

Introduction

There is limited research examining differences in symptom profiles of girls and boys with Autism Spectrum Disorder (ASD). The overall objective of this study is to examine sex-based differences in a matched sample of boys and girls with ASD (N=54) participating in a larger study of families and children with ASD (N=188, ages 5 to 12). Parents completed self-reported measures of ASD symptom severity, child behavior problems, and social skills were used to determine gender differences in the severity of ASD symptoms, social-emotional difficulties, and child behavior problems between boys and girls.

Methods

Study Aims: To examine the symptom and behavioral profiles of school-aged children with ASD and the extent to which symptom presentation varied by child gender (girls vs. boys).

Research Questions:

- 1) To examine the differences in autism symptoms of girls and boys with ASD.
- 2) To examine the differences in the emotional and behavioral difficulties of girls and boys with ASD.
- 3) To examine differences in social functioning of girls and boys with ASD.

Sample

- A matched sample of girls and boys with ASD ($n = 54$) were selected from the larger sample of children with ASD ($N = 188$, ages 5 to 12)
- Females ($n=27$) and males ($n= 27$) were matched on age and IQ status; child $Mage = 7.81$ ($SD= 2.24$)
- 44.4% of children had an intellectual disability (ID)

Measures

- **Emotional and Behavior Difficulties** — Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000, 2001)
- **ASD Symptom Severity**— Social Responsiveness Scale-Second Edition (SRS-2; Constantino & Gruber, 2012)
- **Social Functioning** — Adaptive Behavior Assessment System- 3rd Edition (ABAS-3; Harrison & Oakland, 2015)

Results

Table 1. Descriptives on study measures by sex

Variable	Female ($n = 27$) $M [SD]$	Male ($n = 27$) $M [SD]$
SRS-2 Repetitive Behaviors (% clinical cut- off)	79.96 (11.7) 66.7	77.67 (17.1) 74.1
SRS-2 Social Communication (% clinical cut off)	76.00 (12.1) 59.3	77.81 (11.2) 59.3
CBCL Internalizing Behaviors (% clinical cut off)	63.38 (8.7) 42.3	61.93 (8.9) 40.7
CBCL Externalizing Behaviors (% clinical cut off)	57.37 (9.2) 25.9	60.89 (10.4) 40.7
ABAS Social Functioning (% below average)	76.94 (19.0) 69.6	67.12 (10.9) 92.1

Note. SRS-2= Social Responsiveness Scale; CBCL= Child Behavior Checklist; ABAS= Adaptive Behavior Assessment System.

Table 2. Sex-based contrasts

	Females vs. Males		
	$t (df)$	p	Cohen's d
Repetitive Behaviors	.58 (52)	.56	.16
Social Communication	-.58(52)	.57	-.16
Internalizing Behaviors	.61 (51)	.55	.17
Externalizing Behaviors	-1.32 (52)	.19	-.35
Social Functioning	2.01* (46)	.05	.55

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

Discussion

- In general, both girls and boys presented clinically significant ASD symptoms. Though both showed similar ranges of emotional difficulties, parents were more likely to report higher rates of externalizing symptoms in boys. Additionally, social skills were found to be below average for both girls and boys.
- Matched comparisons indicated no significant differences between girls in boys in terms of ASD symptomatology and emotional and behavioral difficulties. However, there was a significant difference between girls and boys in the social functioning domain, $t(46) = 2.10$, $p=.05$.
- This study is one of the few examining sex-differences in school-age children with ASD. Our findings extend upon previous studies that have also examined differences in overall ASD symptom severity.
- Similar to Rodgers et al. (2019), we found differences in the social functioning of girls and boys with ASD. Though we didn't find differences in ASD symptoms, it is possible that there are specific aspects of ASD that may show differences over time as children age.

Implications

- These findings suggest that more research should be conducted to further investigate possible gender differences in: repetitive behaviors, social communication, and internalizing and externalizing behaviors.
- Future research should examine specific social skills that may be different in boys and girls to help inform interventions aimed at improving social functioning over time.
- Future studies should make an active effort to include more female participants in research and longitudinal data.

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Selected References

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