

What are Autism Spectrum Disorders?

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What's in a name?

(Definitions)

Pervasive Developmental Disorders (PDDs) and Autism Spectrum Disorders (ASDs)

Back in 1980, the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-III) introduced the diagnostic term: Pervasive Developmental Disorder (PDD) to cover a group of disorders of development including autism, which presented with abnormalities and impaired functioning across the social, cognitive, emotional and language domains. These impairments were present from the first few years of life. Pervasive Developmental Disorders are now described in the Diagnostic and Statistical Manual of Mental Disorders Text Revised edition (DSM-IV-TR, 2000). This is the term used in a formal diagnostic assessment. The newer term, Autism Spectrum Disorders (ASDs) is currently used but its definition lacks the level of international agreement attached to Pervasive Developmental Disorders.

Currently, Autism Spectrum Disorder's (ASDs) usually refers to a group of different conditions (Autism, Asperger's Disorder and PDD-NOS), a similar concept to PDD. However, others use the term ASDs to refer to a unitary concept of autism conveying a notion of severity from the aloof intellectually delayed child with 'Kanner' type autism at the severe end through to intelligent, less severely affected children with Asperger's Disorder at the other end of the spectrum. Some clinicians describe children as "on the spectrum" which is confusing for parents and service providers. A comprehensive multi disciplinary assessment is essential in order that a specific diagnosis can be made (Tonge, 2002).

In this fact sheet the term Autism Spectrum Disorders (ASDs) is used to refer to children meeting criteria for Autistic Disorder or Asperger's Disorder or Pervasive Developmental Disorder – Not Otherwise Specified as defined in the DSM-IV-TR (2000).

Autistic Disorder (autism)

American psychiatrist Dr. Leo Kanner first described the core features of autism in his paper of 1943 in which eleven children with 'autistic disturbances of affective contact' showed a distinctive pattern of symptoms: inability to relate to people and situations; failure to use language for the purpose of communication; obsessive desire for the maintenance of sameness in the environment (Kanner, 1943).

To receive a diagnosis of autism a child must have significant deficits in social interaction, communication and present with restricted and repetitive play interests and behaviour, with onset prior to the age of 36 months. Multi-disciplinary assessment teams use the DSM-IV-TR when making a diagnosis of autism. Overall a child must present with at least 6 symptoms from the 3 core areas. Some children with autism will have just 6 symptoms; others will have many more, and all with different combinations of difficulties, which is one of the reasons why children with autism can present so differently.

Three Core Features of Autistic disorder (autism)

1. Impaired Social Interaction

Progressive abnormalities in interpersonal relationships with:

- Reduced responsiveness to or interest in people; may appear aloof and usually have an impaired ability to relate to or empathise with others
- Impaired ability in non verbal social relating such as: impaired use of facial expression, eye contact and difficulty with use of gestures such as waving goodbye and pointing to indicate social interest
- The ability to make friends is absent or distorted; unable to engage in reciprocal social play with other children



2. Delayed and Disordered Communication

Delayed language or lack of speech - not compensated for by use of gesture and mime

Stereotyped and repetitive use of languages such as:

- Echolalia- the repetition of words and phrases (often out of context). The child may immediately repeat words and phrases or repeat previously heard favourite phrases such as advertising jingles or dialogue from movies.
- Repetitive questioning and rituals and the creation of their own words for objects and people (neologisms)

Difficulties with the social use of language such as:

- unable to initiate or sustain a conversation, or speaking too loudly or too softly for the context and using an unusual accent or tone

Lack of a range of varied, spontaneous social imitative or pretend play

- Older children may engage in what appears to be imaginative play but it is usually the repetition of learned activities or scenes from favourite videos

3. Ritualistic and stereotype interests and behaviours

Preoccupations which are intense and focused, for example:

- Fascination with a particular object or topic - dinosaurs, football fixtures or weather forecasts and repeated questions or talking in a monologue about favourite topics even if the context is inappropriate

Non-functional rituals and rigid routines such as:

- Repetitive play- lining up, stacking or sorting objects by colour or shape lacking imagination and social elaboration. Resistance to change in routine or the environment. The child may become extremely distressed if there is a new teacher at preschool, if furniture in the house is rearranged or if the child needs to wear new clothes. The child may try to control the play of other children and rigidly apply their own inflexible version of the rules

Repetitive motor mannerisms such as - hand flapping, finger flicking and tiptoe walking

Preoccupation with parts of objects such as:

Visually attentive, closely watching spinning wheels, fascination with shadows or reflections

Autism – change over time

Autism does change over time. The young pre-school aged child may exhibit a marked lack of interest in others, have no capacity for empathy, and have absent or severely delayed speech and communication. Marked resistance to change, restricted interests and stereotyped movements may develop or become more noticeable after 3 years of age. Many parents find the pre-school years most difficult to manage but, with early intervention and education, improvement can be expected. In response to education and therapy, primary school aged children usually become more socially responsive and communication skills increase. Self-stimulatory behaviours, problems in coping with change and transitions and disruptive or compulsive behaviour may increase at this time. Adolescence can also bring the development of symptoms such as aggressive and oppositional or obsessive compulsive behaviour, and an increase in anxiety, tension and mood disturbance. Depressive illness is not uncommon and is probably due to a combination of the development of some degree of insight as well as hormonal and central nervous system functional changes (Prior & Tonge, 1990; Wing, 1988).

Asperger's Disorder (AD)

Independent of Kanner, in 1945, Austrian Psychiatrist Hans Asperger published a paper that reported on a group of children and adolescents with what he described as "autistic psychopathy" (Asperger, 1994). These school-aged boys had problems with social interaction, unusual and intense interests, behavioural problems and clumsiness, but no significant delays in cognitive or language development. Since Asperger's paper was translated from German to English by Uta Frith in 1991 there has been increasing interest and debate over whether Asperger's Disorder is a separate disorder to Autism. The relationship between the two disorders has remained unresolved (Woodbury-Smith & Volkmar, 2009).

DSM-IV-TR (2000) provides criteria for a differential diagnosis of Asperger's Disorder and Autistic Disorder based on exclusionary criteria, that for AD there is (i) no clinically significant general delay in language and (ii) no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction), and curiosity about the environment in childhood. The two core areas of impairment in AD are impaired social interaction and restricted repetitive and stereotyped patterns of behaviour, interests and activities. The disorder must cause clinically significant impairment in social, occupational, or other areas of functioning, and

finally, the child must not meet criteria for another PDD or schizophrenia (DSM-IV-TR, APA, 2000).

There are currently many definitions of AD in the literature, in addition to those currently outlined in DSM-IV-TR and ICD-10 (Volkmar et al., 2009; Szatmari, 2011). Wing (1981) described AD as part of the “autistic continuum” with others sharing the view that AD is at the “less severe” end of the clinical spectrum (Frith, 1991; Manjiviona & Prior, 1999). An alternative and more recent view is that there is clinical, neurobiological, neurobehavioural, and neuropsychological evidence that AD and autism should be seen as separate clinical conditions (Beaumont and Sofronoff, 2008; Brewer et al., 2006; Kaland et al., 2008; Lotspeich et al., 2004; May et al., 2011; McAlanon et al., 2009; Rinehart et al., 2002; Rinehart et al., 2005; Rinehart and Tonge, 2007; Tonge et al., 1999). Research also indicates that children with autistic disorder have cerebellar based subtle motor and gait problems compared to children with AD (Rinehart et al., 2005) and there are also structural brain differences between the two diagnostic groups (McAlanon, 2009; Schultz and Robins, 2005) which justifies their diagnostic separation. Kugler (1998) proposed that acknowledging the differences between the conditions “might have very real implications for causation, course, response to intervention and outcome”.

Features of Asperger’s Disorder

- Acquisition of language follows a normal or even accelerated pattern, but content of speech is abnormal — pedantic, and may centre on one or two favoured topics and the social use of language (pragmatics) is impaired
- Little facial expression, vocal intonation may be monotonous and tone may be inappropriate
- Impairment in two-way social interaction including an inability to understand the rules governing social behaviour
- Problems with social comprehension despite superior verbal skills
- Very rigid, prefer structure
- Well developed verbal memory skills, absorb facts easily, generally good level of performance at maths and science
- Highly anxious with a dislike of any form of criticism or imperfection
- Motor skills are often impaired with general gross motor clumsiness and difficulty with fine motor skills including hand writing

Because language develops and cognitive skills are not delayed, AD tends to be diagnosed later than autism in young children. Neither ICD-10 nor DSM-IV stipulates the criteria for age of onset as they do for autism. However, in his original paper, Asperger described children as having difficulties by the age of two. Parents of young children with autism often recognise problems with behaviour and in particular, language development by about 18 months to two years of age. Because children with AD do not have delayed early language, or problems with cognitive development, there are few early signs that all is not well. It is more usual for parents to become concerned about their child’s emerging unusual or odd behaviour and social development but these tend to be identified later, usually from about 3 to 4 years of age. Diagnosis of AD may not occur until the child has attended pre-school or school. This is probably because the child’s social and behavioural problems become more noticeable when the child is seen with peers in a more structured social setting where there are more demands for social interaction.

Children diagnosed with AD do not have an intellectual disability (IQ >70), yet may have a scattered profile of abilities with strengths in verbal skills but poorer non verbal performance skills and motor clumsiness. Children with AD are therefore likely to have more right brain functional problems and children with autistic disorder more left brain (language based) cognitive difficulties (Rinehart et al., 2002).

Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)

This diagnosis is used when other diagnostic criteria are not met, for example, children who do not fit diagnostic criteria because of age of onset, or who do not have the key symptoms described for other PDD diagnoses. This category is somewhat open to interpretation by clinicians because of the lack of clear criteria. Despite this it is generally used to describe children such as those who may have global developmental delay and some symptoms of autism, or who fail to meet the strict criteria for autism. According to DSM-IV-TR, children diagnosed with PDD-NOS must meet the criteria for severe and pervasive impairment in: reciprocal social interaction associated with impaired verbal or non verbal communication skills or with the presence of stereotyped behaviour, interests and activities (DSM-IV-TR).

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