The Value of AQ in Clinical Practice

M.L. Bezemer, MSc, & E.M.A. Blijd-Hoogewys, MSc, PhD

m.bezemer@inter-psy.nl

Introduction

Background

In clinical practice, the Autism Spectrum Quotient (AQ; Baron-Cohen et al., 2001; Dutch version: Hoekstra et al., 2008) is often used to measure the degree to which adults exhibit autistic traits and to decide whether further ASD assessment is required (case identification).

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 in an outpatient mental health service. Also, whether there are differences between self-report and spouse-report, and between men and women.

Methods

The sample consisted of Dutch patients with a suspected ASD and an average intelligence. They were referred to an 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 AQ and BRIEF-A, both self-report and spouse-report) 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) (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).

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**

Results

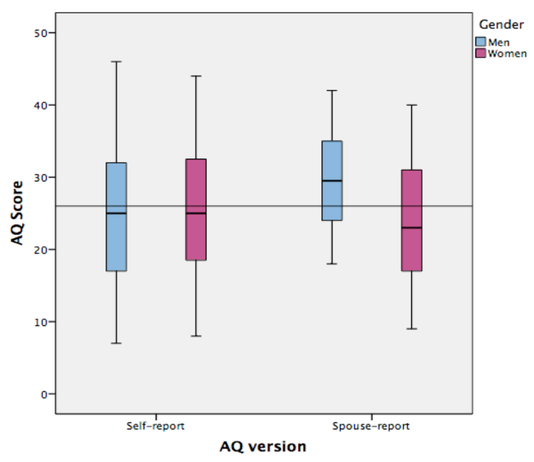
Self-reports versus Spouse-reports

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) (Figure 1). Concerning the classification of the AQ-score as clinical (≥ 26) or non-clinical, there was a moderate agreement between self-report and spouse-report (κ = .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 (men: M = 29.60, SD = 6.57; women: M = 24.13, SD = 8.67 respectively; t = 2.50, df = 47, p =. 02) (Figure 1).

Figure 1 *Boxplot of AQ scores*



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 (X^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) (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.

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

Discussion

In a clinical population under suspicion of having ASD, the AQ self-report and the AQ spouse-report give similar information about autistic traits, which makes the AQ spouse-report useful for clinical practice.

A gender difference is only apparent in the spouse-version: spouses report their men as having higher AQ-scores. Next to that, the AQ self-report of women seems to be more predictive for an ASD diagnosis.

The AQ is valuable for case-identification. Note that the questionnaire is not intended to be diagnostic: the score is not indicative of a definitive ASD diagnosis by itself. If there are clinically significant levels of autistic traits, a comprehensive diagnostic evaluation is warranted.

References

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