



Theory base

ASD

Diagnostic information

The two major diagnostic classification systems (the American DSM IV and WHO ICD10) use similar criteria.

The *Diagnostic and Statistical Manual* (DSM) is published by the American Psychiatric Association (APA). It includes all currently recognised mental health disorders.

The *International Classification of Diseases* (ICD) produced by the World Health Organisation (WHO), is another commonly used guide, more so in Europe and other parts of the world.

The coding system used in the current DSM-IV is designed to correspond with the codes used in the *International Classification of Diseases* (ICD), although not all codes may match at all times because the two publications are not revised synchronously.

Both use the term pervasive developmental disorder (PDD), which encompasses autism, Asperger's syndrome and atypical autism.

Proposed changes to autism and Asperger syndrome diagnostic criteria

Diagnostic criteria are revised periodically by a team of experts, taking into account the most up-to-date research. For the next edition of the DSM, DSM-5, they propose some changes which could affect the way diagnoses will be given to people on the autism spectrum.

Here are some of the main changes:

- The current terms used in the DSM-4 are autistic disorder, Asperger's disorder, childhood disintegrative disorder and PDD-NOS (pervasive developmental disorder not otherwise specified). The proposals mean that when people go for a diagnosis in the future, instead of receiving a diagnosis of one of these disorders, they would be given a diagnosis of 'autism spectrum disorder'.
- The triad of impairments will be reduced to two main areas:
 1. social communication and interaction.
 2. Restricted, repetitive patterns of behaviour, interests, or activities.
- Sensory behaviours will be included in the criteria for the first time, under restricted, repetitive patterns of behaviours descriptors.



- The emphasis during diagnosis will change from giving a name to the condition to identifying all the needs someone has and how these affect their life.
- They are also planning to introduce 'dimensional elements' which should give an indication of how much someone's condition affects them. This should help to identify how much support an individual needs.

The new Manual, DSM-5, will be published in 2013.

The National Autistic Society. (2013). *Proposed changes to autism and Asperger syndrome diagnostic criteria*. Available: <http://www.autism.org.uk/about-autism/all-about-diagnosis/proposed-changes-to-autism-and-as-diagnostic-criteria.aspx>. Last accessed 20 March 2013.

Please visit www.dsm5.org for updates and for more information about the development process.

Diagnosis in the UK – World Health Organisation

Most diagnoses in the UK are based on the International Classification of Diseases (ICD), published by the World Health Organisation (WHO), or other criteria, such as those developed by Professor Christopher Gillberg.

The next version of the International Classification of Diseases (ICD-11) is due to be published in 2015. They will consider the changes made to DSM-5, but their descriptions are often slightly different.

At present there does not appear to be any plans to change the label of Asperger syndrome during the next revision.

Autism spectrum disorder (ASD)

ASD previously stood for autistic spectrum disorder. However, throughout the material we will use the title autism spectrum disorder as this is increasingly being used to reflect the change that is likely to occur following the revision of the DSM.

The World Health Organisation's (WHO) 1994 definition states:

'The term autistic spectrum disorder (ASD) is used to describe the group of pervasive developmental disorders characterised by qualitative abnormalities in reciprocal social interactions and in patterns of communication and by a restricted, stereotyped, repetitive repertoire of interests and activities.'

The word spectrum saw its first scientific use within the field of optics to describe the rainbow of colours in visible light when separated using a prism. Its use in ASD implies a broad range of lifelong developmental conditions or behaviours grouped together and studied under a single title for ease of discussion.



Note: Information on the following conditions is taken from the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, (DSM-IV-TR), the National Autistic Society www.autism.org.uk, OAASIS www.oaasis.co.uk/Autism-Info and Contact a Family www.cafamily.org.uk/medicalinformation/conditions/azlistings

Pervasive developmental disorders (DSM-IV-TR)

The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition published by the American Psychiatric Association (APA) lists the following conditions under the heading pervasive developmental disorder:

- Autistic disorder
- Rett's disorder
- Childhood disintegrative disorder
- Asperger's disorder
- Pervasive developmental disorder NOS (not otherwise specified)

This diagnosis is used in the USA, whereas ASD is more widely used in the UK. However, the APA is proposing the use of the phrase 'autism spectrum disorder' in their revision of the DSM in 2013.

Asperger's syndrome

Asperger's syndrome is a form of autism, which is a lifelong disability that affects how a person makes sense of the world, processes information and relates to other people. A diagnosis of Asperger's syndrome rather than autism is usually given when the person has fewer problems with speech and is of average, or above average, intelligence. They may have associated specific learning difficulties such as dyslexia and dyspraxia or other conditions such as ADHD and epilepsy.

High-functioning autism and Asperger's syndrome

There is no consensus among professionals as to whether these two diagnoses are actually describing the same condition. Research conducted in 2000 at the University of Utah concluded that:

'Overall, the results suggest that Asperger's syndrome and high-functioning autism involve the same fundamental symptomatology, differing only in degree or severity.'

(Autism Sage Journal online, 2000 – 'DSM-IV-Defined Asperger Syndrome')

Childhood disintegrative disorder

This describes children who develop autism after two years of 'normal' development.

Some children may initially be given a diagnosis based on the difficulties identified. A later diagnosis of ASD may be given. In some cases these can be stand-alone conditions, such as:



Semantic pragmatic disorder

This describes a difficulty with both the meaning and the use of words. Semantic difficulties involve misunderstanding the precise meaning of words. The person will use words rigidly and literally.

Pragmatic difficulties involve a lack of awareness of social rules governing the use of language in context and of the needs of their conversational partner.

Sensory processing disorder

Sensory processing disorder (SPD), formerly known as sensory integration dysfunction, is a condition that exists when sensory signals do not get organised into appropriate responses in the brain. Many children with ASD have sensory processing difficulties.

For more information visit www.sinetwork.org

Dyspraxia

Also known as developmental coordination disorder (DCD), motor learning difficulty, or clumsy child syndrome, refers to children who have movement difficulties. There may also be problems with perception, language, thought and planning. It is thought that in a class of 30 children at least one will have dyspraxia.

Source: www.oaasis.co.uk/documents/Info_Sheets/Dyspraxia_Info_Sheet

Specific learning difficulties

Children with ASD and dyspraxia may also have characteristics of dyslexia (difficulty with reading and spelling), dyscalculia (difficulty with mathematics), dysgraphia (an inability to write neatly and/or draw).

Attention-deficit and disruptive behaviour disorder

The DSM classification puts ADHD and ODD under this one heading with the following list:

- Attention-deficit hyperactivity disorder
- Predominantly inattentive subtype
- Attention-deficit hyperactivity disorder NOS
- Oppositional defiant disorder

DAMP

Deficiency in **A**ttention, **M**otor control and **P**erception and hyperkinetic disorder are terms sometimes used to describe similar conditions to ADHD.

See ADHD session 1 notes.

Oppositional defiant disorder

See ADHD session 1 notes.

Hyperlexia

This is an exceptional ability to read, not necessarily with any understanding of what is being read. This is sometimes seen in children with autism.



Obsessive-compulsive disorder

OCD is a separate psychiatric disorder, but the symptoms can be confused with the stereotypical, ritualistic behaviour seen in autism.

Estimated population of autism spectrum disorders in the UK

The estimated numbers have been worked out from the population of the UK as given in the 2001 census: 58,789,194 (2011 census: 60,394,259) of whom 13,354,297 were under 18.

The figure for children is based on the 1 in 100 prevalence rate and corrected to the nearest 100. The estimated number of children under 18 with an autism spectrum disorder (ASD) is 133,500.

Given that there is no prevalence rate for ASD in adults, the figure for the whole population is a very rough guide, but it is estimated that there could be over 500,000 people who have an ASD.

(National Autistic Society, 2006)

Triad of Impairments

Children with ASD exhibit, to a greater or lesser degree, three key features known as the Triad of Impairments, which is the defining characteristic of autism as identified by Dr Lorna Wing (Wing and Gould, 1979).

1. Communication difficulties

Language impairment across all modes of communication: speech, intonation, gesture, facial expression and other types of body language. The person has difficulty processing and retaining verbal instructions. Their use of language is very literal and is limited to sharing facts rather than abstract thoughts. They struggle to understand jokes, sarcasm and figures of speech. The social uses of communication are not understood and they are unable to see the need to share emotions, feelings or beliefs. They have difficulty in understanding non-verbal communication.

2. Social interaction

Difficulties with social relationships, poor social timing, lack of social empathy, rejections of normal body contact, inappropriate eye contact. The person has great difficulty when interacting with others socially. Their social contact is inappropriate because they do not understand the social rules or the feelings of others. They struggle to work co-operatively with others. Making and maintaining a friendship is extremely hard because of their lack of empathy. They may find eye contact



uncomfortable or may appear to stare too closely at another person. Unstructured parts of the day are particularly challenging.

3. Lack of imagination

The child with ASD may be unable to play imaginatively or to pretend, although they can mimic a story or event that they have seen on a TV programme. They may parallel play as opposed to playing and interacting with peers. It is difficult for them to imagine what other people are thinking, which in turn makes empathy impossible, and they cannot imagine or anticipate what a situation might be like before it has occurred. Their resistance to change results in rigid repetitive activities, and their topic of conversation focuses on their particular factual interest. Generalisation is also a difficulty, which means that a child cannot apply a learned behaviour across different situations.

Information from the National Autistic Society www.autism.org.uk, OASIS www.oasis.co.uk/Autism, and *Asperger Syndrome A Different Mind*, by Simon Baron-Cohen

Theory of mind

Theory of mind is the ability to attribute mental states – beliefs, intents, desires, pretending, knowledge – to oneself and others, and to understand that others have beliefs and intentions different to one's own. Having a theory of mind allows one to predict or explain other people's actions, and to understand the intentions behind their behaviour.

Published research suggests that children with autism do not employ a theory of mind and, consequently, have difficulties with tasks that require them to understand another person's beliefs or desires. The absence of the ability to understand what people know, think or feel might be the root of most of the difficulties that people with ASD have in communication and social interaction.

(Baron-Cohen S., Leslie A. M., Frith U. (1985) *Does the autistic child have a 'theory of mind'?*)

Weak central coherence

Those with ASD may be remarkably good at attending to detail but seem to have great difficulty in perceiving and understanding the overall picture or gist. They struggle to see what is relevant and to decipher patterns or meaning in what they see. This can perhaps be understood by imagining that they are looking at the world through a rolled-up piece of paper – seeing the detail but not the whole.

(Tony Attwood seminar, 2011)



History of autism research

Eugen Bleuler – 1911

The Greek word 'autos' (meaning 'self'), from which we get the word autism, was first used in 1911 by a Swiss psychiatrist named Eugen Bleuler. He used it to describe the extreme withdrawal of a person from social life that he saw in his patients.

Leo Kanner – 1943

Dr Leo Kanner, a child psychologist in the USA published a report in 1943 entitled, *Autistic disturbances of affective contact*. A number of children referred to his clinic had an unusual pattern of behaviour that he named 'early infantile autism'. He believed that autism was caused by cold, unloving mothers ("refrigerator parents"). This view has since proved to be erroneous.

Hans Asperger – 1944

At about the same time that Kanner was identifying a new 'autistic' syndrome in America, the Austrian physician, Hans Asperger was identifying a similar group. In 1944 he published his dissertation, "Autistic psychopathy in childhood". As this was published in German during the Second World War, it took nearly 50 years for his paper to appear in English.

Lorna Wing – 1979

In 1979 Lorna Wing compared Asperger's and Kanner's work and noted similarities between the children being described. She first used the term Asperger's syndrome in 1981 to recognise those able people with autism who did not fit into Kanner's description. Researchers now believe that both men had identified the same syndrome, but at two different points on the spectrum. Wing and Gould (1979) concluded that the difficulties characteristic of autism could be described as a 'triad of impairments' – impairment of social communication, impairment of social interaction and impairment of social imagination. Asperger's syndrome, as defined today, is clearly not what Asperger intended, but having this special category has proved clinically useful.

(Frith, U., *Autism: Explaining the Enigma*, 1989)

1980s and 1990s

During the 1980s and early 1990s, the cause, prognosis and treatment of autism were being vigorously studied. Research suggested that a genetic defect caused the disorder, which was presumed to be some form of autoimmune disease or degenerative disease of nerve cells in the brain.

In the 1980s the film, *Rain Man* raised public awareness of autism.

In 1990, Dr Jean Ayers, a psychologist and occupational therapist, studied the relationship between sensory processing and motor planning problems, primarily in children who were intellectually disabled. Her theory, sensory integration, is now often used to treat children with ASD and ADHD.



Since the year 2000

At the beginning of this century, public debate focused on the links to the MMR vaccine as well as the increase in autism spectrum disorders.

In March 2001 the Medical Research Council was commissioned to investigate the apparent links between the combined MMR vaccine, bowel disorders and autism, as well as whether there was indeed an increase in ASD. They concluded that the current epidemiological evidence does not support the proposed link.

Although reviews in medical literature have found no link between the MMR vaccine and autism or bowel disease, it is recognised that there are some physical symptoms associated with autism that include bloating, stomach aches and diarrhoea.

Changes in diagnostic practice as well as public and professional awareness are the likely causes of the apparent increase in the prevalence of ASD.

Current research

Autism researchers are focusing their studies on a number of areas in order to find reasons behind ASD.

Current genetic research is looking at the question, "Is autism inherited?" This is a complex area. Disorders such as the fragile X syndrome and tuberous sclerosis, which are both associated with autism, are inherited. There are many families with more than one child with autism, where the autism is not clearly due to another cause. Recent studies have found that the gene for at least one kind of familial autism may be on chromosome 13. In some families, autism seems to be passed from generation to generation. In other families, autism is not found in prior generations, but affects multiple siblings (brothers or sisters). The results of research suggest that at least one "autism gene" will eventually be found.

However, the lack of strong family history would support the premise that environmental, or a combination of environmental and genetic factors, contribute to the development of autism. In this context, 'environmental' is meant to indicate any non-genetic factor, including infections, toxins, nutrition or others.

www.medicinenet.com/autism_and_communication/page4.htm

Various researchers are conducting studies on the part of the brain called the amygdala, which is the portion that helps people focus on faces and emotions, supports 'joint attention' (that is, the ability to attend to something with another person) and underlies social behaviour.

In a study published in the 2011 Archives of General Psychiatry, researchers scanned 50 toddlers with autism and 33 children without autism at the age of two and again at the age of four. Dr Joseph Piven concluded, "*We believe that children with autism have normal-sized brains at birth but at some point, in the latter part of the first year of life, the amygdala begins to grow.*"

www.archpsyc.ama-assn.org



Researchers propose that dysfunction of the amygdala may be responsible, in part, for the impairment of social behaviour found in autism. In addition, an important role for the amygdala is in the detection of threats and mobilising an appropriate behavioural response. This may contribute to the abnormal fears and increased anxiety found in people with autism.

(Baron-Cohen, S., Ring, H.A., Bullmore, E.T., Wheelwright, S., Ashwin, C. & Williams, S.C. (2000) *The amygdala theory of autism*)
www.autismresearchcentre.com

Another area of research headed up by Dr Daniel Goldowitz at the University of British Columbia's Faculty of Medicine is studying the developing brain by mapping the genes in the cerebellum and studying which genes influence abnormal development. They hope that if they can identify key genes involved in the early development of the cerebellum, which influence the rest of the brain's development, they may be able to encourage or restart plasticity; the brain's ability to heal and change. *"All of our incoming sensory information is received by the cerebellum where it can be compared and contrasted,"* says Goldowitz. *"So you can imagine if there is a mismatch between information coming in and going out – that there would be a serious problem."*

The National Autistic Society believes that "autism is likely to have multiple genes responsible rather than a single gene. The difficulty of establishing gene involvement is compounded by the interaction of genes and by their interaction with environmental factors."

At the Autism Research Centre (ARC) at the University of Cambridge, scientists are looking into the Androgen theory of autism. Researchers in 2010 claimed to have new evidence for hormone dysregulation in autism. They found that a precursor to testosterone, androstenedione, is elevated in both males and females with autism/Asperger's syndrome. This is a sex hormone and has relevance for the androgen theory of autism, which proposes that autistic spectrum conditions are in part due to elevated foetal testosterone levels, which are positively correlated with a number of autistic traits and inversely correlated with social development and empathy.

Visit www.autismresearchcentre.com/arc_research for more information.

Other studies suggest that people with ASD have abnormal levels of serotonin or other neurotransmitters in the brain.

www.ninds.nih.gov/disorders/autism/detail_autism.htm#179513082

The question, "What are the causes of autism?" still remains, as does the question of whether there has been a real increase in the prevalence of ASD.



Cure versus anti-cure perspective

Curing autism is a controversial and politicised issue. Doctors and scientists are not clear on the cause(s) of autism, yet many organisations advocate researching a cure. Conversely, members of the various autism rights organisations view autism as a way of life rather than as a disease and thus advocate acceptance over the search for a cure.

The anti-cure perspective endorsed by the movement is the view that autism is not a disorder, but a normal occurrence – an alternate variation in brain wiring or a less common expression of the human genome.

Advocates of this perspective believe that autism can be viewed as a unique way of being that should be validated, supported and appreciated rather than shunned, discriminated against or cured. They believe autism should not be compared, for example, to curing cancer but instead to the antiquated notion of curing left-handedness and should be removed from the DSM.

They say that funding for 'cure' research is unlikely to ever produce a result. In the meantime, support services for autistic people are under-funded and this money could be far better used to help existing autistic people.

Organisations who advocate an anti-cure perspective include Aspies for Freedom www.aspiesforfreedom.com/, the Autistic Self Advocacy Network www.autisticadvocacy.org/, and the Autism Network International www.autreat.com/

On the other side of the argument, Autism Speaks, www.autismspeaks.org and the Defeat Autism Now project, supported by the Autism Research Institute, www.autism.com, believe that autism is a treatable condition that requires a cure.

Simon Baron-Cohen, a professor of developmental psychology at Trinity College, Cambridge and an autism researcher says:

"I do think there is a benefit in trying to help people with autism-spectrum conditions with areas of difficulty such as emotion recognition. Nobody would dispute the place for interventions that alleviate areas of difficulty, while leaving the areas of strength untouched. But to talk about a 'cure for autism' is a sledge-hammer approach and the fear would be that in the process of alleviating the areas of difficulty, the qualities that are special – such as the remarkable attention to detail, and the ability to concentrate for long periods on a small topic in depth – would be lost. Autism is both a disability and a difference. We need to find ways of alleviating the disability while respecting and valuing the difference."



Diagnosing ASD

There are no specific physical or psychological tests for autism spectrum disorders. In order to recognise and identify the impairments of social interaction, social communication and social imagination, together with the associated repetitive behaviours and all the other features that can be found in autistic disorder, information must be collected in a systematic way. This is achieved by using the DISCO, a detailed, semi-structured interview.

(National Autistic Society February, 2011)

The Diagnostic Interview for Social and Communication Disorders (DISCO) was developed for use at The Centre for Social and Communication Disorders, by Dr Lorna Wing and Dr Judith Gould, as both a clinical and a research instrument for use with children and adults of any age.

Interventions and therapies

There is no single intervention to be used with children with ASD. The following interventions and techniques are the most commonly used by statutory agencies and specialist provision. Some can be combined with one another. See www.autism.org.uk/approaches for further information

Standard therapies

Speech and language therapy, occupational therapy and music therapy are therapies that are accepted and used by the majority of healthcare professionals.

Speech and language therapy

See 'Communication-based therapies' below

Occupational therapy

See 'Sensory integration' below

Cognitive behavioural therapy

Usually carried out by psychologists, counsellors and psychotherapists

Music therapy

Music is increasingly used as part of early intervention programmes for children with autism. Music-making forms the basis for communication, listening and sharing and Music Therapists aim to facilitate positive changes in behaviour and emotional well-being, develop an increased sense of self-awareness and thereby enhance a child's quality of life.

Music can convey feeling without the use of words. For a person whose difficulties are mainly emotional, music therapy can provide a safe setting where 'difficult' or repressed feelings may be expressed and contained.

For more information, visit the British Association for Music Therapy at www.bamt.org



Communication-based therapies

In the early years, speech and language therapists are invaluable in guiding communication practice that can be adapted for use at home by the family. Many people with an ASD find learning easier if it is presented in a visual way such as charts, pictures, timetables or movies. These can be used both as prompts and also in an effort to improve patients' abilities to understand the behaviours, expressions and feelings of others.

PECS (Pictorial Exchange Communication System)

This is a method of communication using the exchanging of pictures. Students are taught to exchange a picture of a desired item with a teacher, who immediately honours the request. For example, if they want a drink, they will give a picture of a 'drink' to an adult who directly hands them a drink.

For more information visit www.pecs.org.uk/

TEACCH (Treatment and Education of Autistic and related Communication Handicapped Children)

Many special schools in the UK have elements of TEACCH in their curriculum. It is designed to help children to be as independent as possible by improving communication skills and autonomy to the maximum of the child's potential.

The TEACCH approach helps to make the world a less confusing and more predictable place by organising the environment and learning situation to be consistent with what is known about how people with autism think and learn.

For more information visit www.autism.org.uk/teacch

Makaton

Signing using symbols has been designed for individuals who have cognitive impairments, autism, Down's syndrome or specific language impairment that has affected their ability to communicate. Signing is not usually taught as a replacement for speech, but to assist the development of spoken language and the communication of intentions. It uses speech together with a sign (gesture) and/or a symbol (picture). Some of the signs are taken from British Sign Language. It is a language programme that is based on a selected list of everyday words. Later many children drop the signs or symbols naturally at their own pace, as they develop speech.

For more information visit www.makaton.org/



Behavioural techniques

ABA and Lovaas

The philosophy behind ABA is to get the child to enter our world. The techniques are therapist-led and are based on the assumption that autistic children need to be taught everything including communication, expression and socialisation.

Traditional behavioural techniques such as Lovaas/ABA (applied behaviour analysis) are reward-based programmes designed to teach basic skills. Therapists use applied behavioural analysis and modification techniques to help children's parents, carers and teachers to manage troublesome behaviours, establish healthy routines and behave acceptably.

Aspects of learning that the child finds hard are broken down into small steps and are then presented in a simple and consistent way. The method relies on providing positive reinforcement so that the child feels successful and is motivated to learn more. Desired behaviours are rewarded and inappropriate behaviours are ignored or redirected. The child is taught to pay attention, how to copy behaviours, imitate sounds, understand what people say, play with toys, show emotions and relate to other children.

The practice of ABA is continually evolving although Baer, Wolf and Risley's work in 1968 is still used as the standard description of ABA.

(Baer, D.M.; Wolf, M.M.; Risley, T.R. (1968) *Some current dimensions of applied behaviour analysis*, J Appl Behav Anal 1)

For more information on the Lovaas model visit www.lovaas.com/about.php or for information on ABA/Lovaas in the UK visit www.peach.org.uk

Diet and supplements

Much has been researched and discussed regarding the link between diet and autism and there is a great deal of anecdotal evidence that certain diets help some children.

When certain foods are eliminated in those children who appear to have food intolerances, the result has been improved behaviour and reduced hyperactivity. Scientific research so far has been inconclusive and there is, as yet, no research evidence to back up any of these claims.

However, it is well documented that people with autism run an unusually high risk of bowel disorders. Physical symptoms associated with autism include bloating, stomach aches, chronic diarrhoea, constipation or food intolerances. In addition, children with autism are often poorly nourished as a result of idiosyncratic food choices and need help to expand their nutritional repertoire.



Amminger et al (2007) believe their study provides preliminary evidence that omega-3 fatty acids may be an effective treatment for autism. Concerning a combined vitamin B6 and magnesium treatment for autism spectrum disorder, Kyriyama et al (2002), Findling et al (1997) and Tolbert et al (1993) give some support to this view.

The Son-Rise method recommends looking into a gluten-free and casein-free diet, eliminating caffeine, reducing sugar intake and looking at exploring the possibility of a candida yeast overgrowth. (Kaufman, R. 2004)

Others have stated that children with autism were more prone to having higher levels of clostridia, a group of 'bad' bacteria. They believe that probiotic food supplements might lower the levels of these bad bacteria and alleviate some of the autistic symptoms.

The British Dietetic Association (BDA) warn against excluding foods without making sure that the diet remains balanced as this may lead to dietary deficiencies, weight loss and poor growth. (Connor, 2006)

Sensory integration

See ADHD session 3 notes

'Off the shelf' sensory programmes

Sensory circuits

These are programmes of physical activities that provide regular and controlled input to specific sensory-motor systems enabling children to be energised or calmed so that they can get the most out of their day.

- Alerting activities (spinning, bouncing on a trampoline, skipping) stimulate the body's central nervous system in preparation for learning.
- Organising activities (balancing on a wobble board, stepping stones) demand the brain and body to work together.
- Calming activities (heavy muscle work and deep pressure) give an awareness of their body in space and increase the ability to self-regulate sensory input.

(A Sensory Motor Skills Programme for Children, a book by Jane Horwood)

The Alert programme

See ADHD session 3 notes

Auditory integration training

Used in the early 1990s as a treatment for autism, created by Dr Guy Berard. It aims to address the sensory problems such as hearing distortions and hyperacusis (over-sensitive hearing), which are said to cause discomfort and confusion in persons suffering from autism spectrum disorders. These hyper-sensitivities are believed to interfere with a child's attention, comprehension and ability to learn. There are 20



half-hour sessions over 10 days, listening to specially filtered and modulated music. The success of this programme is anecdotal, having no conclusive research base.

Visit www.aitinstitute.org for further information

Intensive interaction

The SON-RISE Programme®

These are relationship-based interventions that seek to encourage attachment, bonding and a sense of relatedness. They are child-led in contrast to the ABA/Loovas approach, which is therapist-led.

Intensive interaction encourages carers to join the child in what they are doing, not the other way round. Carers copy the child's repetitive actions (e.g. if they flap, you flap) in order to gain trust, so that the child will lead the adult into their world. It mimics and builds on the child's behaviour and focuses on the importance of eye contact.

The SON-RISE Approach is based on intensive interaction. It is a child-centred, home-based approach focusing on language, interaction and relationships. It is a one to one programme whose first aim is to build a child's self-esteem. It was pioneered at the Options Institute, Massachusetts, USA. The philosophy behind it is for you to join the child's world, with "the child as the teacher".

There are five underlying principles that the institute teaches and believes in as part of its programme:

- The importance of a loving and accepting attitude
- The gift of a special child
- The parents are the child's best resource
- The question of hope and false hope
- The child as teacher

Eye contact is also particularly emphasised in the programme and encouraged at every opportunity, i.e. mimicking the 'ism'" at eye level, feeding food at eye level and raising objects to eye level. The more a child looks, the more he learns. Often the programme will introduce eye contact through the use of a mirror, as some children can at first find it uncomfortable to give direct eye contact.

(Kaufman, R., 2002; also MacDonald & MacDonald, 1991)



Combined approaches

SPELL approach

The SPELL framework recognises the individual and the unique needs of each child and adult, and it promotes the need for:

Structure – To make the world a more predictable and safer place.

Positive – Approaches and expectations that are realistic and based on careful assessment.

Empathy – To see the world from the standpoint of the child with ASD.

Low Arousal – The approaches and environment need to be calm and ordered in such a way as to reduce anxiety and aid concentration.

Links – The people with autism, their parents or advocates are very much seen as partners in the therapeutic process.

EarlyBird approach

The Early Bird Programme from the National Autistic Society is provided by specially trained Health Visitors. It is for parents of pre-school children and is a mixture of ABA and Intensive Interaction (I.I.) approaches. The programme takes place once a week over a three-month period. It combines group training sessions for parents with individual home visits, where video feedback is used to help parents apply what they learned to their child.

During the three-month period parents have a weekly commitment to a three-hour training session or a home visit, plus on-going work with their child at home. It includes some of the elements of the TEACCH programme, looking at the physical structure of the child's environment, the importance of scheduling and routines.

www.nas.org.uk/earlybird

Medication

No medication directly targets the condition itself and no drug has ASD as a licensing indication. Medication may be given for co-morbid conditions such as ADHD, seizure disorders or depression.

Risperidone has become clinically recognised as being beneficial in reducing anxiety, promoting healthy sleep patterns and helping with repetitive behaviours. SSRIs (Serotonin Re-Uptake Inhibitors) may also be given to reduce obsessive and ritualistic behaviours (Olanzapine). This drug causes weight gain.



Complementary therapies

Many of the above approaches to helping children with ASD would have come under the heading of complementary therapies a few years ago. Other complementary therapies are autism assistance dogs and dolphin therapy.

An intervention that appears to help one individual may not be appropriate or effective with another.

For more information on all the approaches above, contact the National Autistic Society, 393 City Road, London, EC1V 1NG, Tel: 020 7833 2299 or visit their website www.autism.org.uk/a-z

Sensory processing difficulty

“People experience life through their senses. Sensations are ‘food’ or nourishment for the nervous system, the brain needs a continuous variety of sensory nourishment to develop and then to function.” (Ayres 1979)

Everything we experience from the world outside or from within our own bodies has to come into the brain through the senses. Sensory processing refers to the brain’s ability to register and modulate sensory information and to organise this sensory input to respond to situational demands (Humphry, 2002). The brain then organises a response to the sensory information, typically through movement and interaction with the environment and others.’ (Smith, 2002)

Sensations from our eyes (visual), ears (auditory), skin (touch), the inner ear (vestibular) and sensors in our joints and muscles (proprioceptive) give us information about the world around us.

Many people with an ASD not only face challenges with the Triad of Impairments but also have sensory differences. It is thought that a person with ASD has an immature nervous system that makes it difficult to filter out non-essential information, background noises or visual distractions and focus on what is essential. The deficit is not in the sense organs receiving input, but it is a delay in the reception in the brain and difficulties in the interpretation and integration of the senses.

Sensory difficulties may show themselves through hypo-responsiveness (with low sensitivity) or hyper-responsiveness (with high sensitivity) to sensory input.

Hypo-sensitivity to light, sound, touch or movement, when the brain has a low registration of the sensation, will manifest in the individual craving sensations.

Hyper-sensitivity to light, sound, touch or movement, when the brain has a high registration (overload) of the sensation, will manifest in avoiding sensations.

The same child can be hypo-sensitive to one sensation and hyper-sensitive to another. They can also switch from hypo-sensitivity to hyper-sensitivity to the same sense at different times.



According to Tony Attwood, of all the sensory difficulties, taste sensitivity can diminish from the age of 8 onwards and into adulthood.

Many children with ASD are mono-sensory, which means it is difficult to take in more than one sense at a time. It is as if they are 'firing on only one channel at a time' so they can listen but not see, speak or think.

Information from the National Autistic Society www.autism.org.uk/living-with-autism/understanding-behaviour/the-sensory-world-of-autism.aspx, OAASIS www.oaasis.co.uk/autism and the Sensory Project www.sensoryproject.com/



Session notes

ASD

Session 1

Bullying

There are five main categories of bullying:

- Physical (causing physical pain or taking belongings)
- Verbal (name-calling, insults, taunting)
- Non-verbal (eye-rolling, gesturing, ignoring)
- Indirect (spreading rumours, excluding from social groups)
- Cyber-bullying (sending malicious emails, texts or social network messages)

As well as the five main categories above, many children with ASD become targets of backhanded bullying, where they are offered 'friendship' by someone who intends to mislead them or they are directed by their 'friend' to engage in absurd activities or activities such as stealing from another pupil's bag to get them into trouble.

Their social naivety means that pupils with ASD may be unsure whether someone is being genuinely friendly or whether they are 'winding them up'. They will often not understand sarcasm or punch-lines, giving their peers an excuse to taunt or upset them. In addition, their difficulties with communication mean that pupils with ASD may not be able to report an incident of bullying to school staff or their parents.

The NAS booklet, *Bullying and autism spectrum disorders* by Alice Stobart has some very helpful tips for school staff and parents.

Mencap's anti-bullying campaign, '*Don't stick it, Stop it*' has a website for children and young people with learning disabilities at www.dontstickit.org.uk

Contact a Family, www.cafamily.org.uk and Family Lives, www.familylives.org.uk provide downloadable resources on bullying for parents.

Personal portfolios

A personal portfolio, also sometimes called a passport or personal profile, is a colourful reader-friendly book designed to help anyone with communication problems tell others about themselves. It is useful when going for respite, hospital visits, starting a new school and meeting people for the first time.

These are especially useful during transitions when children meet a lot of new people and it can be hard for them to have to keep explaining what makes them different. As well as general information about the child and their needs, portfolios typically include strategies and tips on things other people can do to help, e.g. the best way to give them instructions or suggestions about how to handle meal-times.



Cerebra offer a free service to help parents put a portfolio together for their child. It guides them through the process and asks questions to help them think about the information that needs to go into the portfolio.

Parents can include any information they and their child think is important and be as creative as they want. Children often enjoy helping put the portfolio together and might want to draw some pictures to go inside it. It can also be nice to include copies of awards or certificates the child might have been awarded.

Once parents have completed the guide booklet and chosen their photographs, they send it all back to Cerebra who will create the Personal Portfolio.

Visit www.cerebra.org.uk/English/gethelp/personalportfolios to download a copy of the guide.

For older children or adults with ASD, the National Autistic Society, www.autism.org.uk produces a self-advocacy booklet which can be filled in and the Autistic Self-advocacy Network, www.autisticadvocacy.org also produce a similar booklet.

Session 2

Emotional intelligence

Emotional intelligence is an ability or skill to identify, assess and control the emotions of oneself, of others and of groups. Various models and definitions have been proposed.

The model introduced by Daniel Goleman focuses on emotional intelligence as a wide array of competencies and skills that drive leadership performance. Goleman's model outlines four main emotional intelligence constructs:

- 1) Self-awareness – the ability to read one's emotions and recognise their impact.
- 2) Self-management – controlling one's emotions and impulses.
- 3) Social awareness – the ability to sense, understand and react to others' emotions.
- 4) Relationship management – the ability to inspire, influence and develop others.

Emotional intelligence involves perceiving, using, understanding and managing emotions. The ability to recognise one's own emotions and to perceive the emotions of others represents a basic aspect of emotional intelligence, as it makes all other processing of emotional information possible.

Professor Simon Baron-Cohen, Director of the Autism Research Centre at Cambridge, has developed work that enhances emotion recognition in children with an autistic spectrum condition. This intervention uses animated vehicles with real emotional faces to help children with ASD (or as he terms it ASC) with their understanding of emotions.

Many parents have found *The Transporters* DVD very useful in teaching their children about emotions. The resource is available to buy from www.thetransporters.com/buy.html



Session 3

Emotional sensitivity

Children with ASD are often emotionally very sensitive, resulting, it is thought, from some difficulty in emotional processing in the brain. This may be due to the delay in emotional development so that they react to situations as a much younger child might. They are often very sensitive to failure or criticism and can also be impulsive in their responses.

It is thought that there is some deficit in the neural link between the limbic system where emotion is processed, and the cerebral cortex where thinking takes place.

When there is a delay between the event that causes a strong emotion and the thought processes, this can result in an impulsive and inappropriate reaction.

(Baron-Cohen, S., Ring, H.A., Bullmore, E.T., Wheelwright, S., Ashwin, C. & Williams, S.C. (2000) *The amygdala theory of autism*)
www.autismresearchcentre.com