

Autism: An overview

School resources

This resource provides a brief overview of autism including the defining characteristics, the early signs of autism, the identification and diagnostic process, and the importance of early intervention.

What is autism?

Autism, autism spectrum disorder, or ASD, is a type of neurodevelopmental disorder. This means that autism is present early in life and it is thought to be due to differences in the brain. Recent estimates suggest that as many as one in 59 children may be diagnosed with autism. Males are currently three to four times more likely to be diagnosed with autism than females, although research suggests that females may be underdiagnosed.

Children with autism have difficulty with social communication and interacting with others. They also have restricted and repetitive behaviours, interests, and activities. If a child has trouble with social communication and interaction, but does not have restricted and repetitive behaviours, interests and activities (or vice versa), then he or she does not have autism. Children with autism may have some of the following characteristics:¹

Social communication and interaction

Difficulty with:

- **'Social-emotional reciprocity'**
For example, difficulty sharing emotions, difficulty initiating conversations, a lack of response to others' attempts to interact
- **Non-verbal communication**
For example, limited eye contact, limited use of gestures, limited/atypical facial expressions
- **Developing and maintaining relationships**
For example, difficulty adjusting behaviour to suit the context, difficulty making friends, lack of interest in peers

Restrictive and repetitive behaviours, interests, and activities

- **Repetitive motor movements, use of objects, or speech**
For example, lining up toys, repetitively copying other's speech, hand mannerisms
- **Insistence on sameness, inflexible routines**
For example, becoming very upset about small changes, trouble transitioning between activities, needing to follow the same route every day
- **Restricted fixated interests**
For example, fascination with unusual objects, fascination with cars, dinosaurs etc.
- **Over or under-reactivity to sensations**
For example, does not notice pain or temperature, dislike of specific sounds or textures

Most children who are diagnosed with autism also have one or more other medical or behavioural conditions. This could include intellectual disability, language disorder, self-injurious behaviour, epilepsy,

attention deficit hyperactivity disorder, mood disorder, sleep problems, and/or issues with eating and drinking. When working with children with autism, it is important to be informed about any co-occurring conditions.

Without appropriate support, the characteristics associated with autism may make it harder for a child to function in social situations, at school, and/or at home. Autism is a broad spectrum, meaning that some children may require a lot more support than others. The amount and type of support that each child needs will also change as they develop. It is important to remember that children with autism are just as different from one another as any other child. As the saying goes: 'if you've met one person with autism, you've met one person with autism'.

The way that autism is defined and described has changed a great deal since it was first identified in the 1940s (Kanner, 1943).² For example, Asperger's syndrome was a term for individuals who had difficulties with social interaction and repetitive and restrictive behaviours, interests, and activities but did not have cognitive or language delay. These individuals would now receive a diagnosis of autism spectrum disorder rather than Asperger's syndrome. It is likely that the definition and defining characteristics of autism will change as researchers learn more about this condition.

Strengths and abilities

Many of characteristics associated with autism can be viewed as strengths. For example, about 10% of children with autism are described as 'savants', which means that they have outstanding skill or knowledge in one or more areas. These areas include music, mathematics, art, or memory for things like dates, places, or facts. Children with autism who are not savants but do have special interests often know a lot more about this topic than their peers. This can be beneficial, for example, a child who is very interested in computers could go on to have a successful career in this area. Some children with autism also have excellent attention to detail, which may be linked with increased sensitivity to certain sounds and textures. Many very successful people have a diagnosis of autism spectrum disorder. Well known examples include Temple Grandin, an author, public speaker, and professor of animal science, Susan Boyle, a Scottish singer who has sold more the 14 million albums, and Satoshi Tajiri, the creator of Pokémon.

Myths and misconceptions about autism

Autism has received a lot of attention in popular culture and in the media. This has led to the creation and spread of several myths and misconceptions. These are some examples of beliefs about autism which are not supported by research:

- **Children with autism are not interested in social interaction**

Many children with autism do have difficulties with the nuances of social interaction but this does not mean that they do not want to be social or make friends. In fact, many individuals with autism do report that they have friends, and also report feeling lonely if they do not have friends.

- **Children with autism don't have empathy**

Some children with autism may struggle to interpret and understand others' emotions because of difficulty reading body language, facial expressions and non-verbal cues. However, this does not mean that they are unable to empathise with other people's emotional experiences. Research suggests that, when emotions are communicated more directly, individuals with autism may be just as likely to feel empathy for others.

- **All children with autism are savants**

As previously mentioned, most children with autism are not savants, meaning that they do not have outstanding skill or knowledge in any particular area. This stereotype has probably spread due to popular movies such as Rain Man. Even though most children with autism are not savants, they have unique strengths and challenges, just like every other child.

- **Vaccines cause autism**

This is an extremely damaging and completely unsupported myth. The original study which claimed that vaccines cause autism was fundamentally flawed and was withdrawn from the journal in which it was published. At least 15 well-designed studies, involving more than 1.8 million children, have found that there is no link between autism and vaccines.

Early signs of autism

Most research suggests that signs of autism are often apparent in children under the age of one, and that most children can be reliably diagnosed with autism before the age of two. For children under the age of two, there are several behaviours that could be considered 'red flags' for a later diagnosis of autism.³ These include:

Absence or 'poor quality' of:

- Engagement in social games (e.g. peek-a-boo)
- Eye contact
- Response to name (e.g. not turning when name is called)
- Imitation
- Pointing or use of social gestures (e.g. waving, clapping)
- Joint attention (e.g. following another's point and gaze)

Presence of:

- Using another's hand/body as a tool (e.g. placing someone's hand on a container as a request to open it)
- Repetitive behaviours (e.g. lining up toys)
- Stereotyped behaviours (e.g. flapping hands or arms)
- Sensory behaviours and interests (e.g. staring at objects, smelling objects)
- Ritualistic behaviours and routines (e.g. all doors in the house must be closed)
- Echolalia (i.e. repeating back what is said to them)

What to do if you're concerned

It is important to remember that some children who show several 'red flags' for autism may not go on to have a diagnosis. Only trained professionals can diagnose a child with autism. Labelling a child as having autism without an official diagnosis can cause unnecessary distress for the child's family/whānau.

As a teacher, there are several things you can do if you have concerns about a child:

- Speak to other members of staff to see if they share your concerns. Most schools have a Special Education Needs Coordinator (SENCo) who may be knowledgeable in this area.

- Observe the child and record specific behaviours of concern.
- Speak to the child's parents. Do not say that the child might have autism: instead, talk about the specific behaviours you have noticed, for example, 'I have noticed that Jimmy spends a lot of time lining up his trucks at lunchtime and does not join in the other children's play. What do you think about this?'
- If the parents are also concerned, then you can advise them to talk to their GP. If the GP shares these concerns, then he or she will refer the child to a Paediatrician and/or the Child Development Service.

The diagnostic process

In New Zealand, most young children who are suspected to have autism undergo assessment with the Child Development Service, which is part of their local District Health Board. It is recommended that ASD assessment is conducted by a multidisciplinary team.⁴ Typical members of the team include paediatricians, child and adolescent psychiatrists, clinical or educational psychologists, speech-language therapists and occupational therapists. This assessment should include:

- Developmental and family history
- Physical examination and medical testing
- Observations of the child in familiar settings such as the home or the early childhood centre/school
- Observation using standardised measures such as the Autism Diagnostic Observation Schedule

The importance of early intervention

Arguably, there is little point in providing an early diagnosis if it does not lead to tailored early intervention. There is a lot of research to suggest that the earlier a child receives intervention, the greater the progress he or she is likely to make in areas such as communication, social skills, and daily living skills. Although early intervention does not 'cure' autism, it can sometimes lead to a reduction in some of the symptoms associated with autism. This is particularly the case when a child receives many (20 or more) hours of intervention per week. However, this is not always possible in New Zealand due to funding and a lack of appropriately trained service providers. Regardless of the number of hours of intervention per week, it is important to ensure that the strategies used to support children with autism are based on high-quality research evidence.

Endnotes

1 American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th Ed.). Arlington, VA: American Psychiatric Publishing.

2 Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child*, 2, 217-250.

3 Barbaro, J., Ridgway, L., & Dissanayake, C. (2011). Developmental surveillance of infants and toddlers by maternal and child health nurses in an Australian community-based setting: Promoting the early identification of autism spectrum disorders. *Journal of Pediatric Nursing*, 26(4), 334-347.

4 Ministries of Health and Education (2008). New Zealand Autism Spectrum Disorder Guideline. Wellington: Ministry of Health.

PREPARED FOR THE EDUCATION HUB BY



Hannah Waddington

Hannah Waddington completed her PhD on the topic of low-intensity early intervention for children with autism. She is currently a lecturer at Victoria University of Wellington, and is also a practicing educational psychologist and certified early start Denver model therapist. Her research focusses on the evaluation of early intervention approaches for young children with autism which are effective and feasible in a New Zealand context.

<https://www.victoria.ac.nz/education/about/staff/sedu/hannah-waddington>