Child and adolescent psychiatry

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Child and adolescent psychiatry

- An independent speciality in medicine, only partially overlapping with the psychiatry of adults

- Deals with mental and behavioral disorders of the youth, usually 2-18 years old

Child and adolescent psychiatry basic theses

- Paediatric medicine = developmetal medicine
- Mental development is striking in childhood
- There are many pathways to healthy mind of the adult
- There are also developmental milestones that must be achieved
- Considering pathology = mastering healthy development

Paediatric medicine = developmetal medicine

- From a newborn baby to an 18 yo adolescent
- Several important phases
  - Newborn
  - Infant
  - Toddler
  - Pre-school
  - Schoolar
  - Puberty
  - Adolescence

Mental development is striking in childhood

- Brain development is exraordinary in childhood
- Motoric development
- Speech development
- Emotional development
- Development of thinking

There are many pathways to healthy mind of the adult

- Not sure, what is fundamental for healthy mind development
- Many pathogenic factors are however known
- The concept of vulnerability and resilience

There are also developmental milestones that must be achieved

- In all kinds of development there are milestones and deadlines to help differ, what is physiological (albeit delayed) and what is pathological

- https://www.cdc.gov/ncbddd/actearly/milestones/index.html

Considering pathology = mastering healthy development

- To consider if a behavioral, emotional or thoughts-content symptom is pathological, one must master the healthy development.

- Ex.:
  - Physiological periods of anger, anxiety, perfectionism
  - No developmental period of depression

Assessment of a child

- History taken from adults, ideally parents
- History must include thorough information about mental and somatic development

- Interview with a child (at least a part of it without a parent)
  - playing, using toys, drawing…

The comprehensive evaluation of a child

- Description of present problems and symptoms
- Information about health, illness and treatment (both physical and psychiatric), including current medications
- Parent and family health and psychiatric histories
- Information about the child's development
- Information about school and friends
- Information about family relationships
- If needed, laboratory studies such as blood tests, x-rays, or special assessments (for example, psychological, educational, speech and language evaluation)

Mental problems in children

Disorders with onset in childhood, variable course and sometimes persistence into adulthood

Same disorders as in adults, with lower incidence in children and often with atypical signs and symptoms

Hyperkinetic disorders/ADHD, child autism, tics, Tourette sy, conduct disorders, emotional disorders in childhood, specific developmental disorders of speech, learning disorders and mental retardations

Schizophrenia, depression, anxiety disorders, bipolar disorder, obsessive-compulsive disorder, eating disorders, suicidal behaviour, adjustment disorders

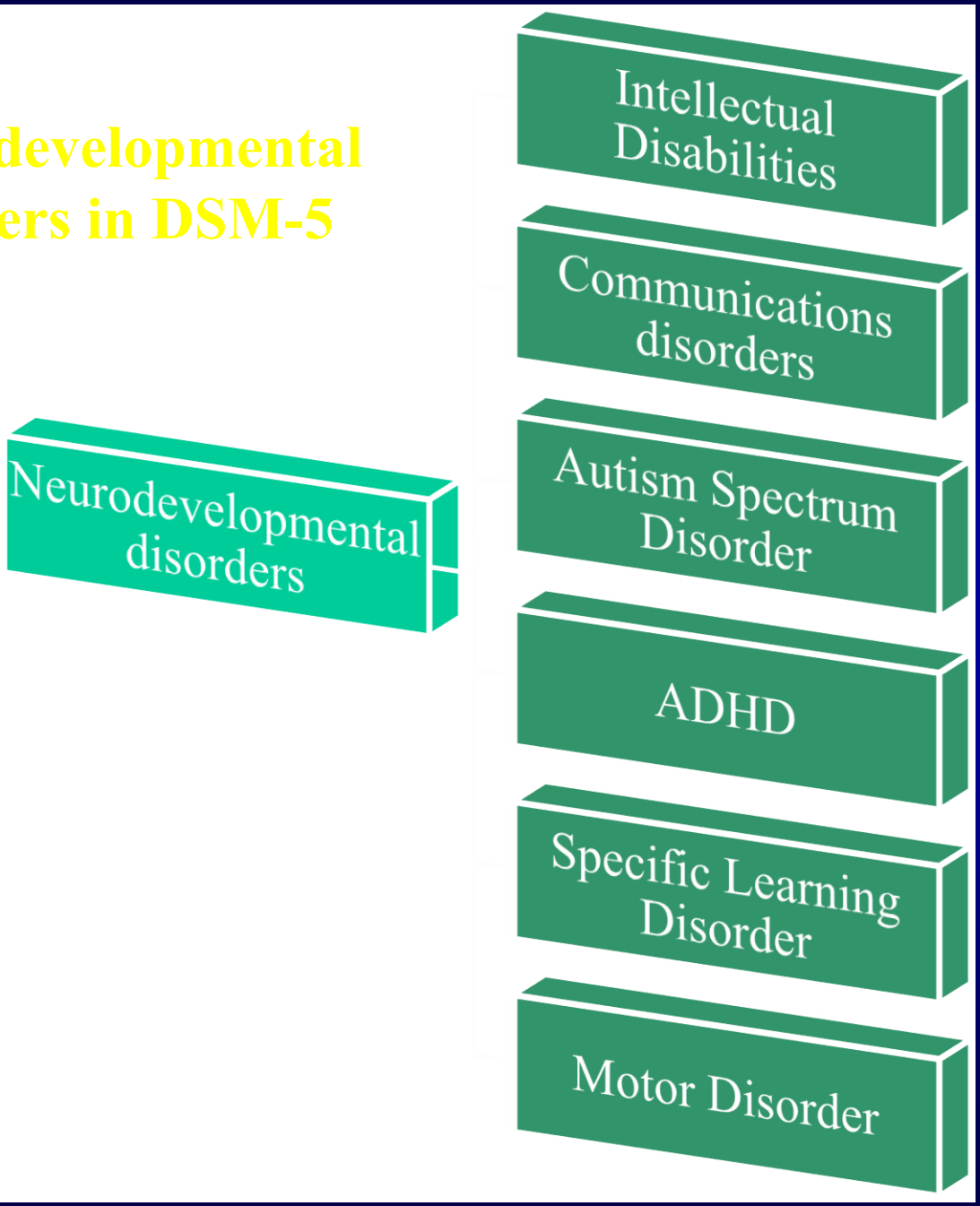
Mental problems in children

1. Developmental problems (disorders)
   - specific (one domaine of development affected)
   - pervasive (complete development affected)

2. Emotional and behavioral problems

3. Disorders typical in adulthood with childhood onset

Neurodevelopmental disorders in DSM-5



Intellectual disability (mental retardation)

MILD (IQ 50-69)

MODERATE (IQ35-49)

SEVERE (IQ 21-34)

PROFOUND (IQ less than 20)

IQ in population

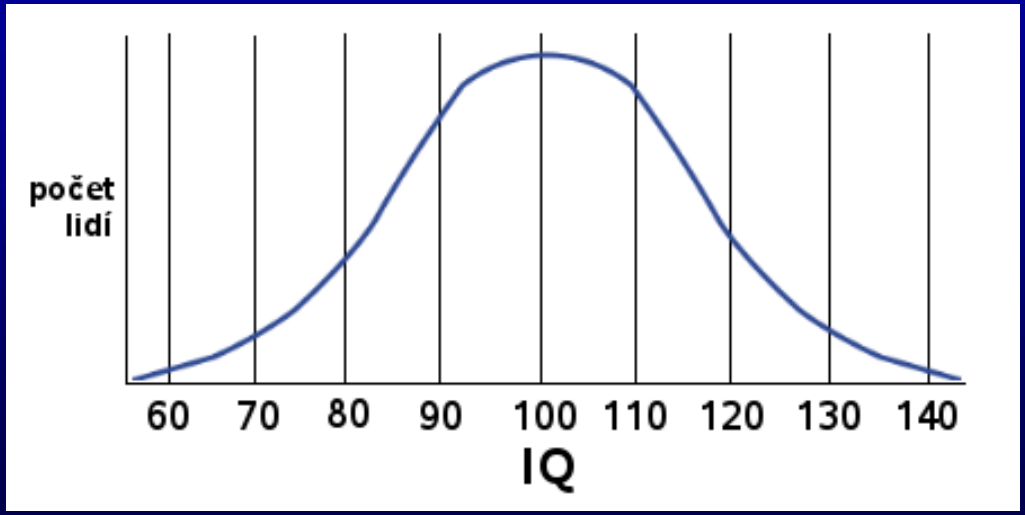
Below 69 = ment. retardation – 5 %
70–89 = under average – 20 %
90–109 = average – 50 %
110–129 = above average – 20 %
130–139 = signif above av - 3 %
Above 140 = genius

IQ calculation

$$\frac{\text{mental age}}{\text{calendar age}} \times 100 = ?$$

100 = average IQ.

Gaussian distribution



CHILD AUTISM *(Kanner, 1943)*

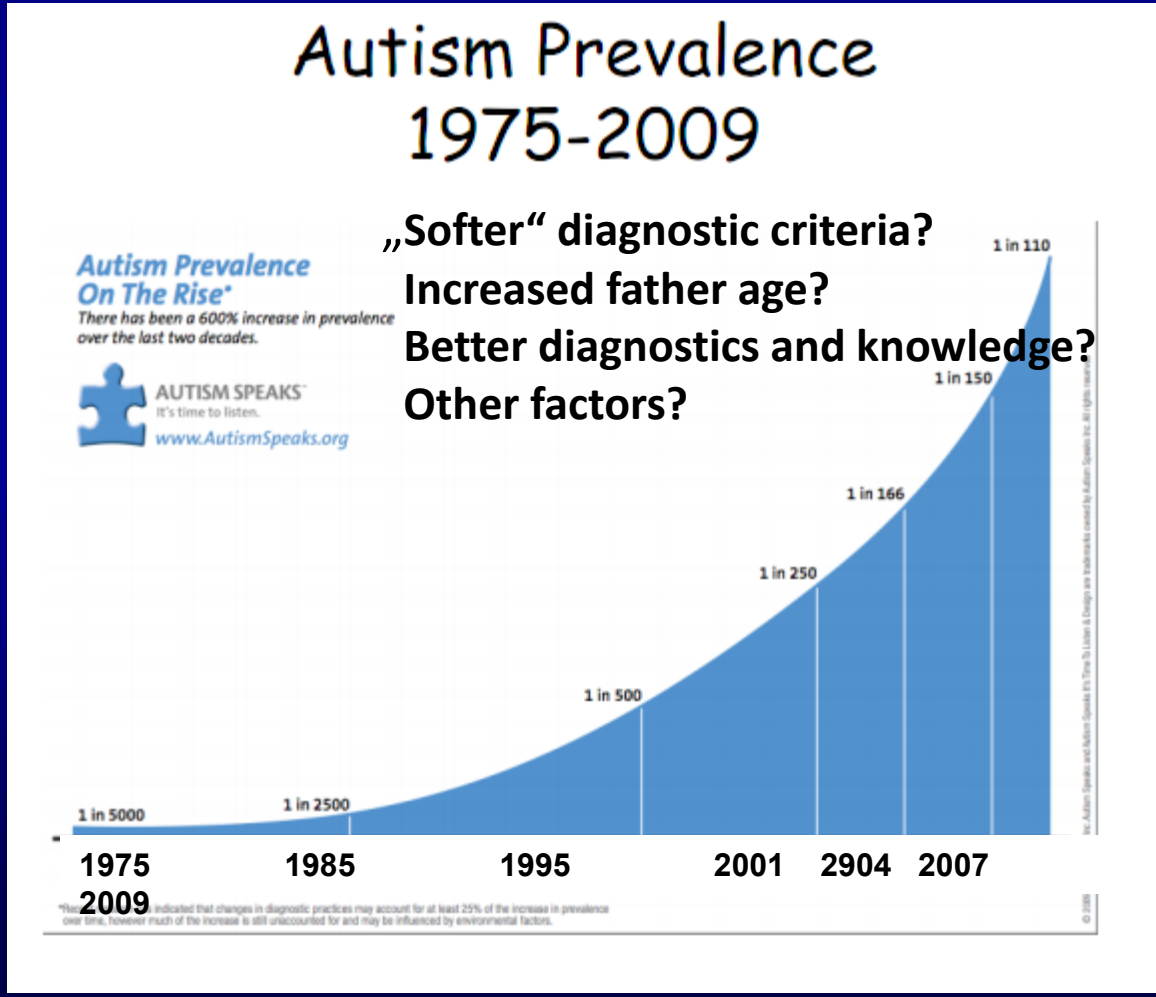
SOCIAL A EMOTIONAL WITHDRAWAL

„Extreme loneliness“

Symptoms present before 36th month of age.

Impairment :

- social interaction
- communication and playing
- limited, stereotyped habits, aversion to change



Child autism

Symptoms in early childhood

- lack of interest for contact with others
- decreased face fixation
- lack of interest in communication (monologues)
- often strange intonation, echolalias, grammatical mistakes
- emotional distance or inappropriate emotions
- stereotypes adherence (wishing the things to be always same)
- anxiety and panic reactions in new situations
- stereotyped, non-constructive playing
- interest in non-living (non soft) objects
- inappropriate exploration and manipulation (sniffing, licking)
- bizarr stereotyped movements (arm shaking, wrist twisting…)

Autistic regress visible in 30-39% patients around 2. year of age (loss of speech and regresive changes in behaviour)

Autism in older children and adolescents

Lack of empathy and spontaneity, behaviour „mechanic“, indifferent to feelings of other people, peple less attractive than objects.

- Eye contact limited, no interest in communication

- Speech stereotyped, pedantic, without intonation and emotion, echolalias, answers irrespective to context.
- Lack of fantasy and imagination – stereotyped behaviour and restricted interests (fanatical preoccupation with traffic signs, numbers, timetables, birthdates, dinosauruses…)

Intelligence : normal (but hardly useful), mental retardation (commonly), sometimes isolated, accented skills (mathematics, music, painting…)

Videos

- https://www.youtube.com/watch?v=3w1c4sF4ZTg
- https://www.youtube.com/watch?v=YtvP5A5OHpU

ASPERGER SYNDROM

(1944 - Hans Asperger, Austrian psychiatrist)

Social abnormities less pronounced that in autism. Strogn ego-centrism, introversion, normal IQ and speech skills (sometimes even hypertrophic speech), often clumsiness.

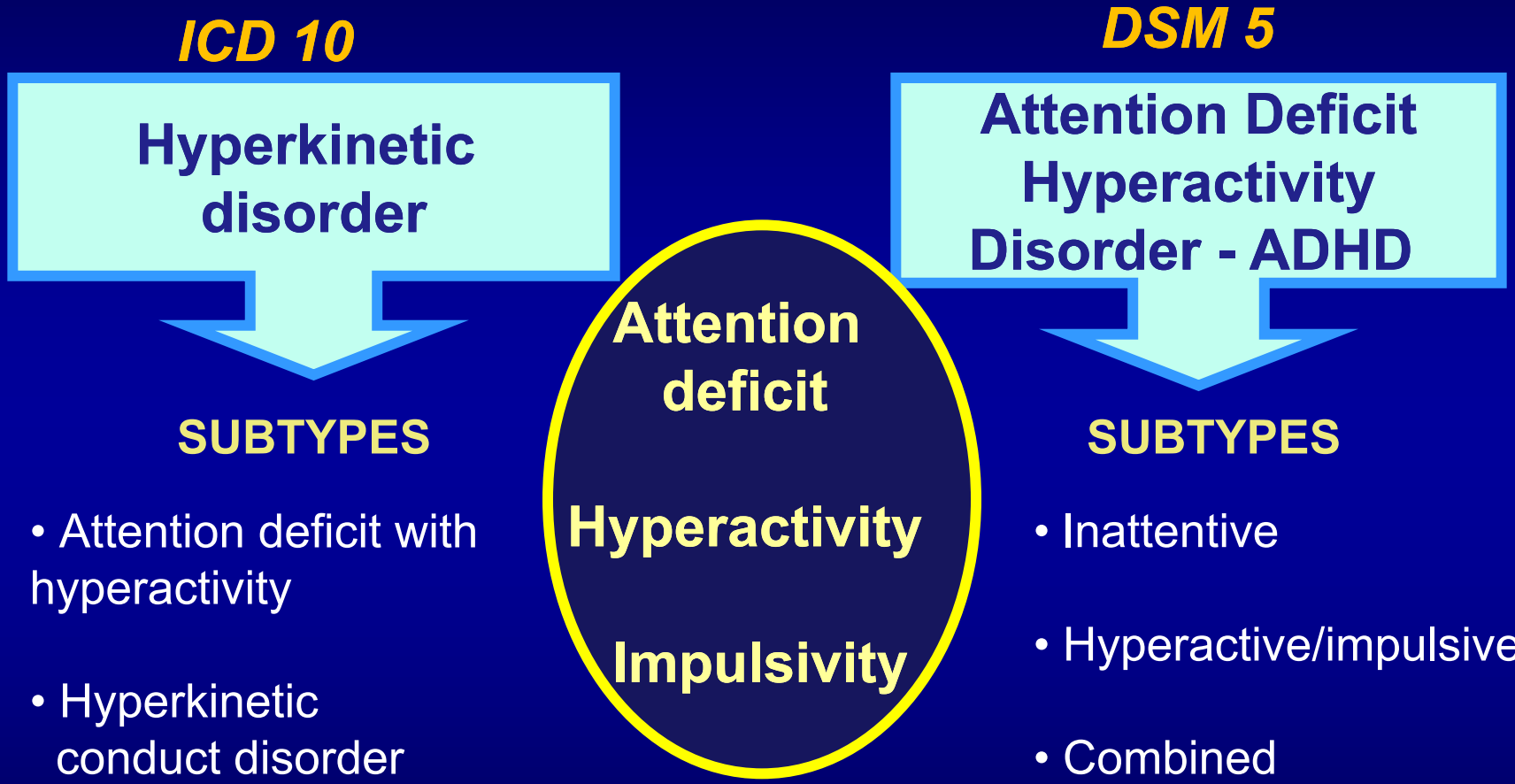
- lack of empathy, poor recpect to social conventions
- emotional withdrawal
- problems in social contact
- strange intonation and expression (detailed, „small adult“)
- poor social skills, pedantic truthfulness, inapproproate, shocking remarks, poor understanding of jokes and hyporboles
- samotimes special talents and almost obsessive interests (computers, encyclopedias, collections, chess...)

PREVALENCE: boys prevail (8 : 1)

Video

- https://www.youtube.com/watch?v=Wi1MW6CTJbc

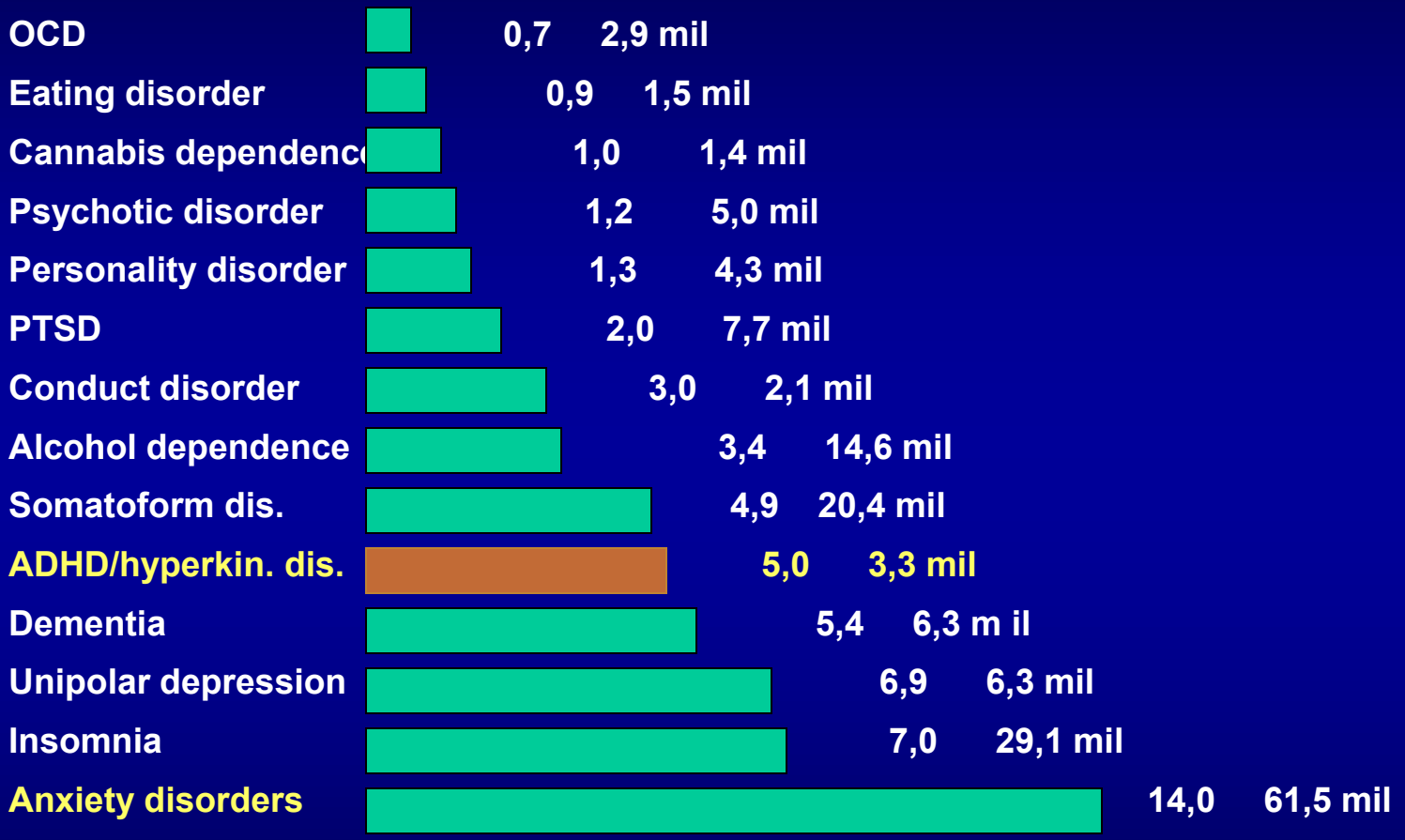
Hyperkinetic disorder/ ADHD



Prevalence : 3 - 7 %
Prevails in boys

Mental Disorders by prevalence (2011)

(and estimated number of persons affected in millions)



Výskyt ve státech Evropské Unie (EU-27) plus Švýcarsko, Island a Norsko

H.U. Wittchen et al. European Neuropsychopharmacology (2011) 21, 655–679

Core ADHD symptoms

Attention deficit

1.inattentive during tasks or games
2. skips details, makes mistakes
3. doesn´t follow instructions
4. disorganized
5.absent-minded
6. fails in making plans
7.inpatient, hates effortful tasks
8. loses things
9. forgets tasks, needs prompts

Hyperactivity

1. Can´t stay calm
2. Makes useless moves
3. Stands up and runs in classroom
4. Noisy all the time
5. Always on-the-go
6. talkative

Impulsivity

7. Answers before a question is finished
8. Can´t stay in queues
9. Interrupts others

Etiopathogenesis of ADHD

Significantly genetic disorder with variant genes for:
-Neurotransmitters
-Neurodevelopmental factors

Dysfunction of neurotransmitters important for cognitive functions – dopamine, norepinephrine.
Impairments in inhibition of activity, time planning, sequencing

Pharmacotherapy in ADHD :

Increase in catecholamine levels

Stimulants :

Methylphenidate

reuptake DA, NE re-uptake inhibitor, also increases release from presynaptic neuron

in PFC –improves cogn. deficits

Nonstimulating treatment:

Atomoxetine

Selective NE re-uptake inhibitor

- increases NE levels in PFC.

Also increases DA levels in PFC but not in BG nor ncl. accumbens

The efficacy of drug treatment for ADHD is high, probably the best in all psychiatric disorders.

TIC DISORDERS

Tics :

Sudden, irregularly repeated moves/jerks or sounds,

stereotyped and purposeless

Types : motor, vocal (sounds, words, utterances)

Frequent location: mimic muscles (eyelids, nose, mouth, neck)

Tics are anticipated by urge

Partially voluntarily controlled which is an important sign to consider in differential diagnosis against extrapyramidal disorders

If they are suppressed for longer time, the inner tension increases and then tics reappear usually in higher frequency and intensity for a short period of time (**„rebound”** phenomenon).

TOURETTE SYDROME
(Gilles de la Tourette, 1885)

The most serious tic disorder

Onset between age 7-11, improves in early adulthood.

Complex motor tics in combination with vocal tics (simultaneously)

- motor tics: complex, similar to rituals
- vocal ticsy : sounds, words, echolalias, koprolalia

TS often comorbid with OCD and ADHD

https://www.youtube.com/watch?v=7_dBRDvkbTU

Therapy of tics

Mild forms:

Psychotherapy the first choice

Medication if PT fails or tics are persistent and disruptive

Tourette: Antipsychotics (antidopaminergic effect)

atypical AP (tiaprid, risperidon, aripiprazol), sometimes haloperidol (typical AP, very potent but lot of AE)

Conduct disorders

- a repetitive and persistent pattern of behavior by a child or teenager in which the basic rights of others or major age-appropriate societal norms or rules are violated.

  - **Agression** towards humans and/or animals (bullying, fights, threats, sexual offence)
  - Property loss or damage (setting fires, voluntary property destruction)
  - Deceitfulness or theft (lying, burglary)
  - serious violations of rules time and time again (escapes, truancy before age 13.)

Conduct disorders

- **SOCIALIZED** - the child/teenager is able to socialize, has friends and friendly relationships. The delicts are commited either alone or in a gang
- **NON-SOCIALIZED** – decreased ability for socializing, few friends, ususally alone (poorer prognosis)

Conduct disorders

Oppositional defiant disorder (ODD)

Younger children up to 10, age-inappropriate oppositional behaviour, angry/irritable mood, poor respect towards authorities. Aggresive or antisocial behaviour not present!

Conduct disorders

- If CD comorbid with ADHD the prognosis is poorer
- If symptoms of CD persist into adulthood, then personality disorder is classified, often antisocial PD

Emotional disorders

- Separation anxiety disorder
- Elective mutism
- Phobias
- Mixed conduct and emotional disorders
- Stress reactions
- Post-traumatic stress disorder (PTSD)
- Adjustment disorders

Emotional disorders with childhood onset

Separation anxiety disorder

Strong and age-inappropriate anxiety if separated from parent(s)/home or even imagining such a situation
Irrational concerns (kidnap, losing, beeing killed...)
Fear of: leaving home
staying home alone
sleeping alone
going to preschool/school
Frequent and significant somatic symptoms (headeaches, abdominal pains, nausea and vomiting)
Typically worsens on Sunday evening or Monday morning
Pronounced affects during separation

Fobic anxiety disorders in childhood

- abnormal and specific fears of specific objects and situations more pronounced than appropriate in a particular age (e.g. Zoophobia is frequent in preschoolers)

Animals general	**zoophobia**
Insects	**entomophobia**
Cats	**ailurophobia**
Dogs	**cynophobia**
Snakes	**ophidophobia**
Spiders	**arachnophobia**
Dark	**nyktophobia**
Blood	**hematophobia**
Dirt	**mysophobia**
Heights	**acrophobia**
Closed places	**claustrophobia**
Strangers	**xenophobia**
Fire	**pyrophobia**
Thunder	**brontophobia**

Elective mutism

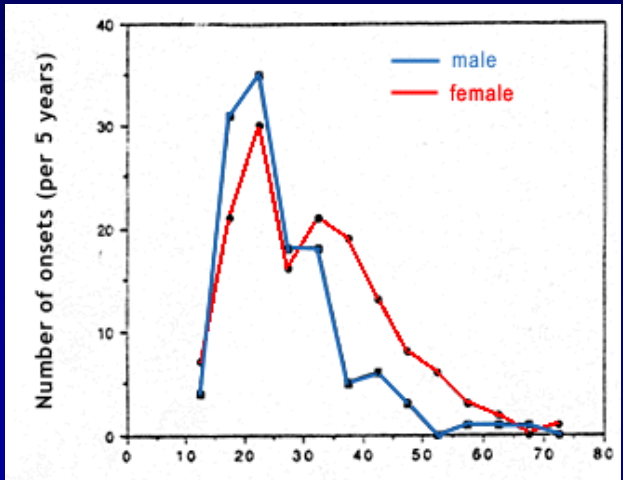
- A period of mutism (not speaking) in specific social situations despite the normal development of speech and lack of problems when speaking with family members

- Prevalence 0,3-0,8/1000 children, more girls
- Psychological traits like shyness
- Good prognosis with therapy, although social phobia as a possible outcome

- https://www.youtube.com/watch?v=WXcgNPpFjBM

Early-onset schizophrenia

Symptoms in children:
Impairment of interpersonal relations, emotional changes, social withdrawal, bizarr, anxious behaviour, rituals, unjustified fears or flattened emotivity, delusional fantasies, abnormal speech, abnormal motor symptoms
Older children: verbal and sometimes visual hallucinations (animals, monsters…)
Symptoms are influenced by cognitive development and only after 11 years of age are similar to those in adults



Age at onset in schizophrenia

Age of onset

before 10 –	1%
before 15	5%
before 17	20%
before 25	50%
before 30	80%

Prognosis of COS and therapy

Early childhood:

- Poor progosis
- Mental development is impaired
- Chronical course
- Often pharmacoresistant

Later childhood

- Insure prognosis

Adolescence:

- Better prognosis

Atypical antipsychotics

Risperidon
Paliperidone
Aripiprazol

Olanzapin
Quetiapin
Clozapin
Ziprasidon

https://www.youtube.com/watch?v=BIligWBtJus

DEPRESSION in children

In early childhood the diagnosis is difficult.

CHILDREN: depressive mood not necessarily predominates, more anxiety symptoms, anhedonia, unexplicable somatic symptoms, irritability, changes in behaviour and conduct, impaired school performance, reduction of interests and social contacts

ADOLESCENTS: more sleep disorders, changes in appetite, suicidal thoughts and attempts, impaired performance, inattention, tiredness, reduction of interests and social contacts, being bored, irritated
Quite often delusions and hallucinations.

Depression - treatment

- Milder depression- psychotherapy
- Severe depression – SSRI antidepressants + psychotherapy

- Antidepressants are less effective than in adults

Self-harm

Deliberate, often repeated self-injury – no wish of dying.
Superficial cutting, burning with cigarettes – used to diminish inner tension, mental suffering during strong emotions or feelings of inner emptiness. Physical pain reduces the mental one.

Often habitual coping strategy (maladaptive) in youth with non-harmonic personality development, eating disorders, anxiety disorders and many other

The treatment is focused on primary cause, relationships, better coping strategies

Suicidal attepmts

Infrequent until 10 years, increase in adolescence and adulthood.
In CZ approx. 40 completed suicides in adolescents per year
Boys – less attempts but more often completed
(use of more dangerous and letal means)
Girls - more attempts, more often incompleted (intoxications)

Parasuicides (demonstrative s.)- in children are considered serious.
Children understand the definitiveness of death by 9 years

In adolescence a suicidal attempt is the most common reason for acute psychiatric help and suicide is the second most frequent reason of death.

Suicidal behaviour - causes

Family and school problems

- Family discomfort
- Abuse and neglect
- death of a parent or divorce
- homesickness (college)
- school results, failures

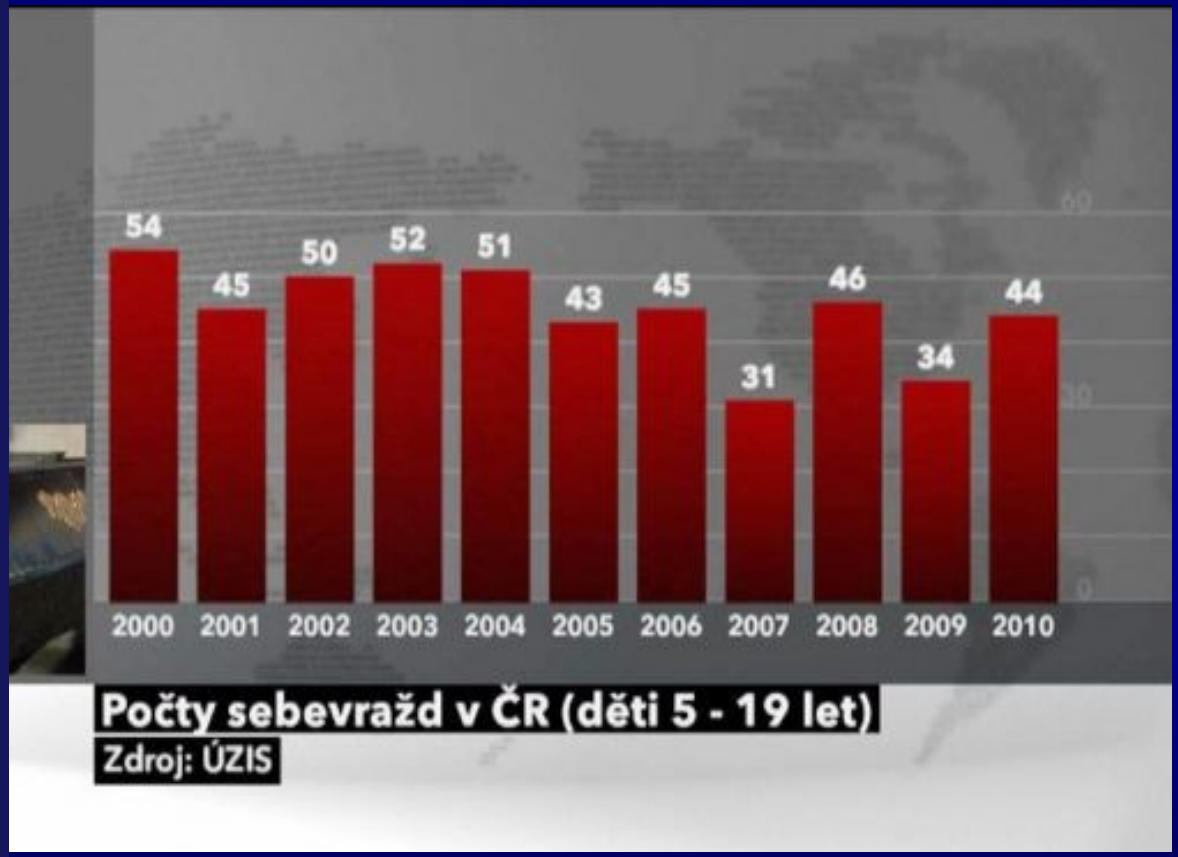
Personal and relational:

- poor acceptance from others
- romantic failures
- low self-esteem
- self-accusation
- increased impulsivity

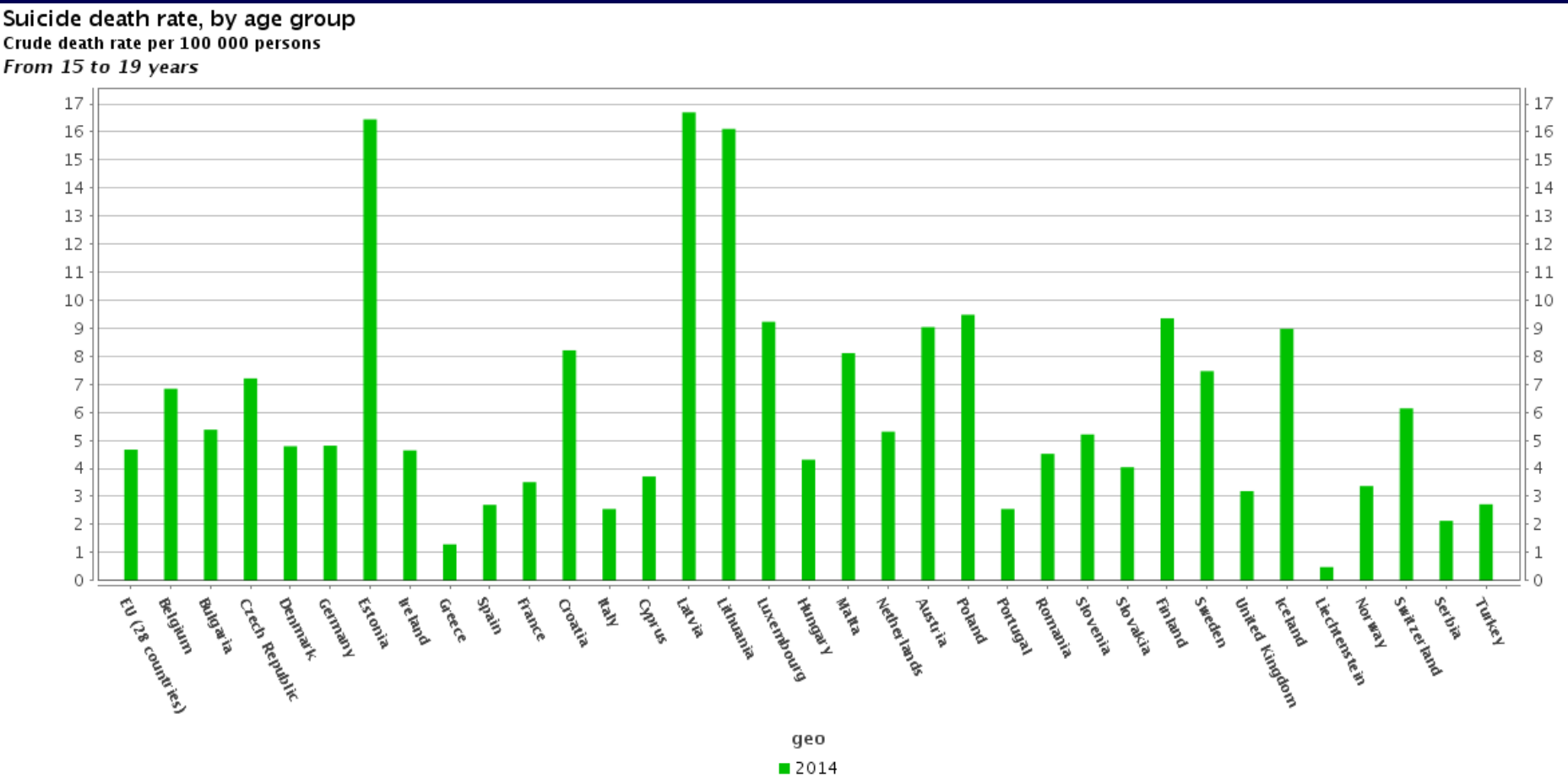
Child and adolescent suicidality in CZ

Year	up to 15	15-19
1996	9	71
1997	6	66
1998	8	52
1999	3	58
2000	12	42
2001	6	39
2002	6	44
2003	9	43
2004	8	43
2005	6	37
2006	3	55

Data from Institute of Health Information and Statistics of the Czech Republic.



Eurostat, 2014, suicidal rates 15-19yo



Source of Data Eurostat
Last update: 28.11.2017
Date of extraction: 10 Dec 2017 16:15:31 CET
Hyperlink to the graph: http://ec.europa.eu/eurostat/tgm/drawGraph.do&init=1&plugin=1&language=en&pcode=tsdph240&toolbox=legend
Disclaimer: This graph has been created automatically by Eurostat software according to external user specifications for which Eurostat is not responsible. Graphic included
General Disclaimer of the EC website: http://ec.europa.eu/geninfo/legal_notices_en.htm
Short Description: This indicator is defined as the crude death rate from suicide and intentional self-harm per 100 000 people, by age group.
Figures should be interpreted with care as suicide registration methods vary between countries and over time. Moreover, the figures do not include deaths from events of undetermined intent (part of which should be considered as suicides) and attempted suicides which did not result in death.
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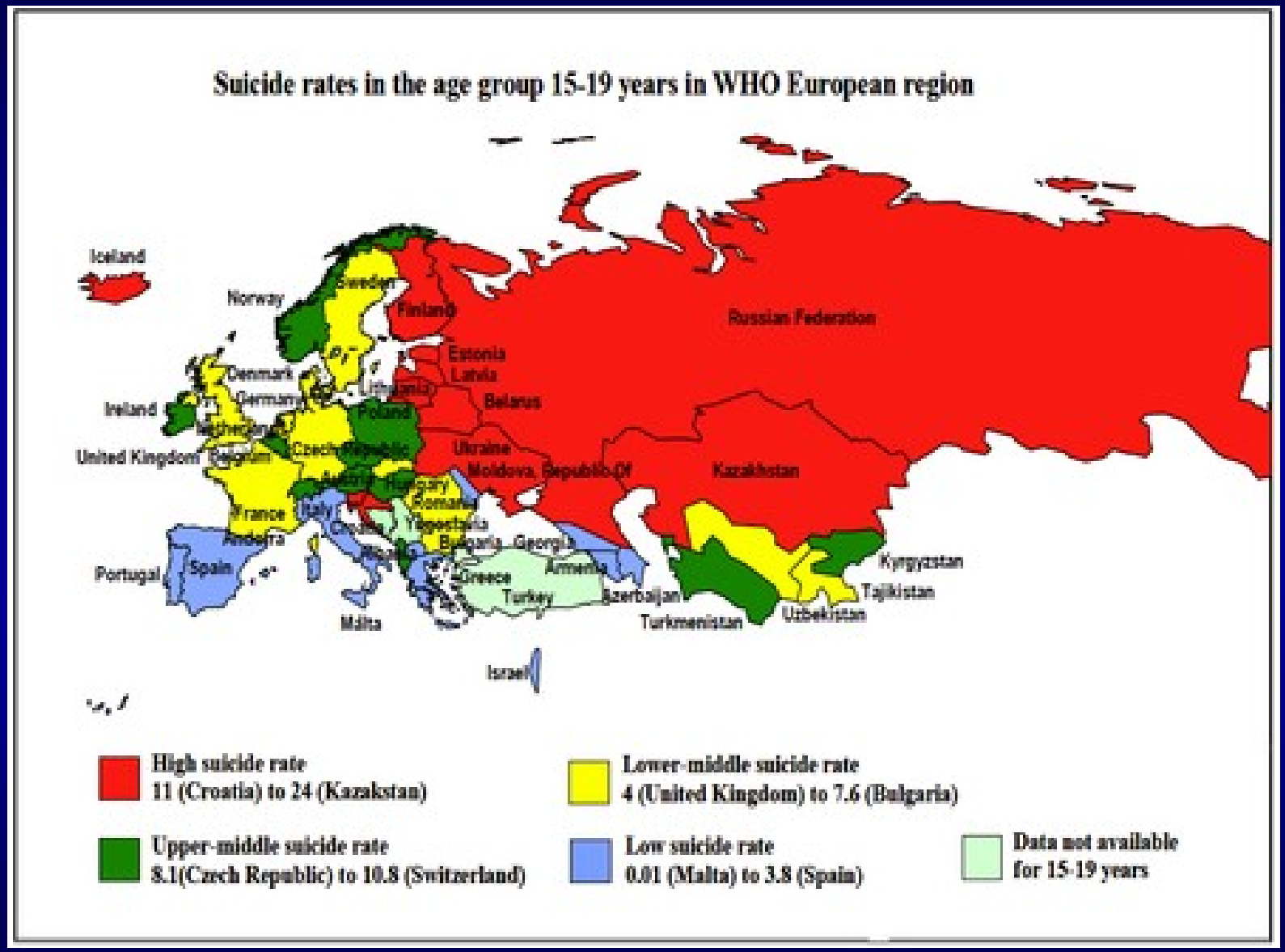
Suicide rates in the age group 15-19 years in WHO European region
Iceland
Norway
Sweden
Finland
Russian Federation
Estonia
Latvia
Denmark
Lithuania
Belarus
Ireland
Germany
Poland
Netherlands
United Kingdom
Belgium
Czech Republic
Ukraine
Moldova, Republic Of
Kazakhstan
Hungary
Romania
France
Italy
Yugoslavia
Andorra
Bulgaria
Georgia
Armenia
Portugal
Spain
Greece
Turkey
Azerbaijan
Kyrgyzstan
Tajikistan
Turkmenistan
Uzbekistan
Malta
Israel
High suicide rate
11 (Croatia) to 24 (Kazakstan)
Lower-middle suicide rate
4 (United Kingdom) to 7.6 (Bulgaria)
Upper-middle suicide rate
8.1(Czech Republic) to 10.8 (Switzerland)
Low suicide rate
0.01 (Malta) to 3.8 (Spain)
Data not available
for 15-19 years

Other common disorders

- Eating disorders!

- Enuresis (bed-wetting)
- Encopresis
- Child abuse and neglect (sydrome) CAN

Thanks for your attention

If you cannot pay attention due to ADHD, thanks anyway