Language Environment Characteristics of Young Children with ASD in Relation to Child Language Level

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Study Purpose

❖ To describe and compare language environment characteristics of young children with ASD with varying language levels using LENA and SALT data

- Amount of language
- Types of utterances
- Functions of utterances

Participants

❖ Thirteen male children

❖ Ages 28-67 months at the beginning of the study

❖ Nine with identified with autism and four identified with ASD based on ADOS scores

❖ All participants had language scores below average

  ○ Vineland Adaptive Behavior Scales Communication SS (M = 69, Range, 40-87)
  ○ CELF-P2 Core Language SS (M = 67, Range, 59-79)

Method

❖ Parent consent, , parent interview

- ○ **Vineland Adaptive Behavior Scales**
- ○ **Parenting Stress Index**

❖ Child participant assessments

- ○ ADOS
- ○ CELF-P2

❖ Language sample collection every 3 months

❖ Select highest AWC segment at school and home for SALT transcription

SALT Transcription

❖ Establish reliability

❖ Use typical SALT conventions for utterance boundaries and identification of morphemes

❖ Developed and used special codes to be able to identify the number/percent of utterances directed to target child, yes/no questions, and pragmatic functions of adult utterances

Results

❖Overall descriptive statistics

❖Independent t-tests to compare quantity, type, and function between low language (MLU < 2.0) and high language (MLU ≥ 2.0) groups

Descriptive Statistics – Total Sample

❖ Participants exposed to a large number of words (M = 1483 per hour)

❖ Only 32 (51%) of samples had 75% or higher of utterances that were child directed (CD)

❖ Three participants representing 10 samples did not have any with 75% or greater of utterances directed to them; 7 of those were from children with MLU < 2.0

❖Independent t-tests used to compare number of words by language level, < 2.0 and ≥ 2.0

	Total Sample N = 32	MLU < 2.0 N = 13	MLU ≥ 2.0 N = 19
AWC per hour	1757	1988	1611
AWC per 15 minutes	1195	1158	1219
SALT number words	900	966	855
Salt number different words	225	234	218

❖Independent t-tests used to compare sentence types by language level, < 2.0 and ≥ 2.0

	MLU < 2.0		MLU ≥ 2.0		t-test
	M	SD	M	SD	
Statements	69	8	61	10	2.45*
Exclamations	3	4	3	3	ns
Intonation Prompts	1	2	3	4	ns
Imitations	1	1	3	2	-2.63*
Questions	26	7	32	8	**ns**
Yes/No Questions	60	16	50	15	ns
Verbal Utterances	99	1	99	1	-2.13*
One-Word Utterances	14	6	15	7	ns

❖Independent t-tests used to compare function by language level, < 2.0 and ≥ 2.0

	MLU < 2.0		MLU ≥ 2.0		t-test
	M	SD	M	SD	
Comments	45	22	30	17	2.20*
Labels	6	6	4	4	ns
Requests for Verbal Behavior	4	5	7	7	ns
Social Niceties and Routines	9	12	5	3	ns
Sharing Information	2	3	9	11	-2.30*
Verbal Reinforcements	11	8	20	13	-2.05*
Directives for Motor Behavior	21	15	19	11	ns
Directives for Prohibition	2	2	1	1	ns
Verbal Corrections	2	3	4	5	**ns**
Multiple Pragmatic Functions	25	14	31	20	ns

Other Interesting Results

❖ Adult MLU did not differ between low (M = 7.19) and high (M = 7.08) language groups

❖ Adult use of multiple pragmatic functions did not differ between low (M = 25) and high (M = 31) language groups

Summary

❖ Positive finding that young children with ASD are exposed to a high number of adult words

❖ Less positive finding that often adults are not consistently directing their language to young children with ASD

❖ Some evidence of individualization of adult language in relation to child language level but perhaps not as much as expected

❖ Need data on language environment characteristics of typically developing children and other disabled children for comparison