First-Word Categorization of Individuals with Autism Disorder

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Introduction

• Delay in onset of language (i.e., no single words by 24 months, no phrases by 36 months) is a hallmark of Autism Spectrum Disorder (ASD)

• Lack of language continues to be the most common reason parents/caregivers become concerned and seek a medical opinion for ASD

• Up to 30% of those diagnosed with an ASD will develop language prior to 24 months

• There is strong evidence that early identification and early intervention to treat ASD can significantly improve outcomes

• The American Academy of Pediatrics has recently recommended that all children be screened for an ASD from the ages of 18-24 months

• The presence of ANY language prior to 24 months can overshadow other delays associated with ASD and prevent early detection

• Identifying qualitative differences between children with ASD who did not have a language delay from patterns that are associated with typical development may help clinicians improve early detection when the child has some language.

Methods

• A retrospective study of the first words spoken by children diagnosed with ASD as reported on the Autism Diagnostic Inventory - Revised by patients evaluated at the Southwest Autism Research & Resource Center

• Population divided into two groups based upon onset of language : Group 1) No language delay and Group 2) Language delay.

• Words spoken were placed into categories based upon those used in the MacArthur Communicative Development Inventories (CDI)

• Frequencies within each category were compared between the groups using the chi-square statistic

Results

• Similar to typically developing children, there is widespread variability in the categories of first-words spoken by both groups (Figure 1)

• Subjects without a delay in language (Group 1) were more likely to develop words that were in the categories of Animals, Body Parts and Small Household Items. Subjects with a delay in language (Group 2) were more likely to develop words that were included in the Food & Drink and Quantifier categories. (Table 2)

• The categories of Food & Drink and Small Household Items were the most statistically significant.

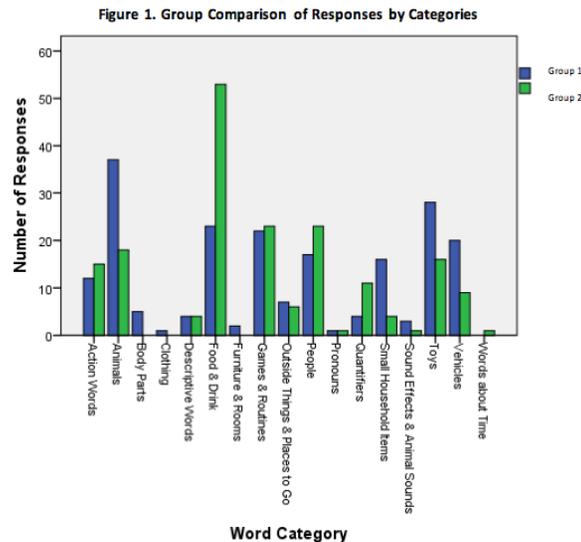Figure 1. Group Comparison of Responses by Categories

Table 2. Categorization of First Words Based Upon MacArthur Communicative Development Inventories and Adaptations into Other Languages Lexical Development Norms Data base

Table 2	Group 1		Group 2		
Word Category	# of responses	%	# of responses	%	Sig
Animals	37	18.3%	18	9.6%	0.016
Body Parts	5	2.5%	0	0.0%	0.031
Food & Drink	23	11.4%	53	28.3%	0.001
Quantifiers	4	2.0%	11	5.9%	0.043
Small Household Items	16	7.9%	4	2.1%	0.010

Discussion

• There are qualitative differences in the word choices of children with Autistic Disorder based upon their onset of language

• As with typically developing children, first-words and the categorization of these words is tremendously heterogeneous

• Based upon the number of words spoken in typically developing children according to the CDI, those with a delay in the onset of language are more closely aligned with typically developing children than those that do not experience a language delay

• Onset of language should be reassuring but should not eliminate the possibility of a pervasive developmental disorders

• Social intent of early language needs to be of primary concern for clinicians

• Categorization of first words may aid in the identification of social intent

• Due to variability in early language, categorization of words should not be considered alone and should be a focus when other early warning signs are present

• As screening for autistic disorder is recommended in younger populations, a qualitative assessment of categorical preferences in the earliest language should be a consideration for more intimate monitoring of the development of children as well as seeking a greater understanding of language preferences in typically developing children compared to those with ASD

Acknowledgements