

AUTISM and ADOLESCENCE

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UP Update Febr 2015

AUTISM and ADOLESCENCE

- Definition
- DSM V
- General remarks
- Specific problems of ASD in adolescence
- Family issues
- Treatment Guidelines
- Case study

Autistic Spectrum Disorders

ASD's constitute

- A class of severe and heterogeneous neurodevelopmental conditions
- caused by atypical brain development beginning during early prenatal life
- reflecting many genetic, neurobiological and environmental influences.
- The first clinical signs of ASD's begin to be evident in children between 12 to 18 months of age,
- often after a period of relatively typical postnatal development.
- Recent longitudinal studies reveal substantial diversity in developmental trajectories through childhood and adolescence.

Italian-Israeli Consensus Conference. 2013

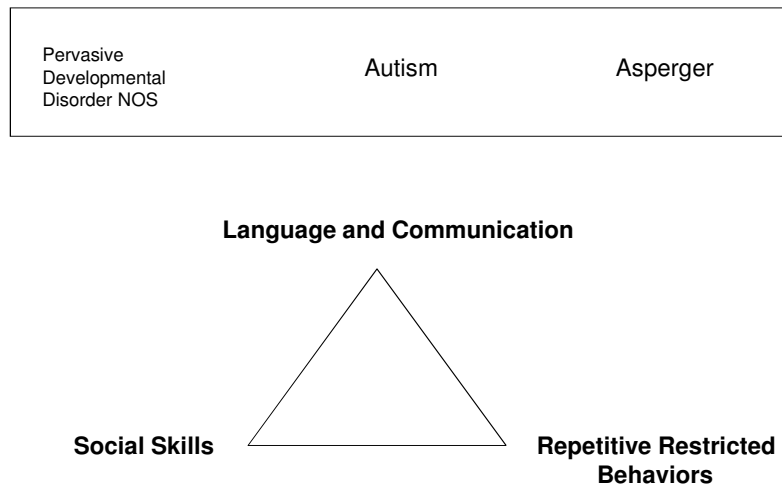
Eur. J. Paediatr. Neurol. 2014

DSM V vs. DSM IV

DSM IV

- Mental condition
- Classified under “Pervasive Developmental Disorders”
 - Retts, Childhood Disintegrative Disorder, Autistic Disorder, Asperger, PDD-NOS.
- Could not diagnose ADHD in PDD

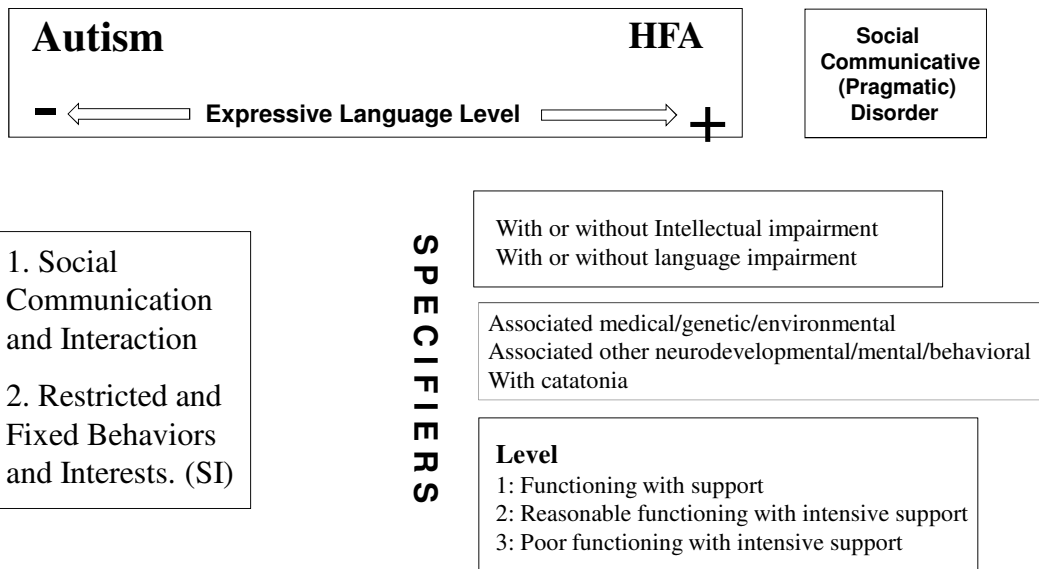
AUTISTIC SPECTRUM DISORDERS DSM IV



AUTISTIC SPECTRUM DISORDERS in DSM V

- Neurodevelopmental condition
- One Term: “Autistic Spectrum Disorders”
- Includes Childhood autism, Kanner’s autism, High Functioning Autism, PDD-NOS, Asperger’s, Childhood Disintegrative Disorder.
- Rett syndrome is now a Differential Diagnosis.

AUTISTIC SPECTRUM DISORDERS - DSM V



ASD.

PREVELANCE: (DSM V)

- 1% of the population
- Heritability approximately 50% (Sandin et al)
- Diagnosed Boys:girls = 3-4:1 Accurate?

Burden of psychiatric and neurodevelopmental disorders:

- Finland: By age 14: (Gyllenberg et al)
 - 12.9% of children (1 in every 8) will have visited specialized services for psychiatric and neurodevelopmental disorders
 - 6.9% of children visiting services - ASD

ASD.

Is ASD more common in recent years?

- UK:
 - Fivefold increase in the annual incidence rates of autism during the 1990's.
 - Incidence and prevalence rates in 8-year-old children reached a plateau by 2004 and remained steady through 2010. (Taylor et al)
- Denmark:
 - Incidence rates increased from 9.0 to 38.6 per 100 000 person years from 1995 to 2010. Mostly pronounced in females, adolescents and patients with Asperger and PPD-NOS (Jensen et al)

ASD - DIAGNOSING in PAEDIATRIC PRACTISE

Identifying autism in a brief observation: Gabrielsen et al:

- 10 Min videos: Expert raters (psychologists with toddler and autism expertise) unaware of diagnoses, missed 39% of the autism group as needing ASD referral.
 - ASD children showed more typical behavior (89% of the time) than atypical behavior (11% of the time) in a 10 minute evaluation.
 - ASD can go undetected during childhood and then present during adolescence with psychiatric comorbidity, especially depression and anxiety (Aggarwal et al)

SOME SPECIFIC PROBLEMS in ADOLESCENCE

ANXIETY and STRESS

The Twins Early Developmental Study (TEDS) (Hallett et al)

- Ages 10-15:
 - Support previous reports of heightened anxiety in ASD
 - Relationship with *Intolerance of Uncertainty* (Boulter et al)
 - Unaffected co-twins also showed increased anxiety.
 - Overlap between ASD and anxiety?
 - Parental modelling?

SOME SPECIFIC PROBLEMS in ADOLESCENCE

SUICIDE

- A systemic review by Segers et al:
 - Individuals with ASD comprised 7.3 – 15% of suicidal populations.
 - Risk factors: Peer victimization, behavioral problems, being male, lower SES, lower levels of education.
- Depressed adults with comorbid autistic traits (Takara et al)
 - Are at high risk for suicide attempts
 - Often engage in methods that are more lethal.
 - Drug overdose most prevalent in non-ASD (59.1%) and hanging in ASD (44.4%)

SOME SPECIFIC PROBLEMS in ADOLESCENCE

BULLYING

- Children with ASD are associated with more severe bullying victimization (Chou et al)

SIB – Self injuries behavior.

- More common in ASD (Minshawi et al)
- About 35.8% of adolescents in one study showed SIB (Rattaz et al)
 - Often head banging and self-biting
 - Major risk factor: severity of autism symptoms

SOME SPECIFIC PROBLEMS in ADOLESCENCE

DISRUPTIVE MOOD DYSREGULATION

- Boys with HFASD significant higher levels of irritability, often resembling severe mood dysregulation (Mikita et al)
- Strong relation with repetitive behaviors (Samson et al)

BIPOLAR DISEASE

- Common, from 6 - 21.4%. (Vannucchi et al)
- Onset often during adolescence
- Difficult diagnoses

SOME SPECIFIC PROBLEMS in ADOLESCENCE

SUD

- Norway: Smoking, alcohol consumption and illicit drug use in adolescent psychiatric population (Mangerud et al)
 - Highest in mood disorders, lowest in ASD

PSYCHOSEXUAL DEVELOPMENT

- Core autistic features are related with skills central to sexual development and functioning. (Dewinter et al)
 - Very little research but area of difficulty for ASD.
 - Girls: sex-specific puberty issues, sexual vulnerabilities (Cridland et al)
 - Hypersexual behavior extremely challenging
 - Case study: 13 years old boy, Propranolol 10mg bd. (Agrawal)

SOME SPECIFIC PROBLEMS in ADOLESCENCE

SLEEPING

- Studies confirm significantly poorer sleep quantity and quality in ASD, particularly from 6-9 years. (Hodge et al)
- Unlikely to diminish with age
- Sleep disturbances aggravates poor daytime psychosocial functioning (Richdale et al)
- Bedroom media access even more strongly associated with reduced sleep in boys with ASD than with ADHD or typical development. (Engelhardt et al)

SOME SPECIFIC PROBLEMS in ADOLESCENCE

OBESITY

- ASD children show significantly higher odds of overweight and obesity, especially in adolescence and adulthood. (Broder-Fingert et al)
 - Risk factors: Older age, public insurance, co-occurring sleep disorders.

ATOPIC DISEASE

- Presence of any atopic disease (asthma, atopic dermatitis, allergic rhinitis or conjunctivitis) in early childhood increases the risk of developing ADHD and ASD. (Chen et al)

SOME SPECIFIC PROBLEMS in ADOLESCENCE

ASD and the GUT:

- Higher incidence of GIT problems:
 - Constipation, encopresis, soiling.
- Risk factors: 2-17 Years (Peters et al)
 - Repetitive behaviors, obsessive-compulsive behaviors, ritualistic behaviors
 - Casual connection or common biological pathway that impacts both gut and brain?

SOME SPECIFIC PROBLEMS in ADOLESCENCE

ACUTE BEHAVIORAL CRISES in adolescents with ASD

Psychiatric Admissions for ABC: (Guinchat et al)

- Organic etiologies (28%)
 - Epilepsy and painful medical conditions (Dental, ENT, Musculo-skeletal, Infections)
 - Environmental causes (25%)
 - Lack of treatment, poor compliance, adjustment problems
 - Non - ASD psychiatric conditions (48%)
 - Catatonia, MDD, BD, Schizophrenia
 - Unknown (17%)
- Mean hospital stay was 84 days. Multidisciplinary approach

FAMILIES of ADOLESCENTS with ASD

MOTHERS

- Mothers reported same continuous levels of stress, irrespective of the age of their child, but significantly less support from professionals in older children and adolescence: The older the child, the more the mothers are on their own. (Mcstay et al)
- Mothers had higher number of important support needs and higher number of unmet support needs than fathers.
 - Influenced by co-occurring behavior problems, presence of intellectual disability, parent education, household income. (Hartley et al)

FAMILIES of ADOLESCENTS with ASD

PARENTS *with* ASD and/or ADHD:

- Reported more stress than parents without ASD/ADHD
- Even higher levels of stress when a child also has ASD and/or ADHD

(van Steijn et al)

ECONOMIC BURDEN

- Is substantial (Lavelle et al)
- Children 3-17 years.
 - High annual utilization and costs for health care, school, ASD-related therapy, family-coordinated services, caregiver time
 - 76% of children with ASD used special educational services vs. 7% of children with non-ASD-related illnesses.

Role of Pharmacological treatment

Core symptoms of ASD.

- No treatment available

Treatment of Comorbidities:

- Antipsychotics
 - Most-studied. (Broder-Fingert et al)
 - Risperidone and Aripiprazole registered by FDA for ASD.
 - Behavior problems: Irritability, aggression, SIB, repetitive.
 - AE: Weight gain, increased appetite, somnolence, urinary incontinence.
 - Long term effects? Neurological, mental, hormonal, metabolic?

Role of Pharmacological treatment

Treatment of Comorbidities:

- Antidepressants:
 - SSRI's:
 - Most studied Fluoxetine. Others: citalopram, escitalopram
 - Improvement in anxiety, mood, obsessive behavior, irritability
 - AE: behavioral activation (hyperactivity and agitation), aggression, suicidal ideation.
- Mood stabilizers:
 - Valproate, levetiracetam, lamotrigine
 - Results inconsistent

Role of Pharmacological treatment

Treatment of Comorbidities:

- Medications for ADHD:
 - Methylphenidate
 - More adverse effects but beneficial results
 - Atomoxetine
 - Slightly more adverse effects but beneficial results
 - Treatment of choice considering 24 hours coverage?
 - Clonidine
 - Little research

Role of Pharmacological treatment

Treatment of Comorbidities:

- Melatonin
 - Overall positive results in various studies.
 - Increasingly used to manage sleep problems.
 - 1 - 3mg nocte
- Omega-3 fatty acids.
 - Positive effect on hyperactivity

Current research: Core deficits

- Glutamate receptor-related medications
- Oxytocin

NICE: Interventions for *core ASD symptoms*

- **No** pharmacological interventions recommended for use or consideration for core ASD symptoms
- Specific injunction against antipsychotics, anticonvulsants, antidepressants, exclusion diets
- Consider a social communication intervention, including play-based interventions with parents and children, adjusted for child's developmental level and delivered by *trained professionals*

NICE – National Institute for Health and Care Excellence

NICE: Interventions for *behavior* that challenges

- Start with a psychosocial intervention involving parents and other parts of environment to ensure generalization
- Offer children and young people with autism support in developing coping strategies and accessing community services, including developing skills to access public transport, employment and leisure facilities
- Consider antipsychotic medication when psychosocial or other interventions are insufficient or could not be delivered because of severity
- SSRI's in severe anxiety or depression

ASD in SA

Our challenge:

Addressing the *inverse care law*: Those who need care the most are the least likely to receive it.

- The role of community paediatric services (Rahman et al)
- The role of non-specialist care providers in low- and middle-income countries. (Bello-Mojeeed et al)
- Autism SA

CASE STUDY

Boy - 15 years Gr 9

- School: Some points:
 - Totally unacceptable behavior
 - Always fights with children - brought knife to school
 - Hugged teacher from behind, was charged with sexual assault.
 - Very “caring”, generally friendly, very good manners
 - Impulsive, rush through work but generally understands the work.

CASE STUDY

- School: Some points (Cont):
 - Very verbal, will walk up to learners in class to make a point, even while teacher talking.
 - Obsessive about computers, certain topics
 - Poor social skills - will do anything not to have to go out of classroom during breaks
 - Finds breaks extremely long and boring
 - Will not do something if he doesn't feel like doing it

CASE STUDY

Mental state assessment:

- School? Likes breaks, stay in class. Why? “Don’t have friends”.
Want to make friends? “Yes.” How do you make friends? “You give them your food.”
- Girlfriend? “No.” Want one? “Yes.” Why? “Everyone has.” How do you get a girlfriend? “You give her a hug and then she likes you.”
(*Teacher?*)
- Why do you fight with the other children? “Because they call me things and I really get cross when they call my mother things. I will kill them because they don’t want to stop” (*Knife?*)

CASE STUDY

Mental state assessment cont:

- If you can have your life over: “The way people think about me”
- Happy: “Computers” (and then talks for 15 minutes)
- Why are you here today? “There’s something wrong with my brain, but I don’t know what, I don’t think I’m the same as other people”

CASE STUDY

Mom: Letter:

- Been on medication since very young age
- At 2 years Melleril, Neulactil, 5 years Ritalin.
- Risperdal + Concerta. ADHD + something oppositional. No difference in behavior or concentration
- Epilepsy – “something on the brainwaves”, Lamictin and Ritalin, no difference
- Herbal medicine – no difference
- Admitted in psychiatric unit, “loved it” (nobody bothered him) Prozac 20, Epilim 600 bd – “slept the whole day” ADHD, Bipolar. Discharged, no difference

CASE STUDY

Mom cont:

- Admitted another psychiatric unit – Prozac 60, Epilim 600 bd, Ceranaize 2.5 night, Dicipal 100 night. – “What a disaster, was falling over his feet, totally impossible and uncontrollable and all he wanted to do was sleep. Depression, ADHD, BD
- My husband came home one day and threw all medicine in dustbin – no difference
- Had OT, ST, Eye exercises, brain gym, seen “don’t know how many” psychologists and cost us thousands and thousands of rands.
- “And things are still not what they should be, he is impulsive, he is a loner, obsessive and getting into trouble all the time”

CASE STUDY

Mom cont:

- Another child with ADHD and dyslexia and a girl who has short stature on growth hormone treatment
- Doctor, my husband has given up, he says he doesn't want the child any more
- Doctor, we haven't been on holiday for many years, we don't have money left

Please Help Us!!

CASE STUDY

Diagnosis?

HFA. Normal IQ. Normal language. ADHD. Depression Level 2.

Treatment:

- Fluoxetine 20mg Concerta 18mg
- IEP with the school:
 - Psychologist – social skills and adjustment
 - Speech therapist – communication skills
 - Teacher training
 - Parent training

SUGGESTED READING:

1. Treating the whole person with autism: the proceedings of the Autism Speaks National Autism Conference.

Couty,DL; Swedo, SE; etc.

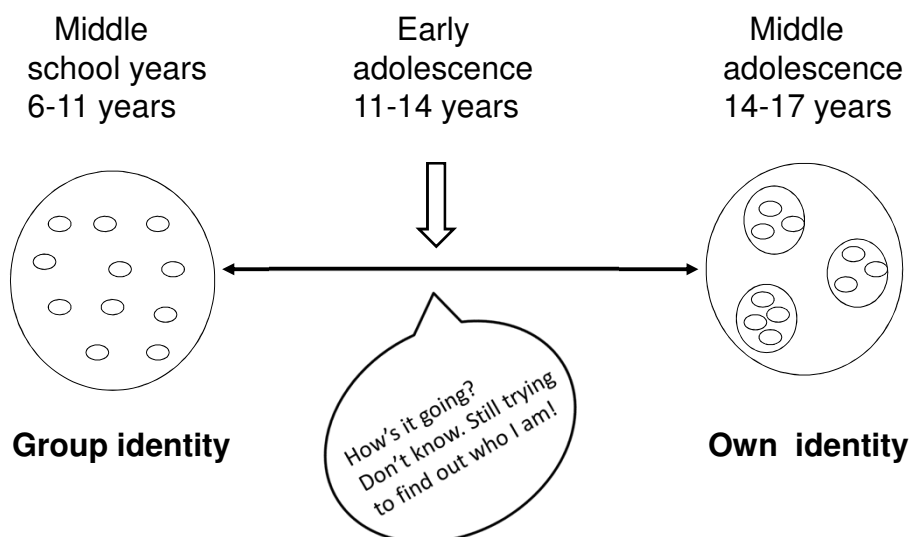
Curr Probl Pediatr Adolesc Health care, 2014 vol. 44(2) pp. 26-47.

2. What's in the pipeline? Drugs in development for autistic spectrum disorder.

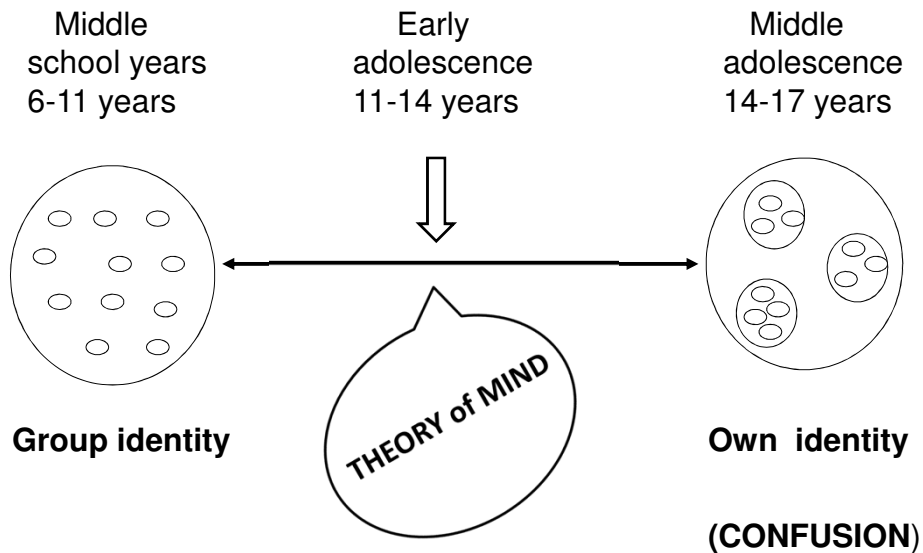
Min Sung, Chee Hon Chin, etc.

Neuropsychiatric Disease and Treatment. 2014: 10 371-381.

Normal Psychosocial Development - Erikson



Normal Psychosocial Development - Erikson



ASD – Red Flags

1. Not responding to name by 12 months.
2. Not pointing at objects to show interest by 14 months.
3. No 'pretend play' by 18 months.
4. Avoiding eye contact and wanting to be alone.
5. Trouble understanding other people's feelings or talking about their own feelings.

ASD – Red Flags

6. Delayed speech and language skills
7. Repeating words or phrases over and over (echolalia)
8. Giving answers unrelated to questions.
9. Getting upset by minor change in routines.
10. Having obsessional interests.
11. Hand flapping, body rocking, spinning in circles.
12. Unusual reaction to sound, smell, taste, look or feel.

Some positive evidence

- EIBI – Early Intensive Behavioral Intervention
- PECS – Picture Exchange Communication System
- TEACCH – Structured TEACCHing Programme
- ESDM – Early Start Denver Model
- CBT
- Social stories
- ABA – Applied Behavioral Analysis
- Visual Scheduling
- Specific medications for specific purposes (e.g. Risperidone or Melatonin)

Evidence of Harm

- Auditory Integration Therapy (AIT)
- Facilitated Communication
- Patterning Therapy
- DORE (DDAT)
- Chelation
- Dolphin Therapy
- Holding Therapy