

Gender Differences in Linguistic Measures Among Three-Year-Olds with ASD



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BACKGROUND

- Typically developing (TD) girls frequently ahead of TD boys in actual speech and ratings of speech^{1,2}
- Debate over whether differences attributed to biological³ or input factors⁴
- Our Question: Might girls with ASD also show more advanced speech than boys with ASD?**
- Much higher diagnosis of ASD in boys⁵ → limited knowledge about language in girls with ASD⁶
- 10-year-old girls with ASD may show pragmatic strengths⁷
- Younger sample (4-8 years) with ASD → no gender difference in standardized expressive vocab⁸
- Proposal: Investigate (a) language in naturalistic settings in (b) even younger children?

OBJECTIVE

Compare lexical and grammatical use of 3-year-old boys and girls with ASD in a semi-naturalistic setting

METHODS

- 28 toddlers diagnosed with ASD^{9,10}
- 14 girls ($M_{age} = 38.40$ months)
- Module 1 ($N = 9$); Module 2 ($N = 5$)
- 14 boys ($M_{age} = 37.18$ months)
- Module 1 ($N = 9$); Module 2 ($N = 5$)
- Language samples from the entire ADOS-2¹¹ administration were transcribed
- Analyzed in CLAN¹² for noun/verb types and MLU
- Qualitative hand-coding to identify unique noun/verb types by gender

	Male		Female	
	$M(SD)$	$M(SD)$	t	p
ADOS-2 Score	14.71(4.05)	14.62(4.31)	0.061	0.951
MSEL Score¹³				
Visual reception	31.43(5.56)	31.17(6.00)	0.116	0.909
Receptive language	26.36(5.18)	25.83(7.09)	0.217	0.830
Expressive language	25.21(4.77)	26.42(8.05)	-0.471	0.642

RESULTS

Figure 1. Girls Produce Numerically but not Statistically More Words Than Boys

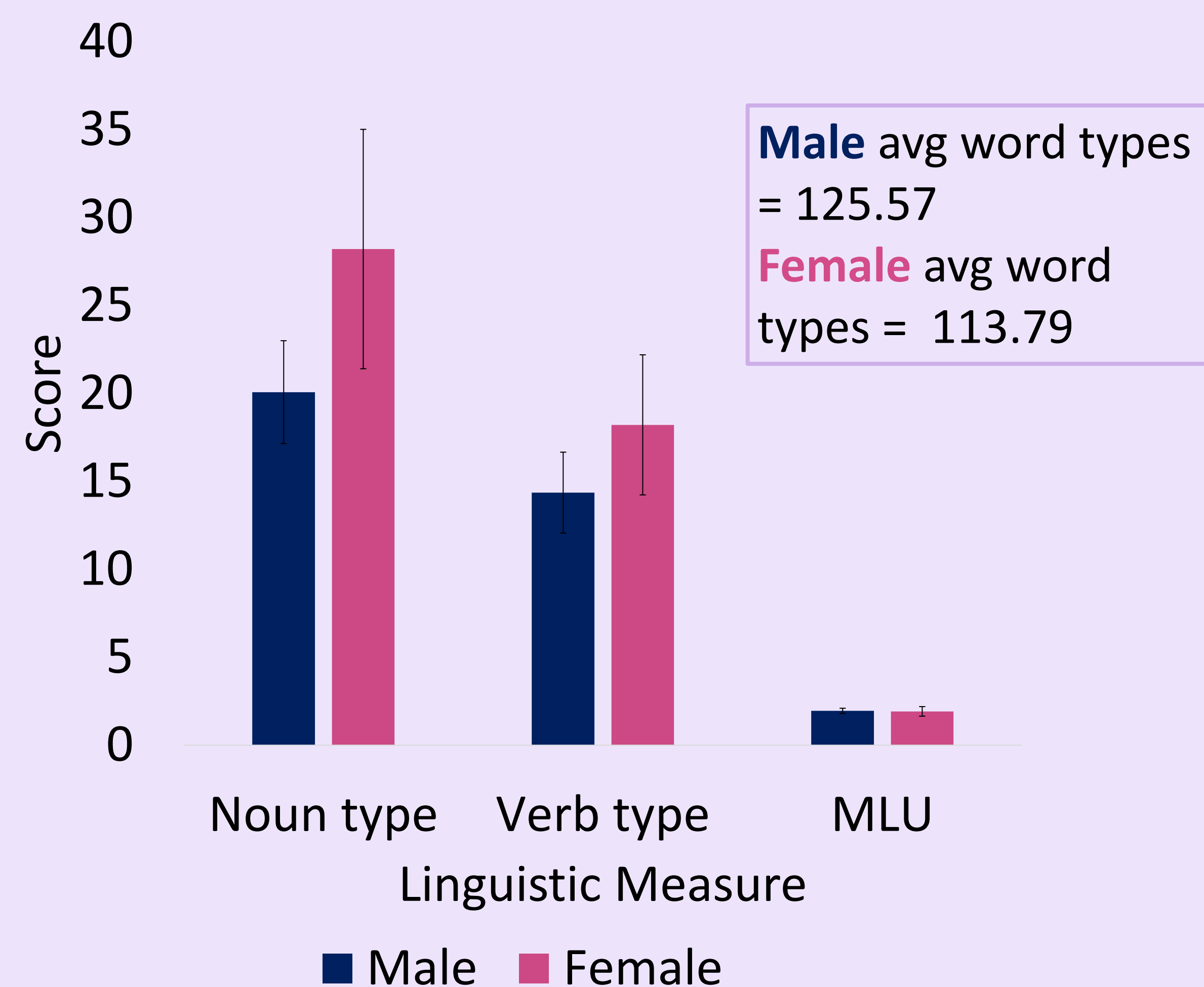


Table 1. Examples of Common Unique Word Types by Gender

	Male	Female
	N = 43	N = 93
Unique Noun Types	Truck Cracker Nose Train TV	Book Number Fire Doll Kid
	N = 14	N = 35
Unique Verb Types	Think Break Wiggle Taste Draw	Pick Build Love Squish Listen

Figure 2. Girls Produce Numerically but not Statistically More Unique Nouns/Verbs than Boys

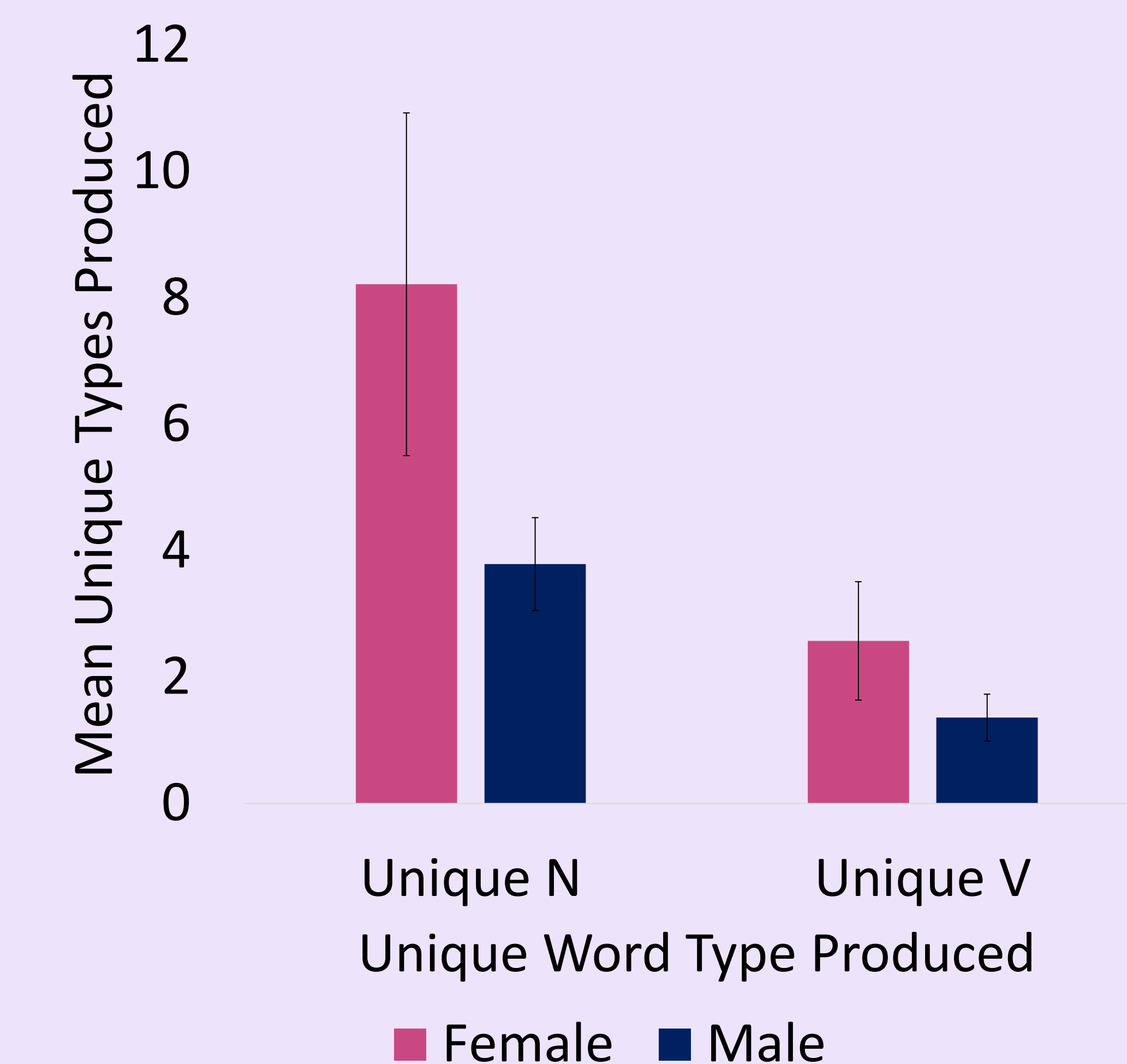
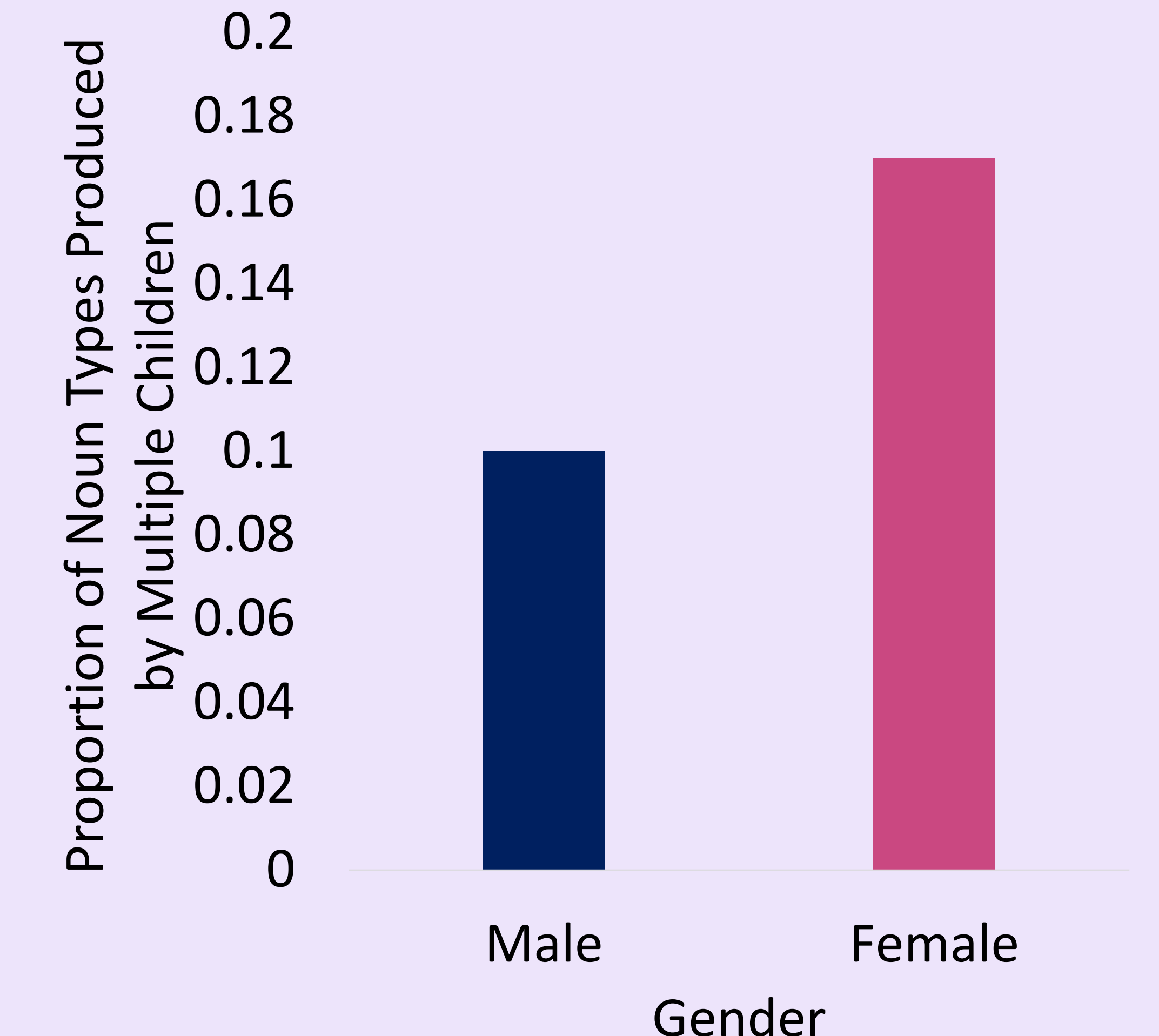


Figure 3. Higher Percentage of Unique Nouns are Produced by Multiple Girls Compared to Multiple Boys



CONCLUSIONS

- Trend for higher language levels in girls with ASD, but not significant → large variability, especially in Module 2
- Girls appear to use a more diverse set of words; possibly more sensitive to input?
- Plan to add TD age-matched comparison group; also include discourse measures to evaluate linguistic camouflage⁶

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