Assessment and diagnosis of Autism

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Pervasive developmental disorders

- Communication
- Socialisation
- Restriction of interest

The autistic triad (Lorna Wing)

Imagination  Communication  Social interaction

PREVALENCE OF AUTISTIC SPECTRUM DISORDERS (Baird et al. 2006)

- 'Narrow' autism 25/10,000
- Childhood autism 39/10,000
- Other ASDs 77/10,000
- Total ASD 116/10,000

Why do it?

- Probably benefits severe children
- Probably benefits moderate children
- What about high functioning children?
  - Child themselves
  - Parents
  - School

BUT?

- Are we over diagnosing?
- Medicalisation of educational issues
- Inability to tolerate difference
- Does educational management need a medical diagnosis?
- Descriptions not diagnoses?
- Beware collusion with parents
You can use the classification systems:

- ICD 10 - The pervasive developmental disorders
- DSM-IV – Autistic disorder

ICD-10 Criteria for "Childhood Autism"

A. Abnormal or impaired development is evident before the age of 3 years in at least one of the following areas:
   1. receptive or expressive language as used in social communication;
   2. the development of selective social attachments or of reciprocal social interaction;
   3. functional or symbolic play.

B. A total of at least six symptoms from (1), (2) and (3) must be present, with at least two from (1) and at least one from each of (2) and (3)

1. Qualitative impairment in social interaction are manifested in at least two of the following areas:
   a. failure adequately to use eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction;
   b. failure to develop a (in a manner appropriate to mental age, and despite ample opportunities) peer relationships that involve a mutual sharing of interests, activities and emotions;
   c. lack of socio-emotional reciprocity as shown by an impaired or deviant response to other people’s emotions; or lack of modulation of behavior according to social context; or a lack of integration of social, emotional, and communicative behaviors;
   d. lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. a lack of showing, bringing, or pointing out to other people objects of interest to the individual).

2. Qualitative abnormalities in communication as manifest in at least one of the following areas:
   a. delay in or total lack of, development of spoken language that is not accompanied by an attempt to compensate through the use of gestures or mime as an alternative mode of communication (often preceded by a lack of communicative babbling);
   b. relative failure to initiate or sustain conversational interchange (at whatever level of language skill is present), in which there is reciprocal responsiveness to the communications of the other person;
   c. stereotype and repetitive use of language or idiosyncratic use of words or phrases;
   d. lack of varied spontaneous make-believe play or (when young) social imitative play.

Diagnostic Criteria for Autistic Disorder DSM-IV

(The following is from Diagnostic and Statistical Manual of Mental Disorders: DSM IV- TR)

1. qualitative impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction
2. failure to develop peer relationships appropriate to developmental level
3. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people, (e.g. by a lack of showing, bringing, or pointing out objects of interest to other people)
4. lack of social or emotional reciprocity (note: in the description, it gives the following as examples: not actively participating in simple social play or games, preferring solitary activities, or involving others in activities only as tools or “mechanical” aids)

The National Autism Plan For Children (NAPC)

- General developmental assessment
- Multi-agency, multi-disciplinary assessment
- Diagnosis of ASD
- Providing a baseline assessment of skills and difficulties for both the child and the family

Essential components for a complete assessment will require:

- All professionals in the multidisciplinary team involved in the diagnostic assessment of ASD require specific training
- Professionals will need to train in the use of specific assessment tools
- Does not specifically recommend which tools but mentions them

Essential components for a complete multi-agency assessment (MFA):

1. Existing information from all settings should be gathered.
2. A specific ASD development and family history should be taken. No evidence exists of which is recommended. A particular family, however, would be taken to be an experienced team familiar with recognized ASD testing. In general, this may be useful to use a consensus statement such as the Autism Diagnostic Interview (ADI) or the Autism Diagnostic Schedule for Social and Communication Disorders (ADOS). If the present state of the examination is not biologically linked, thus a medical history and examination should be completed.
3. Physical examination should also be done no matter what. This should include tools such as the Social Desirability Questionnaire Schedule (SADS). The focus of the assessment is the primary condition, though children should include their functioning in an educational setting.
4. A specific assessment should be performed. This is appropriate for either clinical or an educational psychologist role (in special education). A child with special needs and language as an assessment and language abilities is not rated with ASD training.
5. For an assessment of the needs and strengths of all family members should be gathered.
6. A full physical examination should be performed for all important medical tests.
7. Quiz of kut and well. In addition, the number of years and to the community language and English and ABA analysis are the only current tests recommended (Grade A). Clinical evidence of accessible medical conditions such as autism should be sought. If more than two are not recommended. The evidence base for all assessments should be fully evaluated in person.
8. Other assessments may be required to determine general muscle weakness, motor planning, and co-ordination difficulties, and oral motor problems.
Diagnosis

- Diagnostic history
  - ADI
  - DISCO
  - 3D
  - Lewisham
- Examination
- Blood tests
- ADOS
- SLT
- Early Years/nursery/school

Interviews

- Short
  - Social communication questionnaire
  - Lewisham
- Medium
  - 3Di (computer based)
- Long
  - ADI-R
  - DISCO
  - All interviews subject to parental recall and bias

Lewisham interview

COMMUNICATION SKILLS

(Concerns now or in the past)

Interest in communication
How does your child tell/show you what s/he wants?
Does your child
Use your hand as a toy?
Get things for self?
Point to request? (CHAT 18-24m)
Point to share interest? (CHAT 18-24m)
Follow a pointed finger?
Initiate communication spontaneously?
Bring toys or books to show you or share?
Can your child request help? How?

Typical health district

- For an under 16 population of 55,000
  - About 120 new referrals to Child Health*
  - Majority are talking preschoolers
  - Current therapy caseload is about 300
  - Older and more high functioning tend to go to CAMHs
- Short interview, ADOS and feedback take 3 appointments, discussion with other professionals, report writing
  - Total 3.5 – 4 hours

* Over 4 times the NAPC estimate
Typical health district

- ADOS not really necessary if diagnosis is obvious and consensual
- Long interviews
  - ADI-R
  - DISCO
  - Only really practical for disagreement, second opinions and tertiary assessment
- Computer based interviews (3Di)
  - Only useful for higher functioning over 6

Investigations

- Karyotype
- Fragile X
- CK in preschool boys

Epilepsy:
- EEG
- MRI

Autism Diagnostic Observation Schedule

- Objective
- Structured
- Social ‘presses’
- Language & communication
- Reciprocal social interaction
- Play
- Stereotyped behaviours/restricted interests
- Other abnormal behaviours

ADOS

- 4 modules based on language level
  - 1. single word
  - 2. phrase
  - 3. relationships
  - 4. independence
- Scoring
  - Autism
  - ASD
- Relates directly to ADI-R

Four modules each requiring 35-40 minutes to administer (and as long again to score):

- Module 1
  - Free play
  - Response to name
  - Response to joint attention
  - Bubble play
  - Anticipation of a routine with objects
  - Responsive social smile
  - Functional and symbolic imitation
  - Birthday party
  - Snack

- Module 2
  - Construction task
  - Make-believe play
  - Joint interactive play
  - Conversation
  - Response to joint attention
  - Demonstration task
  - Description of a picture
  - Looking at a book
  - Free play
  - Response to name
  - Birthday party
  - Snack
  - Bubble play
  - Anticipation of a routine with objects
• Module 3
  – Construction task
  – Make-believe play
  – Joint interactive play
  – Demonstration task
  – Description of a picture
  – Telling a story from a book
  – Cartoons
  – Reporting a non-routine event/conversation
  – Emotions
  – Social difficulties/annoyance
  – Break
  – Friends/loneliness/marriage
  – Creating a story

Asperger syndrome
High functioning

• Australian Asperger questionnaire (Atwood)

• Gillberg and Gillberg criteria

THE AUSTRALIAN SCALE OF ASPERGER’S SYNDROME
Primary age range
Scoring: normally expected (rarely) = 0, frequently = 6

A. SOCIAL AND EMOTIONAL ABILITIES
1. Does the child lack an understanding of how to play with other children? For example, unaware of the unwritten rules of social play?

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2. When free to play with other children, such as school lunchtime, does the child avoid social contact with them? For example, finds a secluded place or goes to the school library?

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3. Does the child appear unaware of social conventions or codes of conduct and make inappropriate actions and comments? For example, making a personal comment to someone but the child seems unaware of how the comment could offend.

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DIAGNOSTIC CRITERIA FOR ASPERGER SYNDROME
(Gillberg and Gillberg 1989)
1. Severe impairment in reciprocal social interaction (at least 2 of the following):
   - Inability to share or develop with others
   - Lack of social interest
   - Loss of eye contact
   - Lack of interaction

2. At least 2 of the following:
   - Repetitive stereotyped patterns of behaviour
   - Stereotyped mannerisms
   - Inability to perform
   - Inability to imitate

3. Impaired socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others
   - Failures in others

4. Difficulties in socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others

5. Difficulties in socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others

6. Difficulties in socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others

7. Difficulties in socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others

8. Difficulties in socialisation (at least one of the following):
   - Difficulties in social interactions
   - Failures in self
   - Failures in others
   - Failures in others
4. Speech and language problems (at least 3 of the following):

- Impairment of comprehension including misinterpretations of literal/implied meanings
- Odd prosody, peculiar voice characteristics
- Formal, pedantic language
- Delayed development

5. Nonverbal communication problems (at least one of the following):

- Peculiar, stiff gaze
- Inappropriate expression
- Limited facial expression
- Clumsy/gauche body language
- Limited use of gestures
- Limited facial expression
- Inappropriate expression
- Limited, stiff gaze

6. Motor clumsiness, poor performance on Neurodevelopmental examination

The best way of diagnosing?

- Experience
- Experience
- Experience!