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Sex Differences in Pronoun and Maze Usage in the Language of Children with Autism Spectrum Disorder

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Abstract

Background

Research on sex differences in the language of children with Autism Spectrum Disorder (ASD) has been limited. Song et al. (2020) found that pronoun usage differs among ASD and TD girls and boys. Additionally, studies have shown that maze (i.e. intervals of disfluent speech) usage distinguishes ASD and TD children but it is unclear whether these differences are also influenced by sex.

Objectives

To compare usage rates of “we” (1st person plural) pronouns, “they” (3rd person plural) pronouns, and mazes in ASD and TD girls and boys.

Methods

140 children (ASD: n = 98, 17 girls; TD: n = 42, 22 girls), ages 7 to 15, were administered the Autism Diagnostic Observation Schedule (ADOS), module 3. All sessions were transcribed and four tasks were analyzed. For each participant, we calculated total number of “we”, “they”, and mazes. We used logistic regression models and compared Pairwise Estimated Marginal Means (EMM) post-hoc.

Results

Diagnosis and sex significantly predicted “we” (ASD < TD, boys < girls, $p < .001$), “they” (ASD < TD, $p < .05$; boys < girls, $p < .001$), and maze frequency (ASD > TD, boys < girls, $p < .001$). ASD girls used less “we” pronouns than TD girls, more than ASD boys, and did not differ from TD boys ($p < .0001$). ASD boys used less “they” pronouns than both ASD girls ($p = .001$) and TD girls ($p < .001$). Maze frequency differed among all subgroups except TD girls and boys (ASD girls > ASD boys > TD boys = TD girls, $p < .0001$).

Conclusions

Preliminary analyses showed that sex significantly effected “we”, “they”, and maze frequency of ASD and TD participants. Because analyses did not omit instances where “they” pronouns are referring to inanimate objects (e.g., “those shoes”), these results should be interpreted with caution.