

Revisiting the cut-off: How sex differences affect AQ screening accuracy for ASD

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Background

- AQ: widely used ASD self-report screener
- Psychometric properties may vary across settings
- Sex differences may affect screening accuracy

Objective

- Compare AQ scores in general mental health care
- Examine sex differences
- Evaluate screening accuracy

Methods

Design: Retrospective dataset (2020-2025)

Sample

- $N = 715$ adults
- ASD: $n = 125$
64 men, 61 women; M age = 26.87, $SD = 6.98$
- Non-ASD: $n = 590$
265 men, 325 women; M age = 26.35, $SD = 6.63$

Measure

- AQ (dichotomous scoring)

Analyses

- t-tests: AQ total + subscales
- Bonferroni correction: $\alpha = .0083$
- Sex-specific ROC analyses: AUC, optimal cut-offs

Women required a higher AQ cut-off

Results

AQ scores

- ASD > non-ASD on all scales (see Table 1)

Table 1
AQ total and subscales scores in M (SD) (total group, male, female)

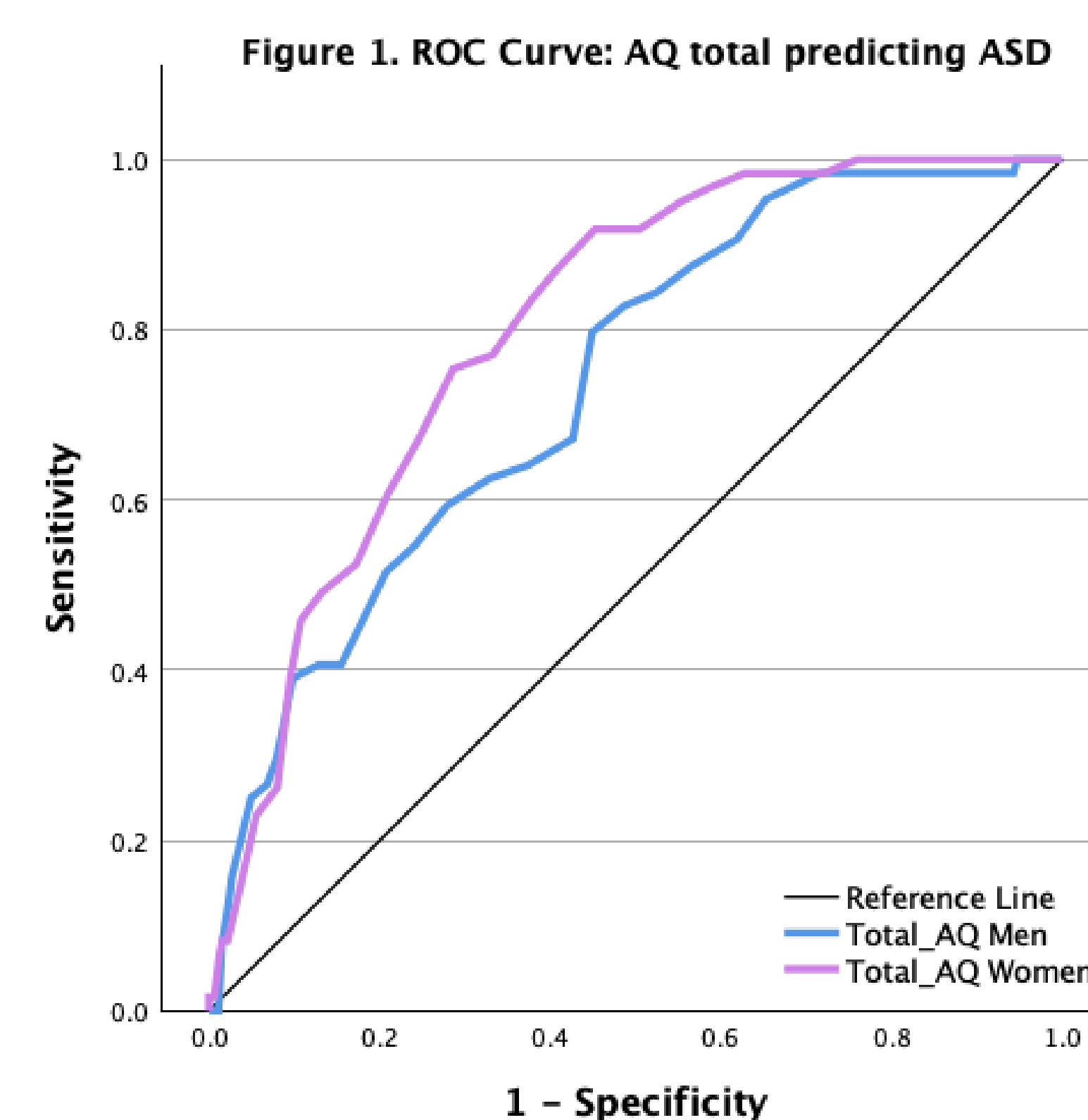
AQ scale	ASD	Non-ASD	t-test ASD vs non-ASD (total group)
Total	32.82 (6.74)	24.72 (8.66)	$p < .001, d = .969$ (large)
	31.69 (7.56)	24.42 (8.51)	
	34.00 (5.59)	24.96 (8.78)	
Social skills	6.76 (2.31)	4.43 (2.70)	$p < .001, d = .882$ (large)
	6.56 (2.46)	4.35 (2.76)	
	6.97 (2.15)	4.50 (2.66)	
Attention switching	8.18 (1.74)	6.62 (2.40)	$p < .001, d = .678$ (medium)
	7.84 (2.01)	6.41 (2.41)	
	8.52 (1.32)	6.79 (2.38)	
Attention to detail	6.49 (1.85)	5.68 (2.34)	$p < .001, d = .355$ (small)
	6.03 (1.98)	5.44 (2.35)	
	6.97 (1.58)	5.89 (2.31)	
Communication	6.34 (2.07)	4.45 (2.50)	$p < .001, d = .775$ (medium)
	6.00 (1.99)	4.33 (2.46)	
	6.69 (2.11)	4.55 (2.53)	
Imagination	5.06 (2.27)	3.53 (2.02)	$p < .001, d = .738$ (medium)
	5.25 (2.45)	3.89 (2.05)	
	4.85 (2.07)	3.24 (1.95)	

Sex differences

- ASD: women > men on Attention to detail scale
 $p = .004, d = .52$ (medium)
- Non-ASD: men > women on Imagination scale
 $p < .001, d = -.33$ (small)

Screening accuracy (AQ total)

- Men: AUC = .735, optimal cut-off = 25.5
- Women: AUC = .801, optimal cut-off = 30.5



Conclusion

- AQ discriminates between ASD and non-ASD in both sexes
- Minimal sex differences within the ASD group: only on the Attention to detail subscale
- Higher optimal cut-off in women
 - Due to the sample characteristics? Young, highly educated adults in mental health care
 - ASD in women may be recognized only when autism traits are more pronounced
- Implication
 - Sex-specific cut-offs may improve autism screening

Sidenote
Poster Bezemer & Blijd-Hoogewys, 2026 (N = 3194, ASD: 1884, non-ASD = 1310); AQ sex differences minimal
Poster Bezemer et al., 2026; N = 1260; M-ASD, an instrument which also captures camouflaging and internal traits, did find sex differences