that focus on one dimension of oral language ability (e.g., PPVT-III)
- Through contact with program directors, we collected personal information about the participants, including:
 - number of siblings
 - siblings' gender and relative age (e.g., older brother, younger sister)
 - language child primarily hears in the home
 - any other language(s) that family members speak

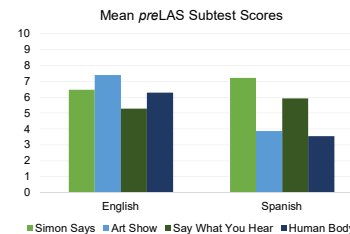
MEASUREMENT

preLAS subtests	Description
Simon Says (Simon dice)	Receptive language/comprehension
Art Show (Muestra de arte)	Expressive vocabulary
Say What You Hear (Repeticion)	Comprehension + syntax and morphology
The Human Body (El cuerpo humano)	Expressive vocabulary (body parts)

Proficiency Level	Description
1	Non speaker
2	Limited speaker
3	Limited speaker
4	Fluent/Proficient speaker
5	Fluent/Proficient speaker

PILOT STUDY FINDINGS – RQ1

Differences in expressive vs. receptive proficiency in English and Spanish



Correlation Matrix - English preLAS

	Simon Says	Art Show	Say What You Hear	Human Body
Simon Says	-			
Art Show	.746**	-		
Say What You Hear	.547**	.572**	-	
Human Body	.732**	.790**	.594**	-

** Correlation is significant at the 0.01 level (2-tailed).

Correlation Matrix - Spanish preLAS

	Simon Says	Art Show	Say What You Hear	Human Body
Simon Says	-			
Art Show	.557**	-		
Say What You Hear	.541**	.366**	-	
Human Body	.676**	.678**	.434**	-

** Correlation is significant at the 0.01 level (2-tailed).

- In English, children performed similarly across subtests, and these scores were highly correlated
- In Spanish, children had lower scores on subtests of expressive language, and the scores were more moderately correlated

PILOT STUDY FINDINGS – RQ2

Tentative relationship between siblings and bilingual language proficiency

Bilingual Profile	Sibling description			Total
	None	Has younger siblings only	Has older siblings (or mixed ages)	
Balanced limited proficiency	1	1	9	11
English-dominant	5	0	10	15
Spanish-dominant	0	3	4	7
Balanced proficient	0	2	11	13
Total	6	6	34	46

$$\chi^2(6, N = 46) = 15.05, p = .020$$

*This analysis does not meet the minimum expected count for several cells and thus violates the assumptions of chi-square

- Difference scores on Spanish vs. English assessments are related to having siblings, $[F(2, 43) = 4.63, p = .015]$
- Post-hoc analyses suggest that there is a significant difference between only children and children with younger siblings ($p = .013$)
- This relationship might be due to our small sample size and limited number of participants with younger siblings

CONCLUSIONS

- The current study found support for the receptive-expressive gap in Spanish and English bilingual preschoolers.
 - Children demonstrated similar proficiency across English subtests, while in Spanish they performed better on receptive tasks versus expressive tasks.
- The current study also found a significant relationship between having siblings and a child's language proficiency.
 - Future analyses will explore this relationship in more detail, and it is possible that additional findings could add to the literature by linking the receptive-expressive language gap with the presence of siblings in the home.
- Additional analyses will examine the relationship between family members' use of language at home (i.e., English and Spanish or Spanish only) and children's usage of English vs. Spanish in the classroom.
- We will also explore—with a sample of bilingual teachers—how teachers' language use in the classroom is related to the child's home language exposure and language proficiency.

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