

Autism Spectrum Disorders

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Signs and Symptoms of Autism spectrum disorder (ASD)

Diagnostic criteria for diagnosis of ASD including the DSM 5 and ICD 10

Causes and psychological theories of ASD

Interventions in ASD

- **Case presentation**
- This should include detailed assessment - developmental history, information from multiple sites and multiaxial formulation (ICD 10 or DSM 5 criteria used), to cover signs and symptoms, triad of impairment and interventions offered
- **Journal club**
- **555**
 - “Interventions used in ASD and their evidence base” *or*
 - “Sleep disorders in ASD and interventions”
- **Expert led session**
- To cover Aetiological theories of ASD, NICE guidelines in ASD, Interventions in ASD
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Autistic Spectrum Disorders

Expert Led Session

Definition

Aetiological theories of ASD

NICE guidelines in ASD

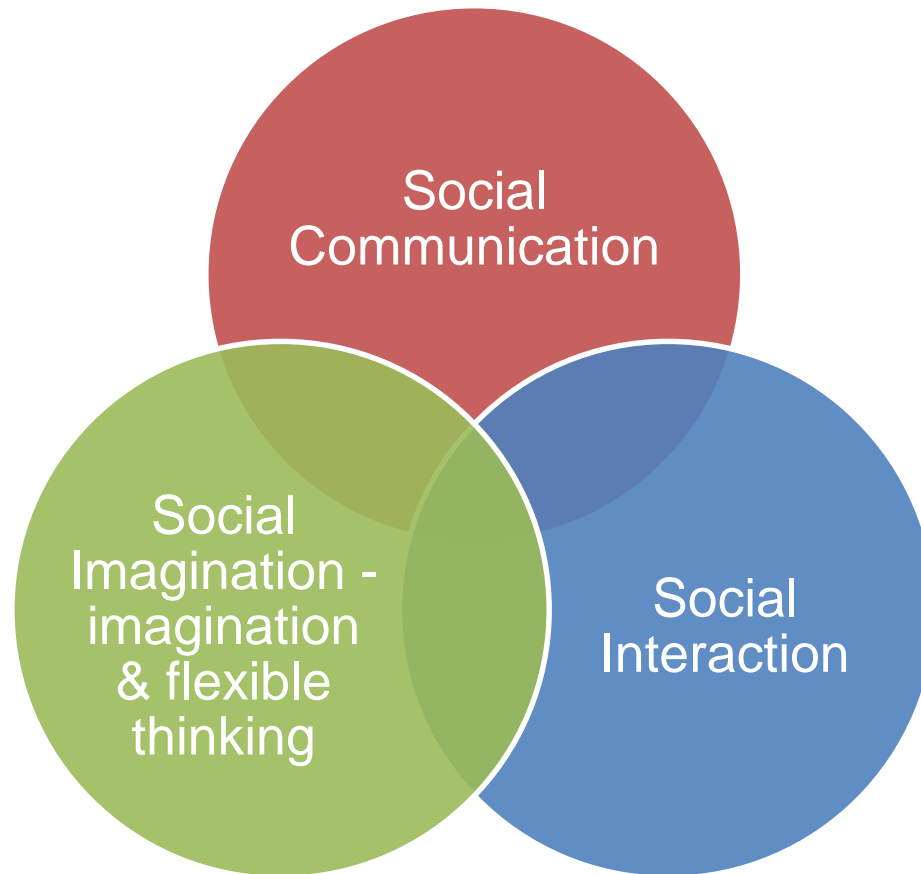
Interventions in ASD

Definition of ASD

Autism is a lifelong developmental disability that affects the way a person communicates and relates to people around them

National Autistic Society

Pervasive Impairments in the quality of



Triad of Impairments in ASD (Wing, 1976, 1988)

- **Impairment of social relationships**



- **Impairment of communication**



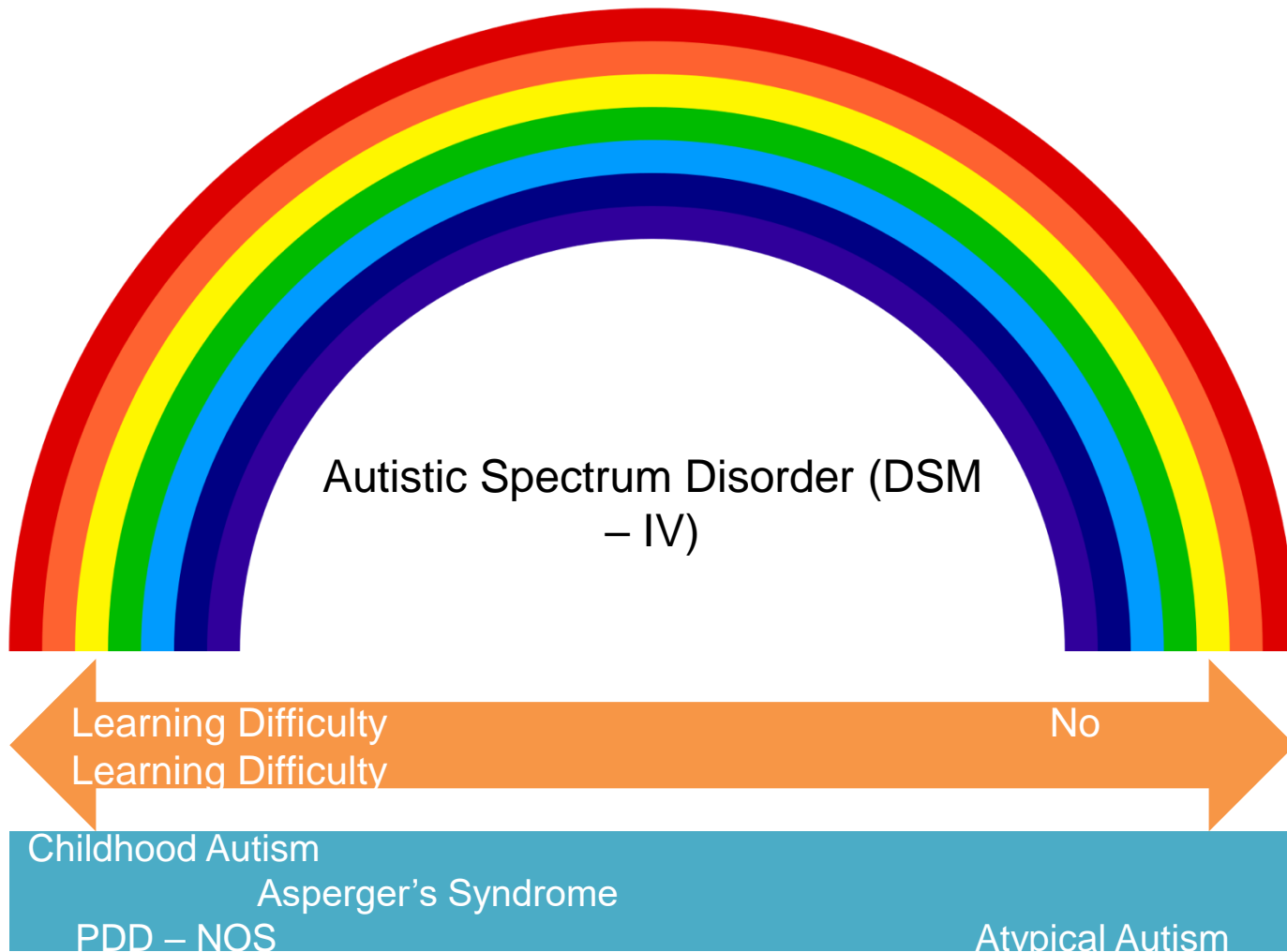
- **Impairment of imagination**



Changes with DSM-V

- Replaces 3-domain model with a 2-domain model and adds symptoms such as sensory interests and aversions
- Communication deficits are subsumed under social impairments
- Change to a single ASD category
- Must be a history of restricted and repetitive behaviours
- Removal of onset criterion of 36 months

The “Spectrum”



Dimensions vs Categories

- In clinical practice, extremely difficult to define boundaries between different diagnostic categories, whatever criteria used.
- Fits better with the concept of multiple dimensions than with the concept of separate, definable categories.
- Individual needs more accurately assessed from the profile of levels on different dimensions than from assigning a categorical diagnosis.

Signs and Symptoms of ASD

Social Interaction

Unusual or inappropriate body language, gestures, and facial expressions
e.g. avoiding eye contact, facial expressions that don't match what is
being said

Lack of interest in other people or in sharing interests or achievements
e.g. showing you a drawing, pointing to a bird

Unlikely to approach others or to pursue social interaction; comes across
as aloof and detached; prefers to be alone

Difficulty understanding other people's feelings, reactions, and nonverbal
cues

Resistance to being touched.

Difficulty or failure to make friends with children the same age.

Signs and Symptoms of ASD

Speech and Language

Delay in learning how to speak (after the age of 2) or doesn't talk at all

Speaking in an abnormal tone of voice, or with an odd rhythm or pitch

Repeating words or phrases over and over without communicative intent

Trouble starting a conversation or keeping it going – to and fro

Difficulty communicating needs or desires

Doesn't understand simple statements or questions

Signs and Symptoms of ASD

Imagination

No imaginary play

Not interested in toys or not knowing what to do with toys

Play scripted from TV programme.

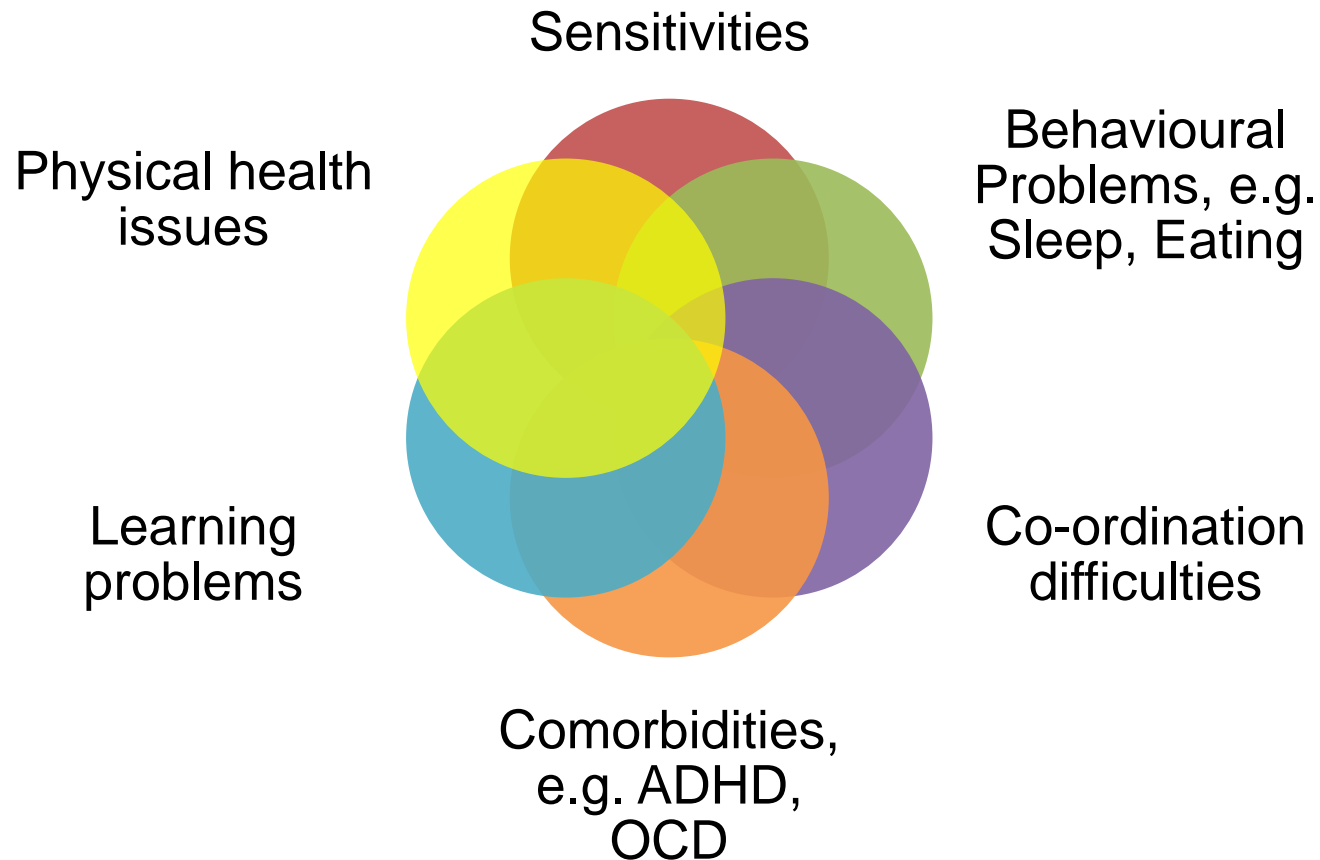
Repetitive play

Lining up toys

Solitary play

Signs and Symptoms of ASD

Associated difficulties



Baird et al 2006 (SNAP study)

- Prevalence rate of 1.1%
 - 38.9/1000 for childhood autism
 - 77.1/1000 for all other ASDs

Baron-Cohen et al (2009) Cambridgeshire Study

- Concurs with previous studies – prevalence rate of 1% for 5-9 year olds.

Males compared to females

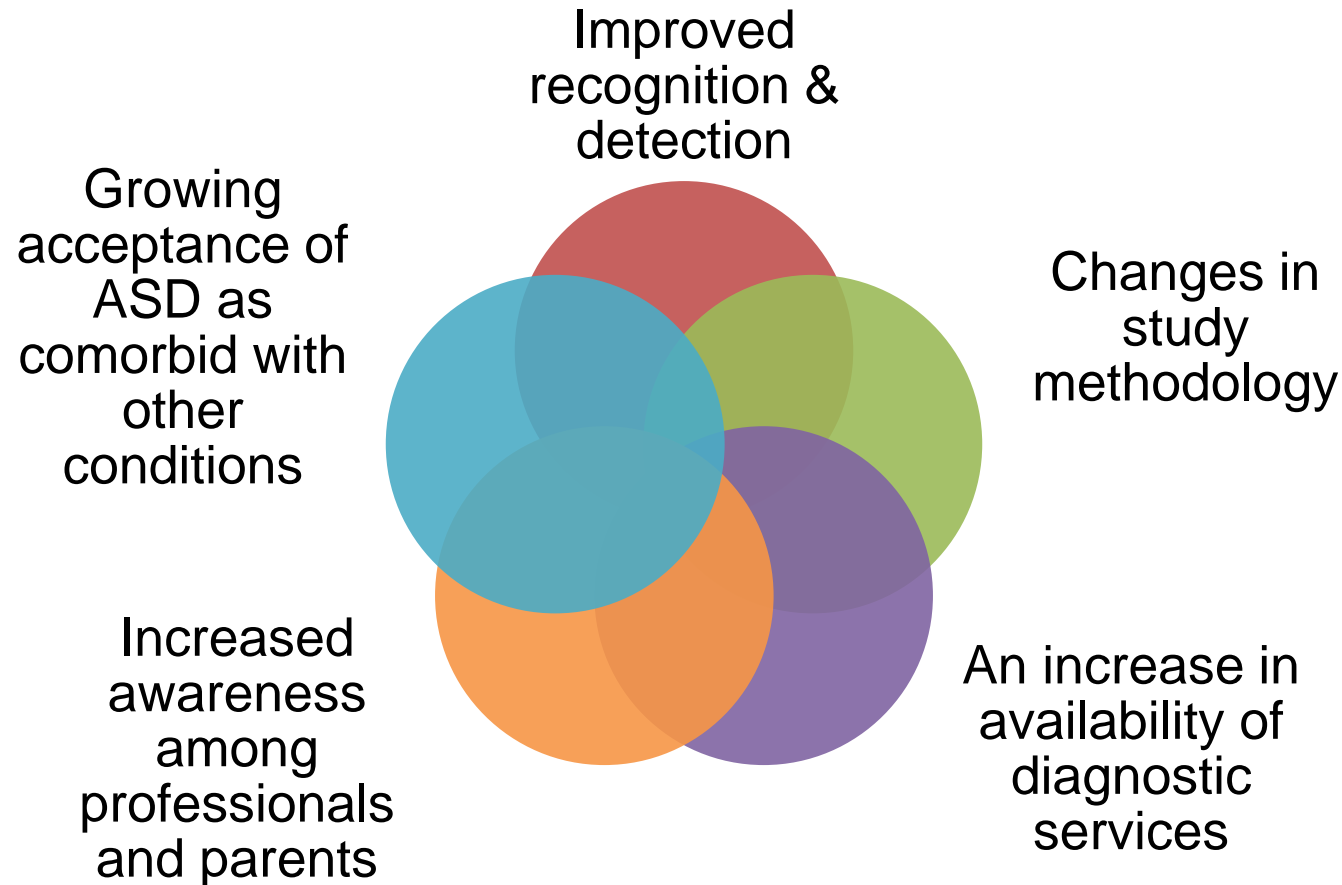
- Ratios - 4:1
- Higher for group without intellectual disability

Possible contributing factors

- Knowledge base biased towards male presentations
- Females often diagnosed later
- Superficial differences in way phenotype manifests?
- May seem more passive, verbal, avoidant patterns? Less aggression and may internalise rather than externalise frustrations?
- Interests may seem more social?

Autistic Spectrum Disorders

Increased Incidence



Axis 1 F84 Pervasive Developmental Disorders

F84.0 Childhood Autism

- A pervasive developmental disorder defined by the presence of abnormal/and or impaired development that is manifest before the age of 3 years
- Characterised by abnormal functioning in social interaction, communication and restrictive, repetitive behaviour

Axis 1 F84 Pervasive Developmental Disorders

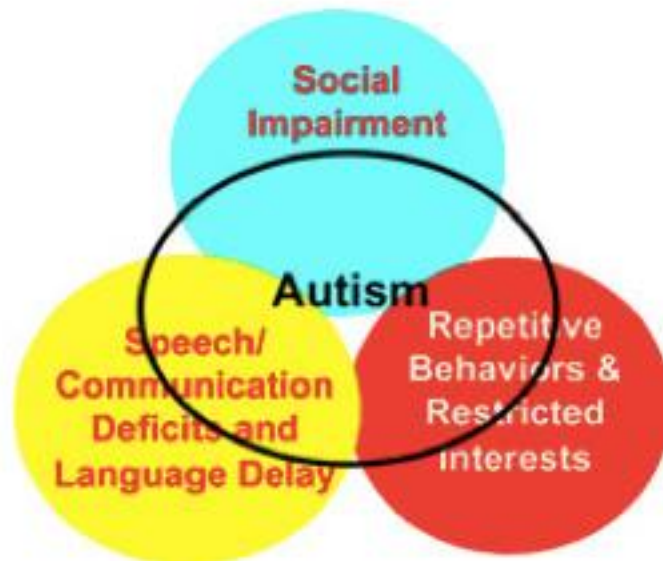
F84.5 Asperger's Syndrome

- Uncertain nosological validity
- Qualitative abnormalities of reciprocal social interaction and restricted and repetitive activities/interests
- No language or cognitive delay
- Clumsiness common
- M:F 8:1

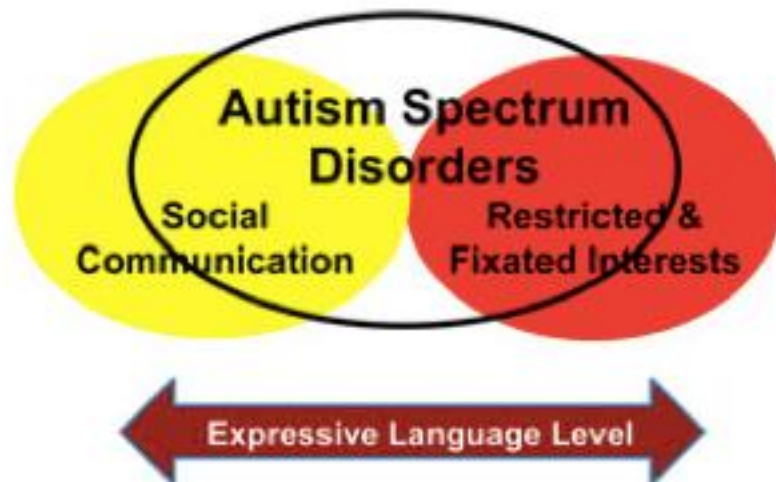
DSM V 299.0 – Autistic Spectrum Disorder

- Five Criteria - A, B, C, D, E

(A) **DSM IV:**
Pervasive Developmental Disorders:
Autism



(B) **DSM5:**
Autism Spectrum Disorders



Criteria A

Social Communication and Social interaction across multiple contexts (Social communication)

- Deficits in social-emotional reciprocity
- Deficits in nonverbal communicative behaviours used for social interactions
- Deficits in developing, maintaining and understanding relationships

Specify current severity

- Severity is based on social communication impairments and restricted, repetitive pattern of behaviour.

Criteria B

- Restricted, repetitive patterns of behaviour, interests or activities as manifested by at least two of the following currently or by history

Criteria C

- Symptoms must be present in the early development period, but may not become fully manifest until social demands exceed limited capacities

Criteria D

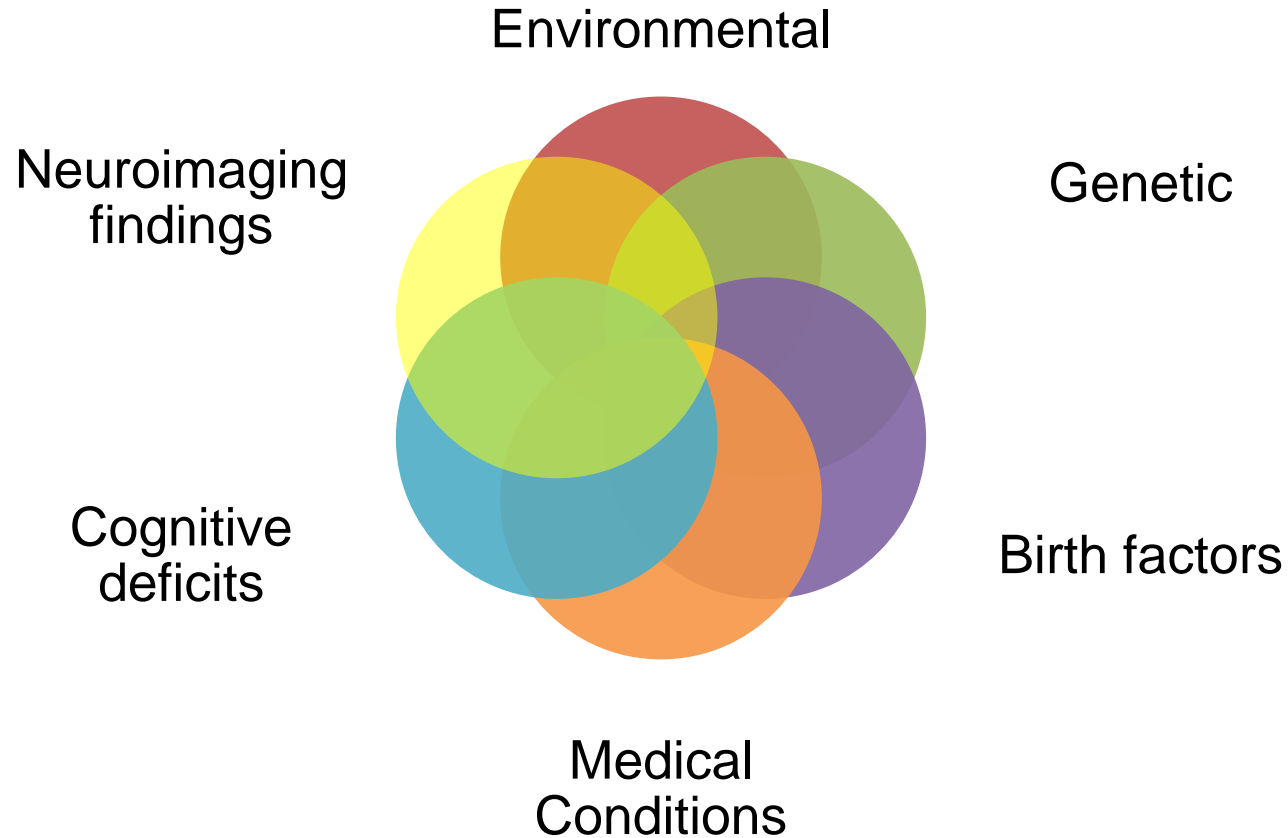
- Symptoms cause clinically significant impairment in social, occupational or other important areas of current functioning

Criteria E

- These disturbances are not better explained by intellectual disability or global developmental delay.

Autistic Spectrum Disorders

Aetiological factors



High heritability

- increased rate of diagnosis has led to this suggestion and Norwegian study is on going – no evidence yet eg. Toxins, diet

Immune system

- Wide range of abnormalities, none of them established.

Gene-environmental effect

- Nature & nurture not nature Vs nurture

Obstetric complications (Bailey et al 1996)

- Mild prenatal, perinatal and neonatal factors associated with autism
- Mild obstetric difficulties sometimes associated with ASD are considered a consequence of abnormal fetal development or genetic risk for autism rather than the cause

MMR

- Vaccination - MMR proposed as causally linked to increase in ASD (Wakefield 1999).
- Definitive study, Japan 2005. Rutter et al.
 - Japan had stopped MMR in 1988 (Meningitis scare from the strain they used).
 - Study of 37,426 children, 88-96.
 - There was a steady increase in ASD diagnosis from 48/10,000 in 1988–117/10,000 in 1997.
- A Study in London 2003 – had concluded the same.

THERE IS NO LINK BETWEEN MMR & AUTISM

Early Relationships

- Rutter found a few children in Romanian orphanages exhibited autistic-like patterns of behaviour but this faded as the children got older

Kanner, 1949 – Emotional Refrigeration Hypothesis

- Not supported by any scientific evidence.
- Onset very early - therefore psychosocial causation unlikely

Is autism related to insecure attachment?

- 40-50% of autistic children show secure attachment to mother (cf, 65% normal controls) [Sigman & Mundy, 1989].
- Autistic children notice when they have become separated from their parents, but do not respond normally (e.g. by showing anxiety) [Rogers et al, 1993]

Twin Studies

- >90% heritability
- Concordance rates in MZ pairs (36 – 91%) much higher than DZ (5%) – Steffenburg et al 1989; Bailey et al 1995).

Sibling Studies

- ASD is 50 times more frequent in siblings than the general population
- Recurrence rates 2-3% for narrowly defined autism and 10 – 20% for milder forms.

Genetic Studies

- Several genes involved
 - suggestions 3-4 predisposing genes, 15 loci proposed
- Sex, environmental influence affect phenotype
- A dozen genome scan studies done
 - Chromosomes 7q – greatest concordance, 2q, 17 q and 11q
- Last decade 100 genes studied
 - Neuroligin gene, Serotonin transporter gene, Reelin gene, several GABA-ergic genes
 - none reproducible

Enlarged head size

- Studies have found head size normal at birth but increases with age
 - 3-4 yrs average size increased by 10%
 - Older age; size remains bigger but to a lesser degree

Affects both gray and white matter

- Findings inconsistent & inconclusive
- May be due to excess neurones &/or reduced pruning
- The role of this in Autism not certain

Structural imaging

- Brain abnormally large in some with Autism
- Marked disruption between cortical and subcortical and cortical-cortical grey matter volumes (GMV)
- Correlation between frontal lobe GMV & temp lobe GMV, Parietal lobe GMV & subcortical GMV, aberrant in Autistic children
- fMRI (functional brain connectivity) different part of the brain used or reduced connectivity shown while doing a task compared to normal

Post mortem studies: 40 brains

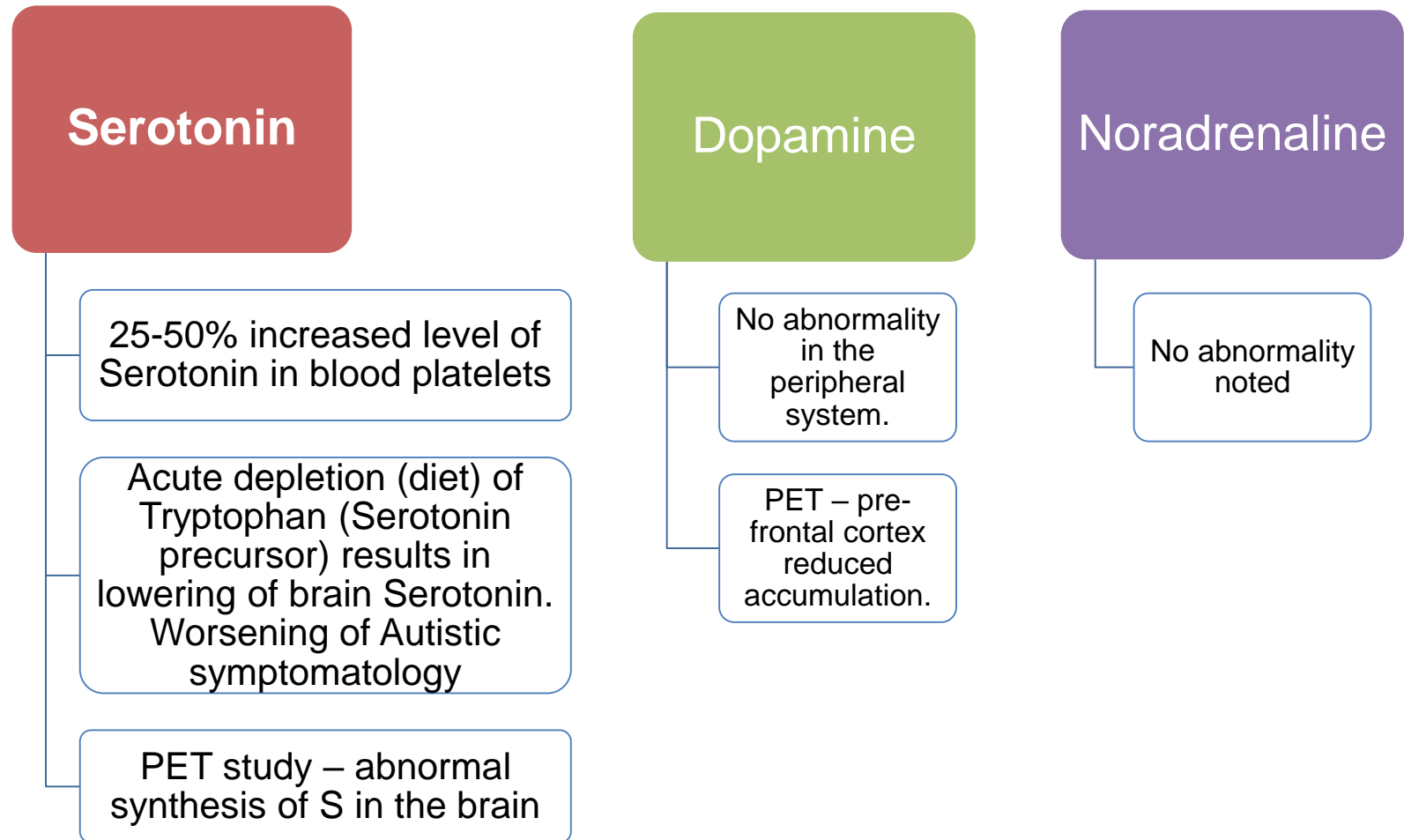
- **Limbic system**
 - increased cell packing
- **Cerebellum**
 - reduced number of purkinje cells and age-related in Cerebellar nuclei & inferior olives
- **Cortical dysgenesis**
- **Increased brain weight**
- **Cortical Minicolumns**
 - more numerous, narrower with less neuropil spaces, increased spacing among constituent cells compared to normal

Neurophysiology Studies

- 50% have abnormal EEG and/or brain scans
- 33% + have epilepsy
- Auditory processing
 - abnormalities to orientating to speech but not to non-speech sounds
- Noisy environments
 - difficulties in recognising and understanding speech

Autistic Spectrum Disorders

Neurochemistry



Autistic Spectrum Disorders

Neurochemistry

GABA

Receptor abnormalities in post mortem brains

Endogenous opioids

No significant evidence

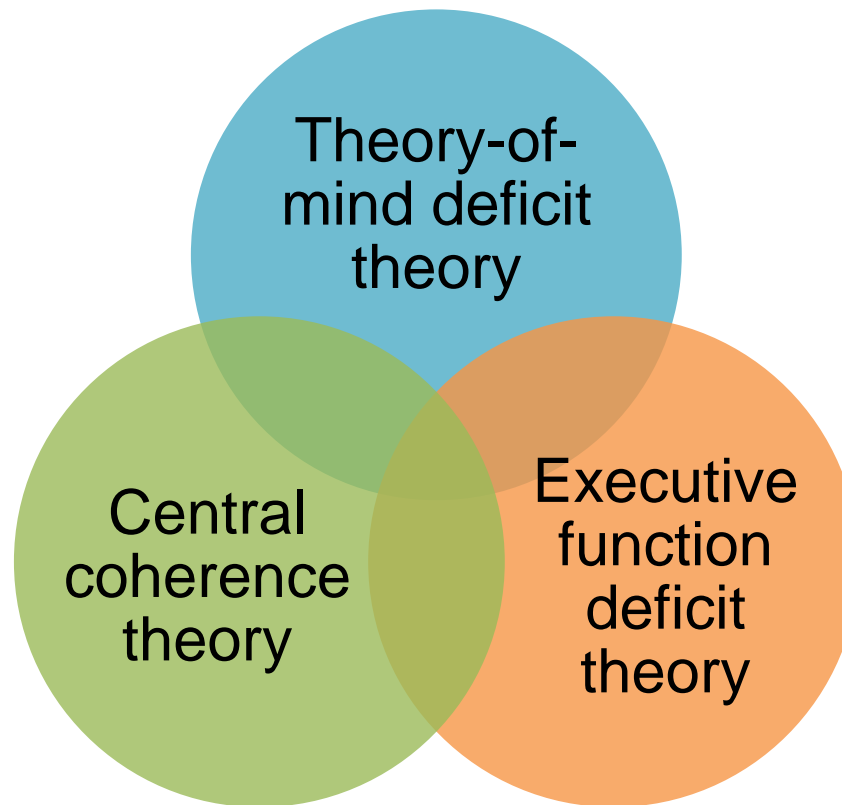
Melatonin and Secretin

No significant evidence

Neuropeptides &/or Neurotrophins

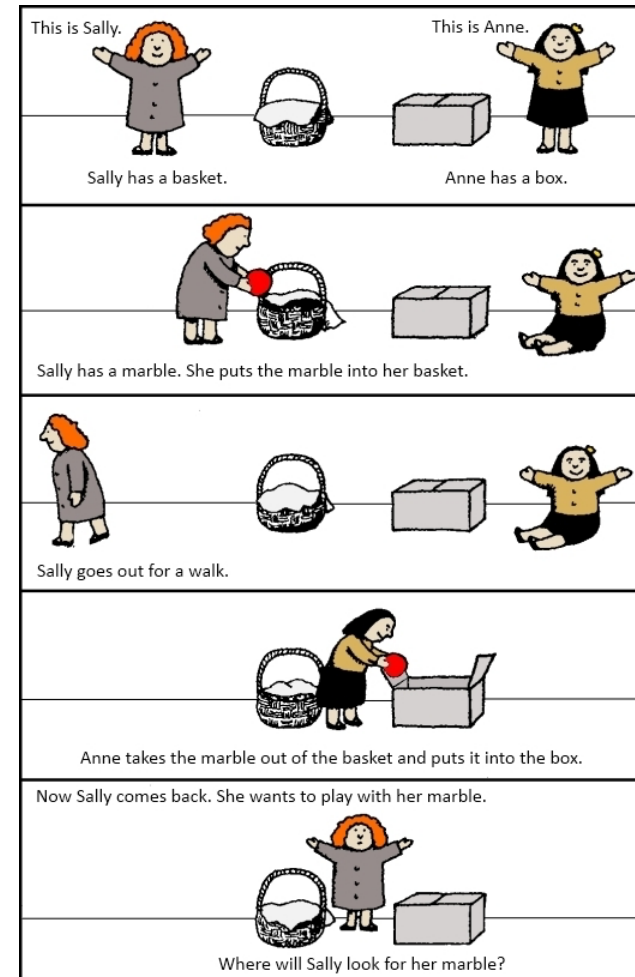
ASD and ID children had abnormality but did not differentiate the 2 groups

Psychological theories of Autism



Theory of Mind Deficit

- Individuals with autism fail to “impute mental states to themselves and others” (Premack & Woodruff, 1978) and that this deficit manifests as inability to mentalise, or failure to take into account others’ mental states



“Autistic children cannot engage in meta-representations, therefore cannot develop Theory of Mind”

- Autistic children don't seem to show pretend/symbolic play (Baron-Cohen, 1987)

Also:

- Chance performance on mental-physical distinction (Baron-Cohen 1989)
- Poor understanding of functions of the mind (Baron-Cohen, 1989)
- Difficulty understanding complex causes of emotion (Baron-Cohen 1991)
- Don't know that eye region indicates thoughts/wants (Baron-Cohen & Cross 1992)
- Unable to deceive (Baron-Cohen 1992)
- Don't understand intentionally non-literal statements (Happé 1994)

Problems with Theory of Mind

- Prior et al (1990) found autistic children could succeed on Baron-Cohen et al's (1985) task
- A child may fail a test for any number of uninteresting reasons such as lack of motivation, attention or task comprehension

Executive function:

- Suppress incorrect response
- Retain relevant information in working memory

Executive function involved in flexible planning

- e.g. Tower of Hanoi



Executive Dysfunction

- Deficit occurs with frontal brain damage leading to perseverative behaviour

However, not specific to ASD and can also occurs in

- Schizophrenia
- Obsessive-compulsive disorder
- ADHD
- Parkinson's disease ...and more.

So by itself, executive dysfunction cannot explain autism

- May co-occur with ToM deficit

Central coherence (Frith, 1989)

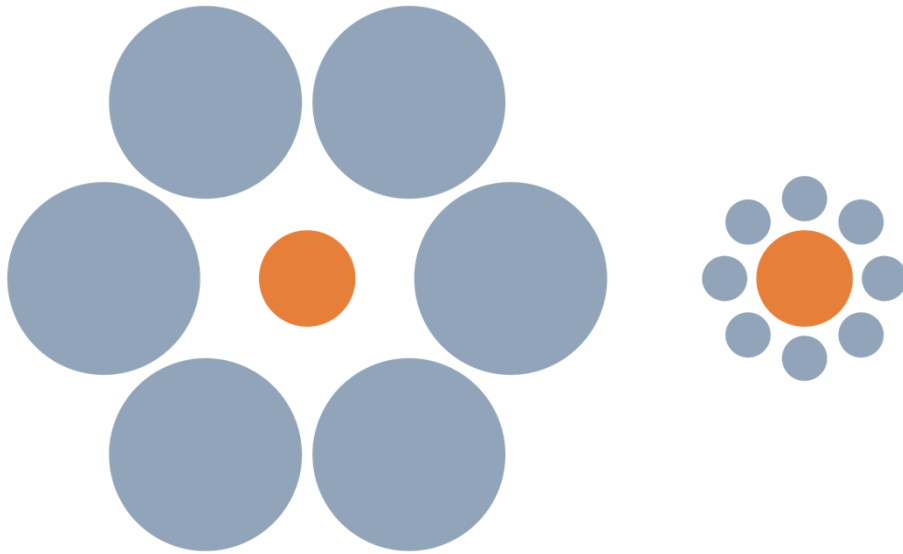
- People need/desire high-level meaning
- This feature of human information processing is disturbed in ASD

'Weak Central Coherence'

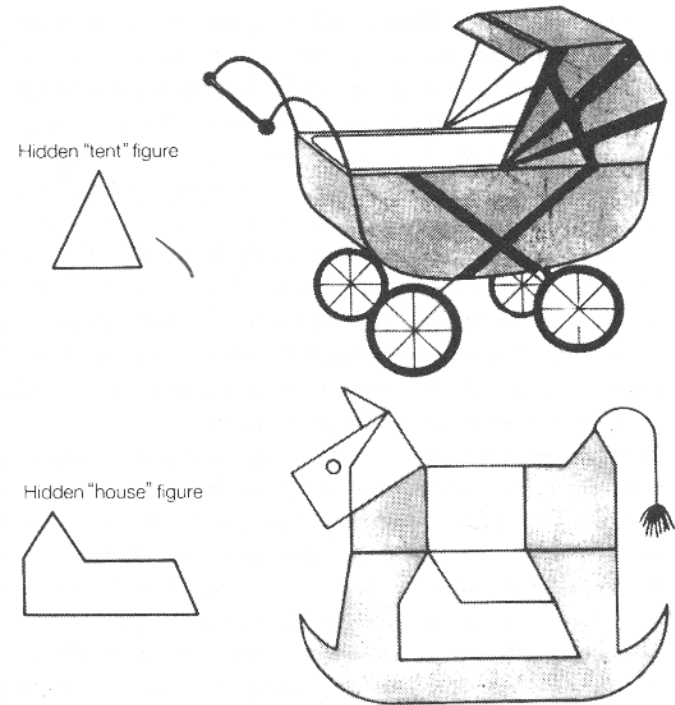
- Autism biased toward local vs global info processing
 - "inability to experience wholes without full attention to the constituent parts"
 - do not succumb to visual illusions (Happé, 1996)
 - failure to use context in reading (Happé, 1995)

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Weak Central Coherence

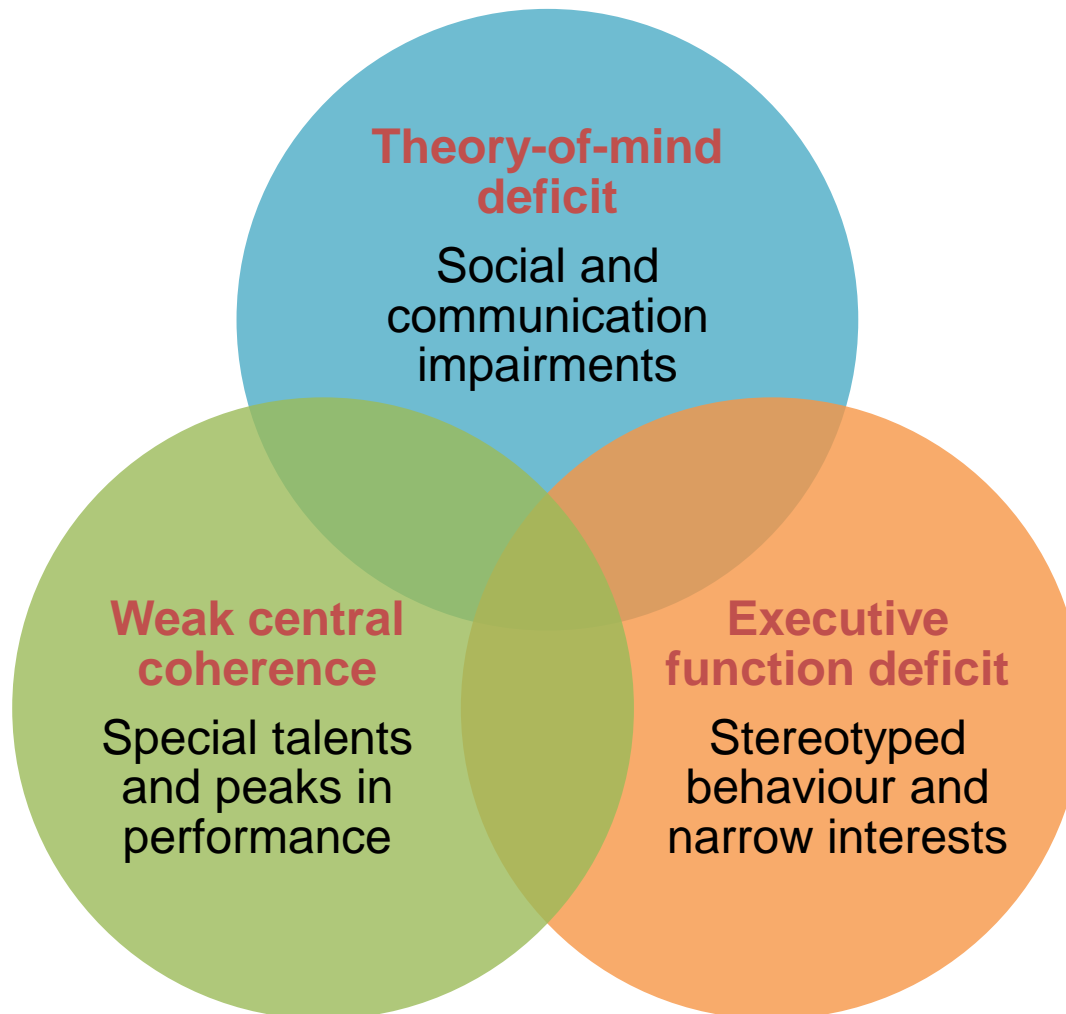


The Ebbinghaus Illusion



Embedded figures test

Three Complementary theories?



National Autism Plan for Children

Multi-agency; Psychiatry, Clinical Psychology, Speech Therapy, Community Paediatrics, Educational Psychology, Specialist Teachers

Set time scales

Multi-modal: developmental history, school obs, direct assessment

Assessment and intervention provided

Detailed information from Parents

- Concerns from parents, details about behaviour, language, social interaction, social communication, play, imagination, sensory sensitivities, repetitive/restricted and other behaviours
- Pregnancy, labour, birth, birth weight, development – smiling, rolling over, crawling, sitting up, walking, language development, any illnesses, medication etc.

Observation of child in clinic

- language, play, social interaction, social communication, repetitive behaviour, other abnormal behaviours such as flapping, spinning etc.

Structured assessment

- Autism Diagnostic Observation Schedule

Parents completing questionnaires (screeners/checklists)

School Assessment

- Information to be gathered from class teacher, teaching assistant and SENCO
- Observing the child in structured and informal settings

Useful information

- Is any other professional involved? Do they have reports from any other professional that they can share e.g. SLT, EP, EHCP
- Are they planning to refer the young person to any professional?
- Child's academic functioning ?above, level with peers and below peers

Structured Assessments

Interview with Parents/Carers

- Autism Diagnostic Interview (ADI) &
- Diagnostic Interview Schedule for Social Communication (DISCO)

Observation of the child/young person

- Autism Diagnostic Observation Schedule (ADOS)
- 3di

Questionnaires:

- Social Responsiveness Scale
- Social Communication Questionnaire

Autism Diagnostic Observation Schedule (ADOS)

- Designed to provide structured opportunities for the child to demonstrate social, communication and play skills.
- Activities provide 'social presses' to see how the child responds
- 4 Modules – most appropriate selected on the basis of child's level of language development (toddler module added in

Module	Expressive language level
1	No speech - Simple phrase
2	Flex 3 word phrase - Verbally Fluent
3	Verbally fluent (child/younger adolescent)
4	Verbally fluent (adolescent – adult)

- Key is how you interpret
- Do not rely on 'single methods' or simple screening material
- Gold standard is to use multi-agency assessments

Psychometrics

- Helps to give structure to assessment and build up systematic picture
- Never to be used in isolation
- Stating IQ scores alone can mask an uneven profile - always report subtest scores. Performance can be uneven within subtests & across sub-tests

Magnetic Resonance Imaging- Assisted diagnosis of ASD (2010 J. Neurosciences)

- Gray Matter anatomy in adults with ASD
- 5 morphological parameters were used
- 20 adults with ASD / 20 controls via adverts
- 20-68 years range
- ASD diagnosed by Adult ASD team ICD 10 criteria – 85% by ADI R, 15% by ADOS – *memory of parents for ADI the older the participant. Only 2 had ADI+ADOS scores*

Weakness

- Adults, MRI is still in its infancy for such assessments, very small numbers

Formulation

- The outcome of the assessment is based on information from multiple sources: parents/carers, Nursery/School, observations in the clinic and school (usually not secondary school children) in structured and unstructured setting
- Formulation: Use of DSM 5 criteria, describe the child/young person's symptoms, strengths and difficulties that need to be addressed/supported by parents/carers and school

Autistic Spectrum Disorders

What Tools to Use?

Charman et al (2005)

Looked at the extent to which assessments of children at 2 and 3 years predicted outcomes at 7 years. They found that assessment at 3 years was a much better predictor of severity of symptoms and profiles.

Eaves et al (2004)

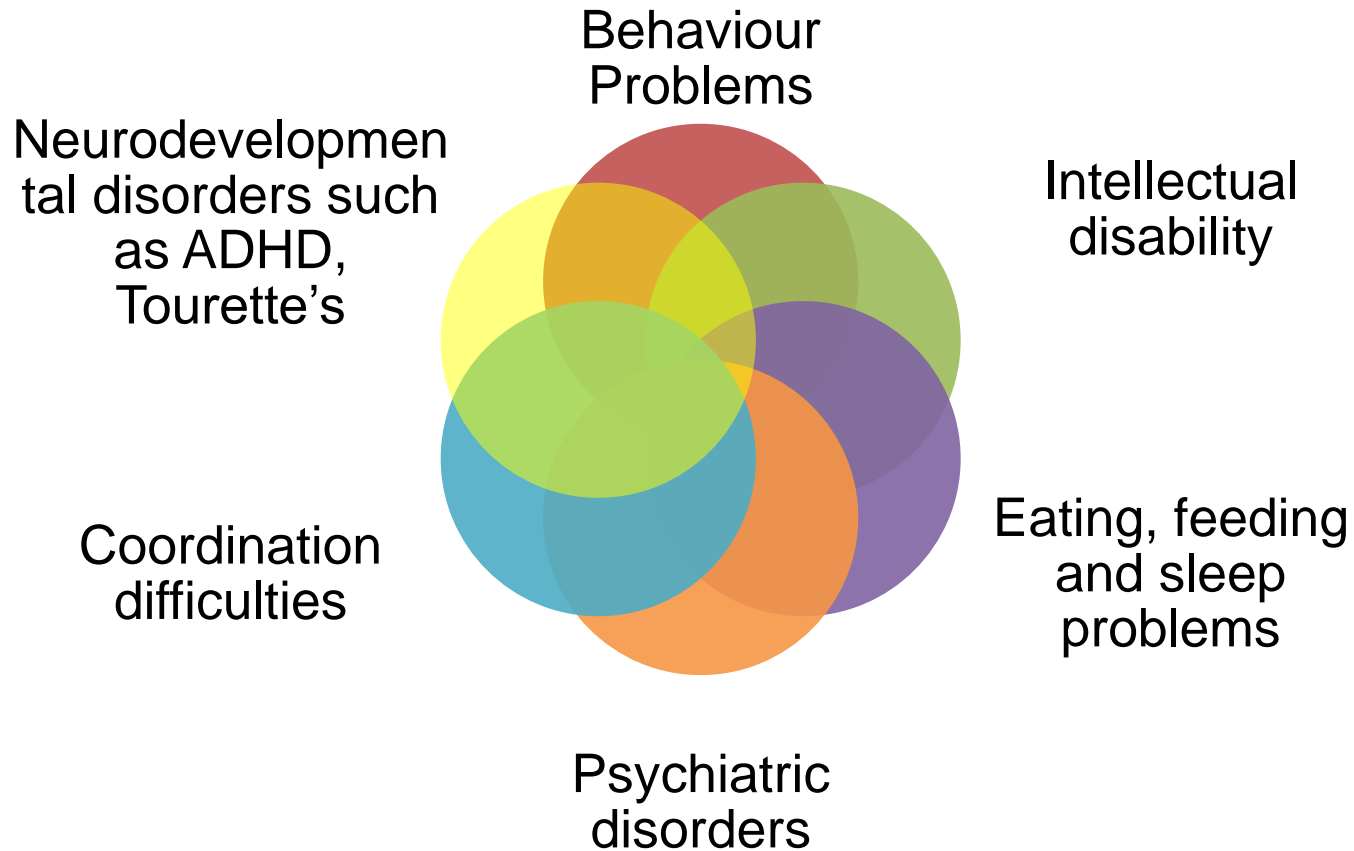
Followed up 49, 2 year olds at 4 and a half.
Found 79% stayed in same diagnostic category, but more likely if ASD than PDD-NOS.
Higher functioning children tended to improve most.

Billsetdt et al (2005)

Followed up 120 people diagnosed in childhood.
Poor outcomes for 78%.
Childhood IQ positively correlated with better outcomes

Autistic Spectrum Disorders

Comorbidities



Mental and Behavioural disorders

- Approximately 70% of individuals with autism also meet diagnostic criteria for at least one other (often unrecognised) mental and behavioural disorder
- 40 % meet diagnostic criteria for at least two disorders, mainly **anxiety, ADHD and ODD**

Challenging behaviours

- Includes aggression (to objects or people), destructiveness and self injury (e.g. head-banging, hand or wrist biting, or skin picking), are more common in autism than in other conditions with similar levels of intellectual impairment

Intellectual disability

- (IQ<70) occurs in approximately 50% of young people with autism.
- Intellectual ability and language skills remain the best predictors of outcome.

Neurodevelopmental disorders

- Developmental Coordination Disorder (DCD) also commonly co-occurs with autism (50-73%)
- Prevalence of ADHD in young people with ASD - 28.2%

Functional problems

- 40%-86 % of children with ASD have reported sleep problems
- Eating difficulties (restricted and rigid food choices) may be the presenting feature of autism in early childhood
- Gastrointestinal problems are frequently reported - particularly diarrhoea, abdominal pain and constipation

Prognosis

- Data from 13 follow up studies (Howlin 2005) – extending to adult like: modest improvement over time.
- Autism +LD: require supervised living and working
- Outcome studies over 30 years: normal to above Normal IQ increased proportion employed
- IQ >70: only ¼ show normal social functioning

- Psychiatric disorders: 16%
- 1/5 of ASD develop experience one or more epileptic attacks in adult life and 2/3 developed of these onset in adolescence or early adult life

Neurodisability as “a risk”

Direct Factors

- Hyperactivity and impulsivity
- Cognitive & language imp.
- Alienation
- Poor emotional regulation

Secondary Factors

- Truancy
- Poor educational attainment
- Illicit Drug use
- Peer delinquency

Systemic Factors

- Parenting Style
- Detachment from education
- Influence of other antisocial peers

Service Failures

- Limited specialist provision
- Lack of training
- Failure to understand the needs of the young person

Most powerful predictors of outcome

- Non Verbal IQ below 50 in preschool years – poor prognosis
- Language – if no language by age 5 – poor prognosis

Other indicators are:

- Joint attention, verbal imitation, appropriate educational provision, improved transitional arrangement to college and supported employment

Education and Management of behaviours

Non specific interventions

- Music Therapy: may help children in turn taking. No specific evidence, many schools offer this
- Art therapy: has been tried, no specific evidence
- Speech and language therapy: helping in communication. Picture exchange communication (PECS) - a picture is exchanged to request an object or activity that he wants
- Early Intervention behavioural intervention (Lovaas, ABA). No evidence if the intervention is less than 40 hrs a week

- Psycho-education for parents and school (APDG)
- Communication workshops for parents/school
 - visual time tables, picture exchange communication etc
- Behavioural intervention/Cognitive behavioural therapy
- ‘Riding the rapids’ – parent training
- Social understanding group/Skills groups
- Transition groups
- Medication in a few
 - associated difficulties such as sleep and Attention Deficit hyperactivity disorder etc

Intervention for core features

- ‘Consider’: Social communication intervention
- ‘Do not’: Medication

Behaviour that challenges

- ‘Offer’: Psychosocial behavioural intervention
- ‘Consider’: Antipsychotic medication when psychosocial or other interventions insufficient

Sleep problems

- ‘Offer’: Sleep hygiene

Service organisation

- Keyworker approach/Autism team/transition

NICE guidelines

- recommend offering psychosocial and pharmacological interventions for the management of coexisting mental health or medical problems in people with autism informed by existing NICE guidance for the specific disorder.
- For those who have the verbal and cognitive ability to engage in an adapted cognitive behavioural therapy (CBT) intervention e.g. for **anxiety**
- Psycho social interventions based on behavioural principles are recommended for all young people and adults who need help with daily living and participation in leisure activities
- If the individual has a sleep problem a stepped approach is recommended

Treatment of anxiety in ASD:

Study	Number randomized and characteristics	Intervention	Results
Sofronoff et al (2007)	71 children with Asperger's and panic disorder, OCD, social phobia, separation anxiety disorder, or GAD	6 sessions 2 hours each of modified CBT	Significant reduction in parent-rated symptoms at 6-week follow-up, Significant increase in the number of strategies participants were able to describe to cope with anxiety producing situations
Wood et al. (2009)	40 children (4 drop outs) with ASDs and social phobia, separation anxiety disorder, OCD, or GAD.	16 sessions 1.5 hours each of modified CBT	Significant reduction in parent reported anxiety scores, No significant change in child reported anxiety, 93% met criteria for positive response to treatment, 64% of treatment group no longer met criteria for any anxiety disorder compared to 9% of control group

CBT modified by:

Increasing family involvement; Emphasis on direct instruction of social skills;
Reinforcers for treatment compliance; Reducing emphasis on abstract concepts emotions

Approximately 45% of children with ASD are prescribed psychotropic medication (*Prevalence of use of psychoactive medicines among individuals with ASD in the Autism Society of Ohio. Aman et al. 2003*)

Problems in applying Research base to therapeutic practice:

- Absence of an accepted diagnostic system for detecting and rating co-morbid psychopathology in individuals with ASD, particularly for anxiety and psychosis;
- Scarcity of widely used outcome measures for the ASD population
- Divergence on whether to study treatment of identifiable co-morbid psychiatric syndromes in ASD, such as depression, or to evaluate treatment of symptom domains, such as aggression.
- Debate as to whether certain behaviours in ASD are symptomatic of psychopathology found in the neurotypical population.

Risperidone

- Antagonist of both dopamine and serotonin receptors and is the most well researched psychotropic treatment for children with ASD.
- Established evidence for risperidone's efficacy in the treatment of irritability and hyperactivity in children with autism.
- Preliminary evidence for efficacy in reducing repetitive behavior and stereotypy.

Use of Risperidone

Study (Rating of strength)	Target symptoms	Dose	Study	Significant side effects	Primary outcome(s)
RUPP (2002) (Strong)	Irritability, hyperactivity, stereotypy, social withdrawal, inappropriate speech	0.5–3.5 mg per day	N = 101 5–17 yrs	Weight gain, increased appetite, fatigue, drowsiness, drooling, dizziness	69% had a positive response on risperidone vs. 12% positive response on placebo. Significant positive findings for hyperactivity and stereotypy
Shea et al. (2004) (Strong)	Irritability, hyperactivity, stereotypy, social withdrawal inappropriate speech	0.02–0.06 mg/ kg/day	N = 79 5–12 yrs	Weight gain, somnolence,	64% improvement in ABC Irritability on risperidone vs. 31% improvement on placebo. Significant positive finding for hyperactivity

Use of Aripiprazole

- Studies provide evidence for the efficacy in reducing irritability, hyperactivity and stereotypy in ASD.

Study	Target symptoms	Dose	Study	Significant side effects	Primary outcome(s)
Marcus et al. (2009) (Strong)	Irritability, hyperactivity, stereotypy, social withdrawal inappropriate speech	5,10 or 15mg per day, fixed dose	N = 218 6–17 yrs	Somnolence, weight gain, drooling, tremor, fatigue, vomiting	56% positive response for 5 mg aripiprazole versus 35% on placebo.
Owen et al. (2009) (Strong)	Irritability, hyperactivity, stereotypy, social withdrawal inappropriate speech	5–15 mg per day, flexibly dosed	N = 98 6–17 yrs	Somnolence, weight gain, drooling, tremor, fatigue, vomiting	52% positive response* for aripiprazole versus 14% on placebo.

Use of other Antipsychotics

Study (Rating of strength)	Target symptoms	Dose	Study	Significant side effects	Primary outcome(s)
Haloperidol					
Anderson et al. (1989) (Strong)	Multiple behavioral symptoms, global functioning	0.25–4 mg per day	45 children 2–7 years old	Sedation, extrapyramidal symptoms	Behavioral symptoms improved with significant decrease in 7 of 14 items of the CPRS
Olanzapine					
Hollander et al. (2006) (Weak)	Global functioning, aggression, compulsions, irritability	7.5–12.5 mg per day	11 children 6–14 years old	Weight gain, sedation	0% of those on olanzapine much or very much improved in global functioning versus 20% on placebo

Use of other medications

Class	Agent	Primary target symptom(s)	Level of evidence
Alpha 2 Agonist	Clonidine Guanfacine	Hyperactivity Hyperactivity	Insufficient evidence Insufficient evidence
Mood Stabilizers	Valproic acid Valproic acid Lamotrigine	Irritability Repetitive behavior Irritability, social behavior Irritability	(conflicting results) Insufficient evidence Insufficient evidence
Norepinephrine reuptake inhibitor	Atomoxetine HCl	Hyperactivity	Preliminary evidence
Anitdepressants	Citalopram Fluoxetine Clomipramine	Repetitive behavior Repetitive behavior Repetitive behavior, stereotypy, irritability, hyperactivity	Insufficient evidence Insufficient evidence Insufficient evidence
Stimulants	Methylphenidate	Hyperactivity	Promising evidence
Miscellaneous	Naltrexone Naltrexone	Social behavior, communication, indiscriminant learning, SIB	Insufficient evidence Preliminary evidence

Sleep problems are highly prevalent in ASD ranging from 40-80%

Medication

- Melatonin is commonly prescribed for sleep difficulties in children with neurodevelopmental disorders, with the MENDS trial suggesting that melatonin can reduce sleep onset latency by an average of 38 minutes (Appleton et al, 2011).

- Emerging systematic evidence base on effectiveness of ASD interventions.
- Findings from recent studies are convergent
 - Well targeted interventions can indeed improve immediate outcomes, e.g. parent-child communication, but generalising such change to core symptoms and adaptation in the real world is more challenging.
- Need for understanding of longer term outcomes

Conclusions

- All parties involved in care of young people with ASD are looking for guidance with regards advances in treatment
- Better understanding of etiologies behind autism but no single factor can explain it all
- Neural, Genetic studies ongoing and adding to our understanding
- Multimodal approach to management is needed

Autistic Spectrum Disorders

MCQs

1. The M:F ratio of Childhood Autism is

- a) 1:1
- b) 2:1
- c) 3:1
- d) 4:1

2. The prevalence of Autism Spectrum Conditions in a school based study in UK was

- a) 99 per 10,000
- b) 70 per 10,000
- c) 9 per 10,000
- d) 1 per 10,000

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3. The clinical features of Childhood Autism as described by Kanner include all the following except:

- a) autistic aloneness
- b) delayed or abnormal speech
- c) an obsessive desire for sameness
- d) onset in the first one year of life

4. The following are true about the aetiology of Autism except:

- a) higher concordance among MZ twins.
- b) increased rate of perinatal complications.
- c) decreased brain serotonin levels
- d) condition is 50 times more frequent in the siblings of affected persons

3. The clinical features of Childhood Autism as described by Kanner include all the following except:

- a) autistic aloneness
- b) delayed or abnormal speech
- c) an obsessive desire for sameness
- d) onset in the first one year of life**

4. The following are true about the aetiology of Autism except:

- a) higher concordance among MZ twins.
- b) increased rate of perinatal complications.
- c) decreased brain serotonin levels**
- d) condition is 50 times more frequent in the siblings of affected persons

5. Which of the following is false for Rett's syndrome:

- a) occurs only in boys
- b) onset between the ages of 7 and 24 months
- c) often develop autistic features and stereotypies
- d) X linked dominant disorder

6. The following is false for Seizures in Autism:

- a) Can affect quarter of autistic individuals with generalised learning disability
- b) Affects 5% of autistic individuals with normal IQ
- c) In autistic individuals with normal IQ the seizure onset is usually in early childhood.
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7. The following is true about the epidemiology of Autism:

- a) Prevalence is decreasing in recent years.
- b) Associated with high socio-economic status.
- c) More common in boys.
- d) No hereditary risk.

8. All the following are first line support for a child with Childhood autism except:

- a) Communication skills workshop
- b) Behavioural support
- c) counselling and advice to parents
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9. The following can be used in the diagnosis of a child with Autism except:

- a) Autism diagnostic Inventory (ADI)
- b) Autism Diagnostic Observation Schedule (ADOS)
- c) Social Responsiveness Scale (SRS)
- d) Check list for Autism in Toddlers (CHAT).

10. Which of the following drugs can be used in short term treatment of severe aggression in Autism under specialist supervision:

- a) Risperidone
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- c) Lorazepam
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Autistic Spectrum Disorders

Any Questions?

Books

- Rutter's Child and Adolescent Psychiatry, Sixth Edition.
- Child and Adolescent Psychiatry. Robert Goodman and Stephen Scott. Third Edition, Wiley-Blackwell
- Autism and Asperger Syndrome. Simon Baron-Cohen. The Facts. Oxford university press

E-Learning

- Autism, ethnicity and maternal immigration
 - <http://www.psychiatrycpd.org/default.aspx?page=10591>
- Guidelines - Autism in children and young people (CG128)
 - <http://www.nice.org.uk/guidance/index.jsp?action=byTopic&o=7281>

- no babbling by 12 months
- no gesturing (pointing, waving, showing, reaching, etc) by 12 months
- no single words by 16 months
- no two-word spontaneous (not echolalic) phrases by 24 months
- any loss of any language or social skills at any age
- Other important signs to look out for include:
- Diminished eye contact
- Diminished social engagement
- Limited interest in social games and turn taking exchanges
- Preference for being alone
- Visual attention more frequently to objects than people
- Limited range of facial expression
- *Filipek, P.A. et al. (1999). The Screening and Diagnosis of Autistic Spectrum Disorders. Journal of Autism and Developmental Disorders, 29(6), 439-483*

- Less sharing of affect (smiling and looking at others)
- Unusual hand and finger mannerisms
- Walking on tiptoes
- Difficulty adapting to new situations and coping with changes in routine
- Not orientating to name being called
- Not imitating facial expression or gesture
- Lack of seeking and enjoying cuddles
- Less likely to look at a parent to seek reassurance and approval
- Prone to intense distress
- Sensory over responsivity such as being afraid of every day sounds
- Unusual mannerisms to express emotions
- Extremes of temperament
- *Filipek, P.A. et al. (1999). The Screening and Diagnosis of Autistic Spectrum Disorders. Journal of Autism and Developmental Disorders, 29(6), 439-483*