

The Value of the AQ in Outpatient Mental Health Service

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Background

The **Autism Spectrum Quotient** (AQ; Baron-Cohen et al., 2001; Dutch version: Hoekstra et al., 2008) measures the degree to which adults with normal intelligence exhibit autistic traits. Since the AQ is known to be a good predictor of clinical ASD diagnosis, it can be part of **case identification** to decide whether clinical assessment is required.

The AQ is a self-report questionnaire. Since self-insight might be diminished in individuals with ASD, the perspective of an informant is important. Therefore, the AQ **spouse-version** was developed (Blijd-Hoogewys, 2014).

There is debate on whether there are **gender differences** concerning the expression of autistic traits, and whether these differences influence case identification.

Objectives

The aim was to study the value of the AQ as an instrument for case identification, comparing self-report and spouse-report, and gender differences.

Methods

The sample consisted of **Dutch patients with a suspected ASD** and an average intelligence. They were referred to a specialized ASD outpatient mental health service. The clinical standardized diagnostic protocol consisted of semi-structured interviews (taken from both patient and at least one of the parents), several questionnaires (including the 50-item AQ) and clinical experience.

In total, there were **194 AQ self-reports** (n = 106 men, n = 88 women) and **49 AQ spouse-reports** (n = 26 men, n = 23 women) (see Table 1). AQ-scores were analyzed, using dichotomous scoring with a clinical cut-off point of 26 (in accordance with the Dutch guidelines concerning the use of AQ in clinical practice).



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Table 1 Descriptives of Participants

	Total	Men			Women		
		ASD	Non-ASD	Total	ASD	Non-ASD	Total
Self-report	194	65	41	106	44	44	88
Spouse-report	49	19	7	26	14	9	23

Figure 1 Boxplot of AQ scores

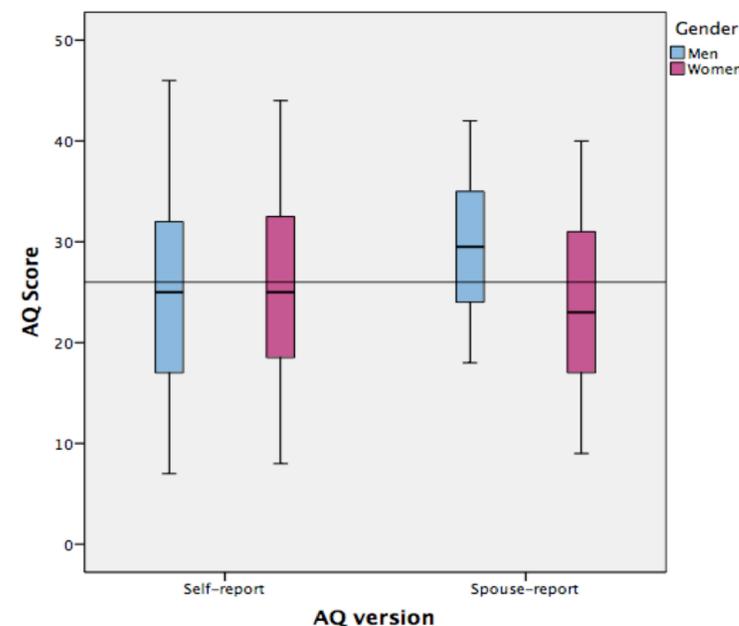


Table 2 Relation between AQ score on self-report and ASD diagnosis

Total group	ASD	Non ASD
Clinical AQ score (≥ 26)	70	22
Non-clinical AQ score	39	63
Men	ASD	Non ASD
Clinical AQ score (≥ 26)	38	14
Non-clinical AQ score	27	27
Women	ASD	Non ASD
Clinical AQ score (≥ 26)	32	8
Non-clinical AQ score	12	38

Results

Self-reports versus Spouse-reports

There was **no significant difference** in AQ-score between self-report and spouse-report (M = 28.08, SD = 9.14; M = 27.02, SD = 8.03 respectively; $t = .61$, $df = 96$, $p = .54$). Concerning the classification of the AQ-score as clinical (≥ 26) or non-clinical, there was a **moderate agreement between self-report and spouse-report** ($\kappa = .58$, $p < .001$).

Men versus Women

The AQ-scores of men and woman did not differ significantly on the self-report (M = 25.06, SD = 9.28; M = 25.51, SD = 9.11 respectively; $t = -.34$, $df = 192$, $p = .73$). They did **differ significantly on the spouse-report** (M = 29.60, SD = 6.57; M = 24.13, SD = 8.67 respectively; $t = 2.50$, $df = 47$, $p = .02$) (see Figure 1).

ASD versus Non-ASD

Results of the self-reports showed a relation between AQ-score above/below cut-off and the presence/absence of an ASD-diagnosis ($\chi^2 = 28.15$, $df = 1$, $p < .001$). Overall, 76% of participants with clinically elevated AQ-scores were diagnosed with ASD (versus 38% of participants with non-clinical AQ-scores) (see Table 2). The predictive values of the AQ differed for men and women. **For men, sensitivity was 58% and specificity was 66%** (positive-predictive-value = PPV = 0.73, negative-predictive-value = NPV = 0.50). **For women, sensitivity was 73% and specificity was 82%** (PPV = 0.80, NPV = 0.75). The same pattern was seen in the AQ spouse-reports.

Conclusions

The AQ is **moderately valuable for case-identification** in an outpatient mental health service. The AQ self-report and AQ spouse-report give roughly similar information about autistic traits. There are **gender differences** though; female spouses report their men to exhibit more ASD traits than reported by the men themselves. Also, the AQ self-report of women seems to be more predictive for an ASD diagnosis than those of men.

Note that the AQ is not intended to be diagnostic. If there are clinically significant levels of autistic traits, a comprehensive diagnostic evaluation is warranted.

References

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