The Adult Asperger Assessment (AAA): A Diagnostic Method

Simon Baron-Cohen,¹,² Sally Wheelwright,¹ Janine Robinson,¹ and Marc Woodbury-Smith¹

At the present time there are a large number of adults who have suspected Asperger syndrome (AS). In this paper we describe a new instrument, the Adult Asperger Assessment (AAA), developed in our clinic for adults with AS. The need for a new instrument relevant to the diagnosis of AS in adulthood arises because existing instruments are designed for use with children. Properties of the AAA include (1) being electronic, data-based, and computer-scorable; (2) linking with two screening instruments [the Autism Spectrum Quotient (AQ) and the Empathy Quotient (EQ)]; and (3) employing a more stringent set of diagnostic criteria than DSM-IV, in order to avoid false positives. The AAA is described, and its use with a series of n = 42 clinic-patients is reported. Thirty-seven of these (88%) met DSM-IV criteria, but only 34 of these (80%) met AAA criteria. The AAA is therefore more conservative than DSM-IV.

KEY WORDS: Asperger Syndrome (AS); Adult Asperger Assessment (AAA); Autism Spectrum Quotient (AQ); Empathy Quotient (EQ).

Asperger syndrome (AS) is a sub-group on the autistic spectrum (Baron-Cohen, 1995; Frith, 1991; Wing, 1981, 1988) and is diagnosed on the basis of DSM-IV criteria (APA, 1994). The DSM-IV criteria for autism and AS both require patients to demonstrate the same number of impairments in social interaction and to demonstrate obsessions or repetitive behaviour. However, for autism, but not for AS, qualitative impairments in communication must be evident. In addition, for AS, there must be no significant general delay in language (defined by the use of single words at the age of 2 years and communicative phrases at the age of 3 years) or in cognitive development. For autism, this restriction is not stated, so that an autism diagnosis can be made in an individual of any IQ or language level. A final difference between the DSM-IV criteria for autism and AS is that the AS diagnosis specifies that the disturbances must cause clinically significant impairment in social, occupational or other important areas of functioning. (Bizarrely, this criterion is not specified for autism.) These similarities and differences between the DSM-IV criteria for autism and AS are summarised in Table 1.

These diagnostic criteria for AS are unsatisfactory, at two levels (Howlin, 2000). First, no communication abnormalities are included as symptoms, despite the difficulties in the domain of pragmatics (Baron-Cohen, O’Riordan, Jones, Stone, & Plaisted, 1999). Secondly, the number of required criteria are so few that there is a risk of over-diagnosis. In this paper we describe a new diagnostic instrument, the Adult Asperger Assessment (AAA), designed to assess adults for AS and high functioning autism (HFA). The AAA uses more stringent diagnostic criteria than DSM IV.

A new instrument for assessing AS in adults is needed because at present nothing exists for this purpose. This is because it is only recently that clinicians have really become aware of AS. The condition was first described more than 60 years ago by Hans Asperger (Asperger, 1944), but the attention of the English-speaking scientific and medical world

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Table I. Similarities and Differences between the DSM-IV Diagnostic Criteria for Autism and Asperger Syndrome (AS)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Autism*</th>
<th>AS</th>
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<tbody>
<tr>
<td>1. Qualitative impairment in social interaction</td>
<td>At least 2 out of 4 listed symptoms</td>
<td>AS for autism</td>
</tr>
<tr>
<td>2. Restricted repetitive and stereotyped patterns</td>
<td>At least 1 out of 4 listed symptoms</td>
<td>AS for autism</td>
</tr>
<tr>
<td>of behaviour, interests and activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Qualitative impairments in communication</td>
<td>At least 1 out of 4 listed symptoms</td>
<td>Not specified</td>
</tr>
<tr>
<td>4. Delay/abnormal functioning, with onset prior</td>
<td>At least 1 out of 4 listed symptoms</td>
<td>Not specified</td>
</tr>
<tr>
<td>to 3 years, in social interaction, language as</td>
<td></td>
<td></td>
</tr>
<tr>
<td>used in social communication, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>symbolic/imaginative play</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. General language development</td>
<td>Not specified—so can be at any level</td>
<td>No clinically significant delay</td>
</tr>
<tr>
<td>6. Cognitive development</td>
<td>Not specified—so can be at any level</td>
<td>No clinically significant delay</td>
</tr>
<tr>
<td>7. Disturbance causes clinically significant</td>
<td>Not specified</td>
<td>Required</td>
</tr>
<tr>
<td>impairment in social, occupational, or other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>important areas of functioning</td>
<td></td>
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</tbody>
</table>

*A total of 6 or more symptoms are required from criteria 1 to 3.

was only drawn to AS by the publication of articles by Lorna Wing (Wing, 1981, 1988). Apart from a small number of research studies in the 1980s (Tantam, 1988a, 1988b, 1988c; Tantam, Monaghan, Nicholson, & Stirling, 1989), this condition still went mostly undiagnosed. The publication of the first book on the subject in English in the early 1990s changed this situation significantly (Frith, 1991). Today, there are hundreds of books on AS, and a wealth of research debating its relationship to autism and characterizing its cognitive profile, epidemiology, and biology (Baron-Cohen, 2000; Baron-Cohen, Joliffe, Mortimore, & Robertson, 1997; Ghaziuddin, Tsai, & Ghaziuddin, 1992; Klin, Volkmar, Sparrow, Cicchetti, & Rourke, 1995; Szatmari, Bartolucci, Bremner, Bond, & Rich, 1989; Szatmari, Archer, Fisman, Streiner, & Wilson, 1995; Szatmari, Bartolucci, & Bremner, 1989; Szatmari, Turi, Finlayson, & Bartolucci, 1990). Family pedigrees of AS implicate inheritability (Gillberg, 1991). There are also numerous first person and practical accounts (Attwood, 1997; Sainsbury, 2000; Willey, 1999).

Due to this relatively recent increase in awareness of AS, professionals are now alert to the possibility of AS in primary school age children. Current estimates of its prevalence are as high as 1 in 200 children (Ehlers & Gillberg, 1993; Scott, Baron-Cohen, Bolton, & Brayne, 2002). But for individuals who were born before 1980, a new diagnostic dilemma has arisen. What instruments should be used to diagnose AS in adults who have reached this point in development without being recognised as having it?

Currently available diagnostic instruments for autism spectrum conditions, such as the ADI-R (Autism Diagnostic Interview) (Le Couteur et al., 1989; Lord, Rutter, & Le Couteur, 1994), the ADOS-G (Autism Diagnostic Observation Schedule) and the CARS (Childhood Autism Rating Scale) (Schopler, Reichler, & Renner, 1986), are not age-appropriate for adults with AS. Moreover, as mentioned above, the DSM-IV criteria for AS are currently a cause for concern, not least because of how few symptoms an individual needs to manifest to warrant a diagnosis. For this reason, we describe new criteria and a new method for diagnosis of AS or HFA in adults.

THE ADULT ASPERGER ASSESSMENT (AAA)

The distinction between AS and HFA is simplified in the AAA so that those patients who meet criteria and who did not have a language delay are diagnosed with AS, whereas patients who meet criteria and did have a language delay are diagnosed with HFA.

The Adult Asperger Assessment (AAA) is shown in Appendix A. It comprises 4 sections each describing a group of symptoms (A–D), and then a final section (E), describing 5 key prerequisites. The AAA incorporates all the symptoms from the DSM-IV diagnosis of Asperger's Disorder as well as additional relevant symptoms. The additional symptoms reflect the more stringent approach to diagnosis taken in the AAA compared with DSM-IV. This conservative design was employed so as to err on the side of under-diagnosis.

Section A of the AAA is 'Qualitative impairment in social interaction'. This includes 4 symptoms from
The Adult Asperger Assessment

can be ascribed to the DSM-IV AS criteria, and 1 extra symptom. The wording of symptom A3 has been slightly adapted
from DSM-IV for the AAA. Section B is “Restricted, repetitive and stereotyped patterns of behaviour, interests and activities”. This section also has 4
symptoms from the DSM-IV AS criteria, and 1 extra symptom. Section C, “Qualitative impairments in verbal or non-verbal communication”, and Section D, “Impairments in imagination”, are not included in the
DSM-IV AS diagnosis but form part of the DSM-IV autistic disorder diagnosis. The AAA retains these
additional sections for the diagnosis of AS. None of the 5 symptoms in Section C appear in DSM-IV and are worded to be appropriate for diagnosing adults
with AS. They refer to the often-noted difficulties with the pragmatic (rather than syntactic or phonological)
asppects of language and communications. (Baron-
Cohen, 1988; Tager-Flusberg, 1993). In Section D, 1
of the symptoms is from the DSM-IV autistic disorder
diagnosis and the other 2 are new. Any symptoms not
found in DSM-IV are asterisked on the AAA.

To meet criteria for a DSM-IV diagnosis of AS, patients need to have 2 or more symptoms from
Section A (A1–A4 of the AAA) and one or more symptoms from Section B (B1–B4 of the AAA). They
also need to meet the pre-requisites in Sections E of
the AAA. In our view, the DSM-IV criteria for AS are
too lax, and so the AAA criteria have been designed to
be more stringent. Therefore, it follows that anyone
who meets the AAA criteria will also meet the DSM-
IV criteria. On the AAA, patients must have at least 3
out of 5 of the symptoms in each of Sections A–C, 1
out of 3 symptoms from Section D. This means the
patient has to score on at least 10 symptoms
(max = 18). They must also meet all 5 pre-requisites
in Sections E. Note that this includes showing no
current or past evidence of psychosis, which the AAA,
including DSM-IV, uses as an exclusion criterion for AS
(ICD-10 allows for comorbid AS and schizophrenia).

Before the clinical interview, patients are asked
to complete the AQ (Autism Spectrum Quotient:
Baron-Cohen, Wheelwright, Skinner, Martin, &
Clibey, 2001) and the EQ (Empathy Quotient:
Baron-Cohen & Wheelwright, 2004) as screening
questionnaires. These are described next.

The AQ comprises 50 questions, made up of 10
questions assessing 5 different areas (see Appendix
B): social skill (items 1, 11, 13, 15, 22, 36, 44, 45, 47,
48); attention switching (items 2, 4, 10, 16, 25, 32, 34,
37, 43, 46); attention to detail (items 5, 6, 9, 12, 19, 23,
28, 29, 30, 49); communication (items 7, 17, 18, 26, 27,
31, 33, 35, 38, 39); imagination (items 3, 8, 14, 20, 21,
24, 40, 41, 42, 50). Individuals score in the range 0–
50. In our previous study we compared n = 58 adults
with Asperger syndrome (AS) or high-functioning
autism (HFA); with n = 174 randomly selected
controls. The adults with AS/HFA had a mean AQ
score of 35.8 (SD = 6.5), significantly higher than controls (x = 16.4, SD = 6.3). Eighty percent of the
adults with AS/HFA scored 32+, vs. 2% of controls.
The AQ strongly predicts an AS diagnosis in a clinic
sample (Woodbury-Smith, Robinson, Wheelwright,
& Baron-Cohen, 2005).

The EQ comprises 60 questions, 40 assessing
empathy and 20 filler (control) items (see Appendix C).
Filler items are 2, 3, 5, 7, 9, 13, 16, 17, 20, 23, 24, 30, 31,
33, 40, 45, 47, 51, 53 and 56. It has a maximum score of
80 and a minimum of zero. In our previous study using
this instrument we employed the EQ with n = 53
adults with AS or high-functioning autism (HFA).
Their mean EQ score was 20.4 (SD = 11.6), which was
significantly lower than n = 53 age and sex-matched
controls (mean EQ = 42.1, SD = 10.6). 80% of the
adults with AS/HFA scored equal to or less than 30 out
of 80, compared to only 10% of controls.

The AAA template is a Microsoft Excel document.
The patient’s response to each item on the AQ
and EQ is entered and a macro is then run to score the
AQ and EQ. The scores from these questionnaires
are automatically entered on to the front sheet of the
AAA. In addition, items from the AQ and EQ, which
the patient has endorsed, provide examples of the
symptoms in Sections A–D, so these are automatically
entered into the appropriate sections of the AAA. The
AAA in Appendix A shows a hypothetical patient
(Max Asperger) who has the maximum AQ score
(=50) and the minimum EQ score (0). This AAA
therefore includes all possible examples of symptoms
from the AQ and EQ. Note that the AQ and EQ do
not provide examples for all the symptoms.

During the clinical interview, the clinician then
seeks to validate the symptom examples provided by
the AQ and EQ by gathering examples from the
patient and their relative/informant and checks the
other symptoms and prerequisites. In our national
clinic, CLASS (Cambridge Lifespan Asperger Syndrome Service), patients are only seen if they
can provide an informant who can supply details of their
developmental history. Following this interview,
the AAA is completed by entering a 1 in the YES or
NO box for each symptom and prerequisite as
appropriate. There is space for the clinician to
include additional examples of symptoms and com-
ments. The number of symptoms and prerequisites
met are automatically totalled on the front sheet of the AAA. The AAA is completed by the clinician entering their diagnosis, if any.

VALIDATION STUDY

Sample

Forty-two patients in series attending the Cambridge Lifespan Asperger Syndrome Service (CLASS), a national diagnostic clinic for adults referred with suspected AS, were assessed using the AAA. The mean age of the sample was 34.1 years (SD = 10.6 years) and the sex ratio was 36:6 (or 9:1) (male:female). The occupational levels of the patients were mixed, varying from university researchers to unemployed and unskilled workers. Twelve of them were married or in long-term relationships, 3 were divorced or separated, and 27 were single. Nine (or 21.4%) had a history of violence. Finally 12 (28.6%) were living alone.

Method

The AAA was administered by a team comprising either a consultant clinical psychologist (SBC) or consultant psychiatrist (MWS) and a clinical psychologist (JR) in the team. Two professionals were involved in every assessment. Each patient was accompanied by at least one parent as an informant. In the case of those patients with a partner, the partner was also invited to the assessment to act as an additional informant. Each area in the AAA was probed, in order to collect a range of anecdotal examples of a specific kind, from the patient’s life, either from self-report or via the informant(s). Each AAA interview took on average 3 hours, including collecting early developmental history information about the patient, information about the patient’s educational history, occupational history, medical history, family factors, and to allow time for feedback on the diagnosis. The team of two clinicians filled in the AAA independently and where there was disagreement, this item was conservatively not scored. Each patient was therefore assigned a total AAA score, a DSM-IV score, an AQ score, an EQ score, and a AAA diagnosis. The AQ and EQ were sent by post in advance of the clinic visit, and filled in by the patient alone.

RESULTS

Of the 42 patients assessed, 31 (28 male, 3 female) were diagnosed with AS, 3 (all male) were diagnosed with HFA and 8 (5 male, 3 female) did not receive an autism spectrum diagnosis. Of the 8 (all male) who did not receive a AAA diagnosis, 3 met DSM-IV criteria for AS.

The mean AQ and EQ scores for the patients with and without a diagnosis of autism spectrum are shown in Table II. As would be predicted, the diagnosed group score significantly higher on the AQ, and significantly lower on the EQ, than the patients without a diagnosis (t = 3.1, p = .004 and t = –2.5, p = .015 respectively). The AS group’s scores on the AQ are well above the usual cut-off of 32, and below the usual cut-off on the EQ of 30. Table II also shows the mean AAA score for each of the two groups, the AS spectrum group scoring well above the minimum cut-off (10/18) whilst the non-AS group scored well below this.

DISCUSSION

The study reported here introduces a method for the diagnosis and assessment of adults with AS. It is easy to use and links with two screening instruments, the AQ (Autism Spectrum Quotient) (Baron-Cohen et al., 2001) and the EQ (Baron-Cohen & Wheelwright, 2004) thus making maximum use of information that can be collected prior to the clinic visit. Results confirm that the AAA diagnosis is more conservative than the DSM-IV diagnosis. Results also replicate earlier findings that adults with a clinical diagnosis of AS score above 32 on the AQ, and below 30 on the EQ. It is recommended that clinicians may wish to adopt the AAA in order to maintain a stricter definition of AS.

There is some debate over whether “impairments in imagination” should be diagnostic criteria for AS.

Table II. Mean AQ and EQ Scores (and SD’s) of Patients with and without Final Autism Spectrum Diagnosis

<table>
<thead>
<tr>
<th>Sample (n=42)</th>
<th>AQ score</th>
<th>EQ score</th>
<th>AAA score</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS/HFA diagnosed patients (n=34)</td>
<td>Mean</td>
<td>34.6</td>
<td>21.2</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>7.3</td>
<td>10.6</td>
</tr>
<tr>
<td>No AS/HFA diagnosis patients (n=8)</td>
<td>Mean</td>
<td>25.0</td>
<td>32.0</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>10.3</td>
<td>12.2</td>
</tr>
</tbody>
</table>
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since cases of individuals with AS who are gifted at drawing, film-making, and poetry are well-documented (e.g. Myers et al., 2005). It should be noted that in the AAA, “impairments in imagination” carry less weight in that only 1 symptom out of the minimum of 10 is required in this domain. Future studies could examine the value of including this one symptom or not.

We report this instrument at this stage of its development, because of the need for a quantitative, clinical method. However, we recognise that in future it will be useful to compare its performance relative to other approaches, such as an adapted form of the ADI-R (Le Couteur et al., 1989). Equally important will be a test of this and other instruments’ power to distinguish between AS and the milder manifestations described as the “broader phenotype” in family genetic studies of autism (Bailey et al., 1995).

Future studies will need to test the sensitivity and specificity of the AAA, as well as the linked screening instruments, by inclusion of psychiatric control groups. It is expected that in the medium term there will be little or no clinical need for the AAA, if most or all of the actual cases of AS are identified when they should be, namely in early childhood. Alternatively, there may be value in adapting the AAA for use in childhood if it is more conservative than alternative methods. But in the interim, whilst undiagnosed cases of AS exist in the adult population, both screening and diagnostic instruments of this kind will be needed. Finally, it is hoped that the extended and more conservative criteria for AS adopted by the AAA will contribute to the debate on what should constitute useful criteria for defining this syndrome.

ACKNOWLEDGEMENTS

We are grateful to the Three Guineas Trust for supporting the CLASS clinic (Cambridge Lifespan Asperger Syndrome Service) and to the Medical Research Council during the development of this work. We also acknowledge the support of Lifespan Healthcare NHS Trust, and its replacement, the Cambridgeshire and Peterborough Mental Health Partnership NHS Trust, for their support of the clinic.

APPENDIX A: ADULT ASPERGER ASSESSMENT (AAA)

<table>
<thead>
<tr>
<th>PATIENT DETAILS</th>
</tr>
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<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Sex:</td>
</tr>
<tr>
<td>Date of birth:</td>
</tr>
<tr>
<td>Appointment:</td>
</tr>
<tr>
<td>Age (in years):</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>SCREENING INSTRUMENT SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism-Spectrum Quotient (AQ) score:</td>
</tr>
<tr>
<td>Max = 50, and 80% of AS patients score 32 or more</td>
</tr>
</tbody>
</table>

| Empathy Quotient (EQ) score: | 0 |
| Max = 80, and 80% of AS patients score 30 or less |

<table>
<thead>
<tr>
<th>AAA DIAGNOSTIC CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to receive a diagnosis of AS, patients must have 3 or more symptoms in each of Sections A–C, at least 1 symptom from Section D and meet all 5 prerequisites in Sections E–I.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Domain</th>
<th>No. of symptoms required</th>
<th>No. of symptoms observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (max = 5)</td>
<td>Social</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>B (max = 5)</td>
<td>Obsessions</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>C (max = 5)</td>
<td>Communication</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>D (max = 3)</td>
<td>Imagination</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total (max = 18)</td>
<td></td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>E–I (max = 5)</td>
<td>Prerequisites</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
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## Diagnosis

**Asperger Syndrome**

### A. Qualitative impairment in social interaction

1. Marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction.  
   - **YES**  
   - **NO**  

2. Failure to develop peer relationships appropriate to developmental level.  
   - **YES**  
   - **NO**  

   - Prefers to do things on own rather than with others (AQ1)  
   - Finds self drawn more strongly to things than people (AQ15)  
   - Finds it hard to make new friends (AQ22)  
   - Does not enjoy social situations (AQ44)  
   - Finds friendships and relationships difficult so tends not to bother with them (EQ12)

3. No interest in pleasing others; no interest in communicating his/her experience to others, including: lack of spontaneous seeking to share enjoyment, interests or achievements with other people; lack of showing, bringing or pointing out objects of interest.  
   - **YES**  
   - **NO**  

4. Lack of social or emotional reciprocity (e.g. not knowing how to comfort someone; and/or lack of empathy).  
   - **YES**  
   - **NO**  

   - Is not concerned if late when meeting a friend (EQ11)  
   - Finds it hard to see why some things upset people so much (EQ21)  
   - Does not spot when someone in a group is feeling awkward or uncomfortable (EQ26)  
   - Is not upset by seeing people cry (EQ32)  
   - Makes decisions without being influenced by people's feelings (EQ39)  
   - Friends don't talk to them about problems as not considered understanding (EQ43)  
   - Can't sense when intruding (EQ44)  
   - Often described as insensitive, but can't see why (EQ48)  
   - If sees stranger in a group, thinks it's up to them to join in (EQ49)  
   - Stays emotionally detached when watching films (EQ50)  
   - Difficulty with tuning in to how others feel (EQ52)  
   - Does not get emotionally involved with friends' problems (EQ59)

5. Difficulties in understanding social situations and other people's thoughts and feelings.  
   - **YES**  
   - **NO**  

   - Can't keep track of conversations in social group (AQ10)  
   - Finds social situations difficult (AQ11)  
   - Finds it difficult to work out characters' intentions when reading a story (AQ20)  
   - Finds it difficult to read between the lines when talking with others (AQ27)  
   - Often the last to understand the point of a joke (AQ35)  
   - Finds it difficult to work out what someone is thinking/feeling from facial expression (AQ36)  
   - Finds it difficult to work out people's intentions (AQ45)  
   - Finds it hard to know what to do in social situations (EQ8)  
   - Can't pick up if someone says one thing but means another (EQ19)  
   - Finds it difficult to put self in someone else's shoes (EQ22)  
   - Not good at predicting how someone will feel (EQ25)  
   - Finds social situations confusing (EQ35)  
   - Difficulty with detecting whether someone is masking their true emotion (EQ55)  
   - Conscious works out the rules of social situations (EQ57)  
   - Not good at predicting what someone else will do (EQ58)
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B. Restricted repetitive and stereotyped patterns of behaviour, interests, and activities

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<th>YES</th>
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1. Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus.

- gets so strongly absorbed in one thing that loses sight of other things (AQ4)
- tends to have very strong interests which gets upset about if can’t pursue (AQ16)
- collects information about categories of things e.g. types of car (AQ41)

2. Apparently inflexible adherence to specific, nonfunctional routines or rituals.

- prefers to do things the same way over and over again (AQ2)
- gets upset if daily routine is disturbed (AQ25)

3. Stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting, or complex whole-body movements).

4. Persistent preoccupation with parts of objects/systems.

5. Tendency to think of issues as being black and white (e.g. in politics or morality), rather than considering multiple perspectives in a flexible way

C. Qualitative impairments in verbal or non-verbal communication

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1. Tendency to turn any conversation back on to self or own topic of interest.

- often keeps going on and on about the same thing (AQ39)
- in conversation, focuses more on own thoughts rather than listener’s (EQ15)
- tends to concentrate on talking about own experiences (EQ37)

2. Marked impairment in the ability to initiate or sustain a conversation with others.

- cannot see the point of superficial social contact, niceties, or passing time with others, unless there is a clear discussion point/debate or activity.

- does not enjoy social chit-chat (AQ17)
- frequently finds doesn’t know how to keep a conversation going (AQ26)
- when talking on the phone, is not sure when it is their turn to speak (AQ33)
- is not good at social chit-chat (AQ38)
- can’t tell if someone else wants to enter a conversation (EQ1)
- can’t work out what other person might want to talk about (EQ54)
3. Pedantic style of speaking, or inclusion of too much detail. 

4. Inability to recognise when the listener is interested or bored. Even if the person has been told not to talk about their particular obsessive topic for too long, this difficulty may be evident if other topics arise.

<table>
<thead>
<tr>
<th>YES</th>
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- doesn’t know if listener is getting bored
- can’t easily tell if someone is interested or bored with what they are saying

5. Frequent tendency to say things without considering the emotional impact on the listener (faux pas).

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<th>YES</th>
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- often told has been impolite even though they think they have been polite
- not a good diplomat
- often finds it difficult to judge if something is rude or polite
- doesn’t think it’s their problem if they offend someone
- if asked opinion about new haircut, would answer truthfully even if didn’t like it
- can’t always see why someone should have felt offended by a remark
- is very blunt without being intentionally rude
- sometimes told has gone too far with teasing

**D. Impairments in imagination**

1. Lack of varied, spontaneous make believe play appropriate to developmental level.

<table>
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<tr>
<th>YES</th>
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- as a child, did not enjoy playing games which involved pretending with other children
- finds it difficult to imagine what it would be like to be someone else
- finds it difficult now to play games with children that involve pretending

2. Inability to tell, write or generate spontaneous, unscripted or un plagiarised fiction

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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</table>

- finds making up stories difficult

3. Either lack of interest in fiction (written, or drama) appropriate to developmental level or interest in fiction is restricted to its possible basis in fact (e.g. science fiction, history, technical aspects of film).

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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</table>

- doesn’t particularly enjoy reading fiction
- would rather go to a museum than the theatre
The Adult Asperger Assessment

E. Prerequisites

1. Delays or abnormal functioning in each of A–D occur across development.  

   YES NO

   1

2. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.  

   YES NO

   1

3. There is no clinically significant general delay in language (e.g. single words used by age 2 years, communicative phrases used by age 3 years).  

   YES NO

   1

4. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction or skills linked to social awareness e.g. personal hygiene).  

   YES NO

   1

5. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.  

   YES NO

   1

APPENDIX B: THE AQ

1. I prefer to do things with others rather than on my own.  

   definitely agree slightly agree slightly disagree definitely disagree

2. I prefer to do things the same way over and over again.  

   definitely agree slightly agree slightly disagree definitely disagree

3. If I try to imagine something, I find it very easy to create a picture in my mind.  

   definitely agree slightly agree slightly disagree definitely disagree

4. I frequently get so strongly absorbed in one thing that I lose sight of other things.  

   definitely agree slightly agree slightly disagree definitely disagree

5. I often notice small sounds when others do not.  

   definitely agree slightly agree slightly disagree definitely disagree

6. I usually notice car number plates or similar strings of information.  

   definitely agree slightly agree slightly disagree definitely disagree

7. Other people frequently tell me that what I’ve said is impolite, even though I think it is polite.  

   definitely agree slightly agree slightly disagree definitely disagree

8. When I’m reading a story, I can easily imagine what the characters might look like.  

   definitely agree slightly agree slightly disagree definitely disagree

9. I am fascinated by dates.  

   definitely agree slightly agree slightly disagree definitely disagree

10. In a social group, I can easily keep track of several different people’s conversations.  

    definitely agree slightly agree slightly disagree definitely disagree

11. I find social situations easy.  

    definitely agree slightly agree slightly disagree definitely disagree

12. I tend to notice details that others do not.  

    definitely agree slightly agree slightly disagree definitely disagree

13. I would rather go to a library than a party.  

    definitely agree slightly agree slightly disagree definitely disagree


    definitely agree slightly agree slightly disagree definitely disagree

15. I find myself drawn more strongly to people than to things.  

    definitely agree slightly agree slightly disagree definitely disagree

16. I tend to have very strong interests which I get upset about if I can’t pursue.  

    definitely agree slightly agree slightly disagree definitely disagree

17. I enjoy social chit-chat.  

    definitely agree slightly agree slightly disagree definitely disagree

18. When I talk, it isn’t always easy for others to get a word in edgeways.  

    definitely agree slightly agree slightly disagree definitely disagree

19. I am fascinated by numbers.  

    definitely agree slightly agree slightly disagree definitely disagree

20. When I’m reading a story, I find it difficult to work out the characters’ intentions.  

    definitely agree slightly agree slightly disagree definitely disagree

21. I don’t particularly enjoy reading fiction.  

    definitely agree slightly agree slightly disagree definitely disagree

22. I find it hard to make new friends.  

    definitely agree slightly agree slightly disagree definitely disagree

23. I notice patterns in things all the time.  

    definitely agree slightly agree slightly disagree definitely disagree

24. I would rather go to the theatre than a museum.  

    definitely agree slightly agree slightly disagree definitely disagree

25. It does not upset me if my daily routine is disturbed.  

    definitely agree slightly agree slightly disagree definitely disagree
26. I frequently find that I don’t know how to keep a conversation going. & definitely agree & slightly agree & slightly disagree & definitely disagree
27. I find it easy to “read between the lines” when someone is talking to me. & definitely agree & slightly agree & slightly disagree & definitely disagree
28. I usually concentrate more on the whole picture, rather than the small details. & definitely agree & slightly agree & slightly disagree & definitely disagree
29. I am not very good at remembering phone numbers. & definitely agree & slightly agree & slightly disagree & definitely disagree
30. I don’t usually notice small changes in a situation, or a person’s appearance. & definitely agree & slightly agree & slightly disagree & definitely disagree
31. I know how to tell if someone listening to me is getting bored. & definitely agree & slightly agree & slightly disagree & definitely disagree
32. I find it easy to do more than one thing at once. & definitely agree & slightly agree & slightly disagree & definitely disagree
33. When I talk on the phone, I’m not sure when its my turn to speak. & definitely agree & slightly agree & slightly disagree & definitely disagree
34. I enjoy doing things spontaneously & definitely agree & slightly agree & slightly disagree & definitely disagree
35. I am often the last to understand the point of a joke. & definitely agree & slightly agree & slightly disagree & definitely disagree
36. I find it easy to work out what someone is thinking or feeling just by looking at their face. & definitely agree & slightly agree & slightly disagree & definitely disagree
37. If there is an interruption, I can switch back to what I was doing very quickly & definitely agree & slightly agree & slightly disagree & definitely disagree
38. I am good at social chit-chat. & definitely agree & slightly agree & slightly disagree & definitely disagree
39. People often tell me that I keep going on and on about the same thing. & definitely agree & slightly agree & slightly disagree & definitely disagree
40. When I was young, I used to enjoy playing games involving pretending with other children. & definitely agree & slightly agree & slightly disagree & definitely disagree
41. I like to collect information about categories of things (e.g. types of car, types of bird, types of train, types of plant, etc.). & definitely agree & slightly agree & slightly disagree & definitely disagree
42. I find it difficult to imagine what it would be like to be someone else. & definitely agree & slightly agree & slightly disagree & definitely disagree
43. I like to plan any activities I participate in carefully. & definitely agree & slightly agree & slightly disagree & definitely disagree
44. I enjoy social occasions. & definitely agree & slightly agree & slightly disagree & definitely disagree
45. I find it difficult to work out people’s intentions. & definitely agree & slightly agree & slightly disagree & definitely disagree
46. New situations make me anxious. & definitely agree & slightly agree & slightly disagree & definitely disagree
47. I enjoy meeting new people. & definitely agree & slightly agree & slightly disagree & definitely disagree
48. I am a good diplomat. & definitely agree & slightly agree & slightly disagree & definitely disagree
49. I am not very good at remembering people’s date of birth. & definitely agree & slightly agree & slightly disagree & definitely disagree
50. I find it very easy to play games with children that involve pretending. & definitely agree & slightly agree & slightly disagree & definitely disagree


APPENDIX C: THE EQ

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<thead>
<tr>
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<tbody>
<tr>
<td>1. I can easily tell if someone else wants to enter a conversation.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>2. I prefer animals to humans.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>3. I try to keep up with the current trends and fashions.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>4. I find it difficult to explain to others things that I understand easily, when they don’t understand it first time.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>5. I dream most nights.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>6. I really enjoy caring for other people.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>7. I try to solve my own problems rather than discussing them with others.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>8. I find it hard to know what to do in a social situation.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>9. I am at my best first thing in the morning.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
</tr>
<tr>
<td>10. People often tell me that I went too far in driving my point home in a discussion.</td>
<td>strongly agree</td>
<td>slightly agree</td>
<td>slightly disagree</td>
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<tr>
<td>11.</td>
<td>It doesn’t bother me too much if I am late meeting a friend.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>12.</td>
<td>Friendships and relationships are just too difficult, so I tend not to bother with them.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>13.</td>
<td>I would never break a law, no matter how minor.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>14.</td>
<td>I often find it difficult to judge if something is rude or polite.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>15.</td>
<td>In a conversation, I tend to focus on my own thoughts rather than what my listener might be thinking.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>16.</td>
<td>I prefer practical jokes to verbal humour.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>17.</td>
<td>I live life for today rather than the future.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>18.</td>
<td>When I was a child, I enjoyed cutting up worms to see what would happen.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>19.</td>
<td>I can pick up quickly if someone says one thing but means another.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>20.</td>
<td>I tend to have very strong opinions about morality.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>21.</td>
<td>It is hard for me to see why some things upset people so much.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>22.</td>
<td>I find it easy to put myself in somebody else’s shoes.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>23.</td>
<td>I think that good manners are the most important thing a parent can teach their child.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>24.</td>
<td>I like to do things on the spur of the moment.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>25.</td>
<td>I am good at predicting how someone will feel.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>26.</td>
<td>I am quick to spot when someone in a group is feeling awkward or uncomfortable.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>27.</td>
<td>If I say something that someone else is offended by, I think that that’s their problem, not mine.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>28.</td>
<td>If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn’t like it.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>29.</td>
<td>I can’t always see why someone should have felt offended by a remark.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>30.</td>
<td>People often tell me that I am very unpredictable.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>31.</td>
<td>I enjoy being the centre of attention at any social gathering.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>32.</td>
<td>Seeing people cry doesn’t really upset me.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>33.</td>
<td>I enjoy having discussions about politics.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>34.</td>
<td>I am very blunt, which some people take to be rudeness, even though this is unintentional.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>35.</td>
<td>I don’t tend to find social situations confusing.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>36.</td>
<td>Other people tell me I am good at understanding how they are feeling and what they are thinking.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>37.</td>
<td>When I talk to people, I tend to talk about their experiences rather than my own.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>38.</td>
<td>It upsets me to see an animal in pain.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>39.</td>
<td>I am able to make decisions without being influenced by people’s feelings.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>40.</td>
<td>I can’t relax until I have done everything I had planned to do that day.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>41.</td>
<td>I can easily tell if someone else is interested or bored with what I am saying.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>42.</td>
<td>I get upset if I see people suffering on news programmes.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>43.</td>
<td>Friends usually talk to me about their problems as they say that I am very understanding.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>44.</td>
<td>I can sense if I am intruding, even if the other person doesn’t tell me.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>45.</td>
<td>I often start new hobbies but quickly become bored with them and move on to something else.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>46.</td>
<td>People sometimes tell me that I have gone too far with teasing.</td>
<td>strongly agree</td>
<td>slightly agree</td>
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<tr>
<td>47.</td>
<td>I would be too nervous to go on a big rollercoaster.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>48.</td>
<td>Other people often say that I am insensitive, though I don’t always see why.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>49.</td>
<td>If I see a stranger in a group, I think that it is up to them to make an effort to join in.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>50.</td>
<td>I usually stay emotionally detached when watching a film.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>51.</td>
<td>I like to be very organised in day to day life and often make lists of the chores I have to do.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>52.</td>
<td>I can tune into how someone else feels rapidly and intuitively.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>53.</td>
<td>I don’t like to take risks.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>54.</td>
<td>I can easily work out what another person might want to talk about.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>55.</td>
<td>I can tell if someone is masking their true emotion.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>56.</td>
<td>Before making a decision I always weigh up the pros and cons.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>57.</td>
<td>I don’t consciously work out the rules of social situations.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>58.</td>
<td>I am good at predicting what someone will do.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>59.</td>
<td>I tend to get emotionally involved with a friend’s problems.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
<tr>
<td>60.</td>
<td>I can usually appreciate the other person’s viewpoint, even if I don’t agree with it.</td>
<td>strongly agree</td>
<td>slightly agree</td>
</tr>
</tbody>
</table>


REFERENCES


The Adult Asperger Assessment


