

FIRST WORDS Project: Prelinguistic Predictors of Specific Language Impairment

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Introduction

- ❑ Children with Specific Language Impairment (SLI) are at risk for academic failure due to difficulties with language and reading.
- ❑ Identifying toddlers who are likely to receive a diagnosis of SLI allows for earlier intervention which may prevent or reduce the impact of difficulties encountered at school age.
- ❑ Examining prelinguistic skills that may differentiate toddlers later diagnosed with SLI will improve early identification efforts.

Research Question

How do children in the second year of life with and without Specific Language Impairment at age four differ in use of the following prelinguistic predictors?

- ❑ Communicative Gestures
- ❑ Language Comprehension
- ❑ Speech Complexity
- ❑ Language Production
- ❑ Book Sharing

METHOD

Children were recruited for this prospective, longitudinal study using the FIRST WORDS Project Evaluation Model:

- ➔ Step One: Brief Parent Report
 - Complete the CSBS DP Infant-Toddler Checklist (available at <http://firstwords.fsu.edu/B/Bb.htm>)
 - Includes 24 items about developmental milestones and a question about whether the parent is concerned about the child's development
- ➔ Step Two: Child Evaluation
 - Videotape the CSBS DP Behavior Sample
 - Includes a sequence of 6 communication and play sampling opportunities while the child is interacting with the caregiver and clinician

Method: Participants

	Typical	SLI
N	23	24
CSBS DP Age	19 - 23	19 - 23
Mean	21.3 months	21.0 months
CELF-P Age	51.0 months	50.5 months
Total SS	113.8	80.5

SLI group criteria:
CELF- Preschool score >1 SD below the mean

Method: Procedure

CSBS-DP video samples were reanalyzed based on parameters from the Assessment of Language Learning Indicators (ALLI) (Morgan, Allen & Wetherby, 2003)

❑ Communicative Gestures	❑ Language Production
• Deictic	• Total words
• Representational	• Word Variety
❑ Language Comprehension	• Nouns vs. Non-nouns
• Situational	❑ Book Sharing
• Decontextualized	• Pointing
❑ Speech Complexity	• Naming
• Consonant inventory	• Describing
• Syllable shape	

Table 1. Mean (SD) scores on ALLI variables measured in the second year

ALLI Variables	Typical (N = 23)	SLI (N = 24)	t
Gestures			
Point	22.61 (13.61)	8.79 (7.45)	-4.29***
Early Representational	6.04 (3.94)	2.54 (2.67)	3.55**
Late Representational	4.87 (6.59)	0.79 (1.02)	-2.93**
Comprehension			
Situational	74.57 (17.70)	44.22 (26.78)	-4.53***
Decontextualized	71.64 (22.41)	31.48 (23.28)	-5.96***

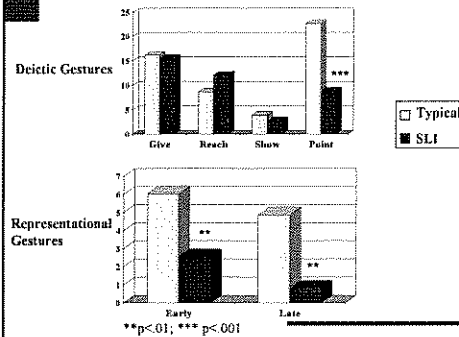
* p<.05; ** p<.01; *** p<.001

Table 2. Mean (*SD*) scores on ALLI variables measured in the second year

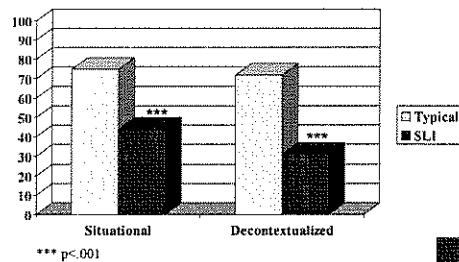
ALLI Variables	Typical (N = 23)	SLI (N = 24)	<i>t</i>
Sound Production			
Consonants	8.39 (1.27)	5.25 (2.86)	-4.90***
Syllable Shape	5.22 (1.31)	3.04 (1.60)	-5.10***
Language Production			
Total Words	79.48 (54.35)	10.79 (17.09)	-5.79***
Word Variety	31.87 (20.71)	5.33 (7.44)	-5.80***
Book Sharing			
Naming	3.52 (2.12)	0.38 (0.92)	-6.58***
Describing	0.74 (1.10)	0.00 (0.00)	-3.23**

* $p < .05$, ** $p < .01$, *** $p < .001$

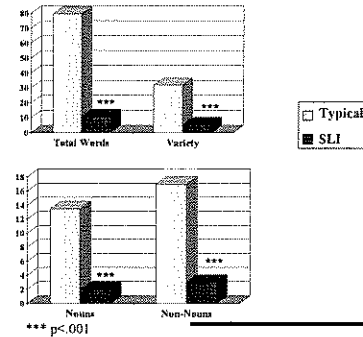
Group Differences in Gestures



Group Differences in Comprehension



Group Differences in Word Production



Conclusions

- The following skills differentiated children with and without SLI in the second year of life:
 - ❖ Pointing and use of representational gestures
 - ❖ Situational and decontextualized comprehension
 - ❖ Inventory of consonants and syllable shape
 - ❖ Vocabulary production
 - ❖ Naming and describing while looking at books
- Clinicians should assess these prelinguistic skills in the second year of life to improve early identification of children with SLI.

Future Directions

- What are more precise early indicators of language learning problems in the second year of life?
- Can intervention efforts change prelinguistic growth trajectories and impact on later language and emergent literacy skills?
- What is the appropriate service delivery model for children with delays in prelinguistic predictors (i.e., Part C, early child education, enhance parent responsiveness)?