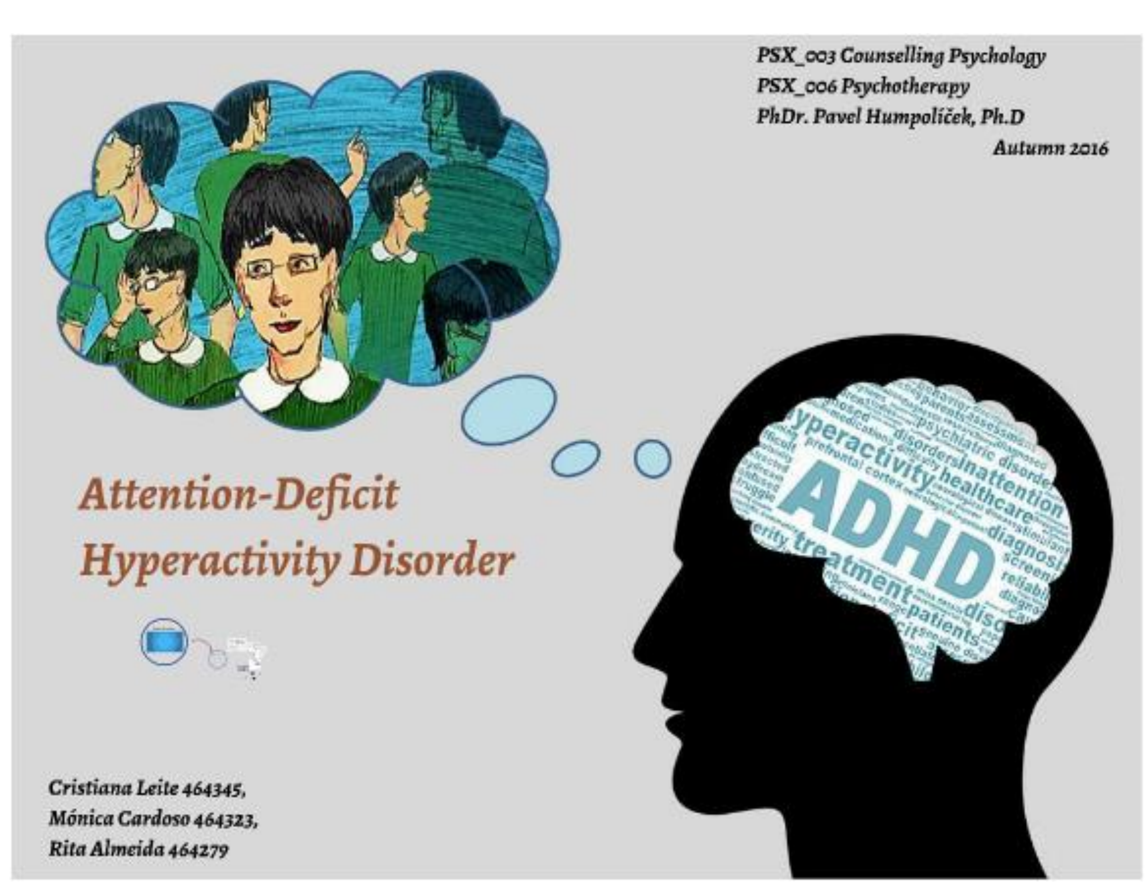
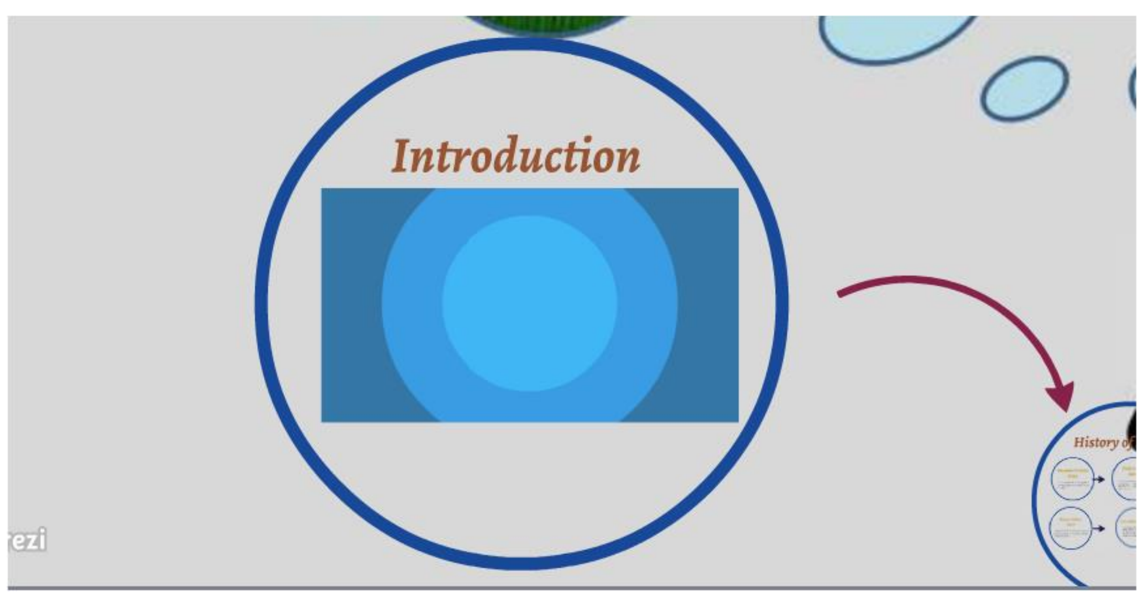
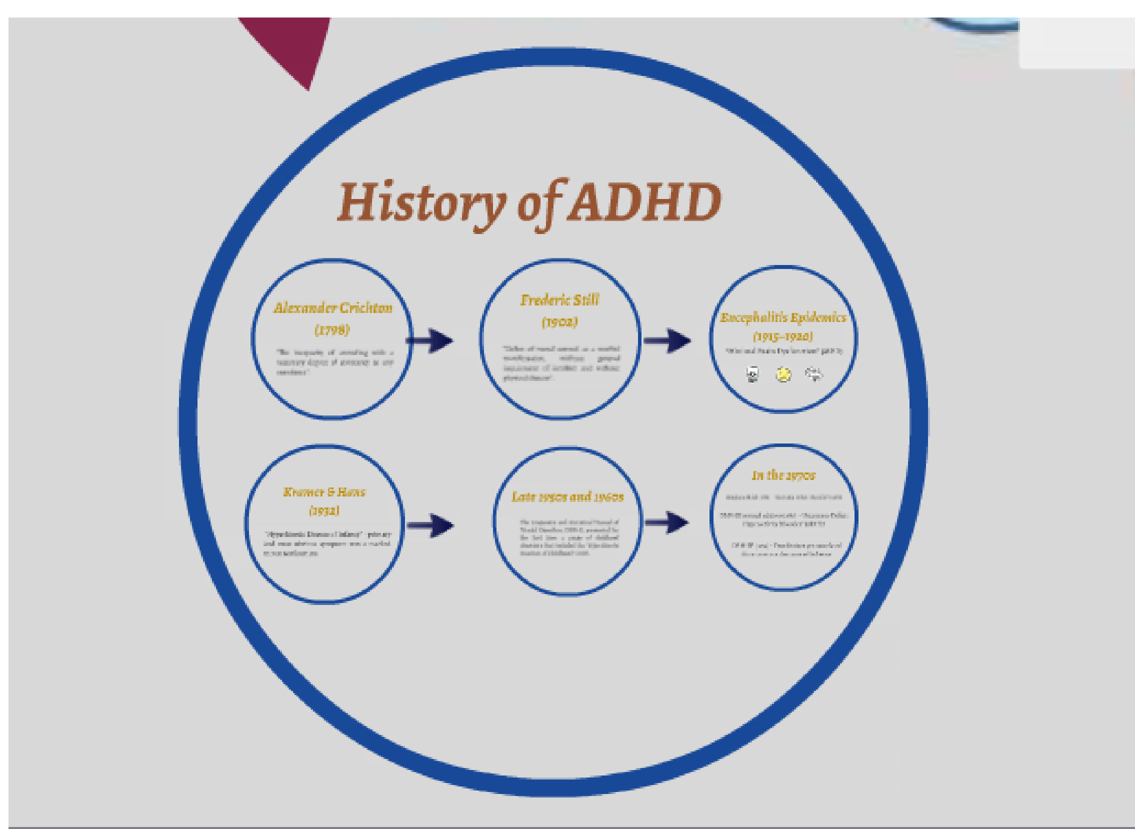
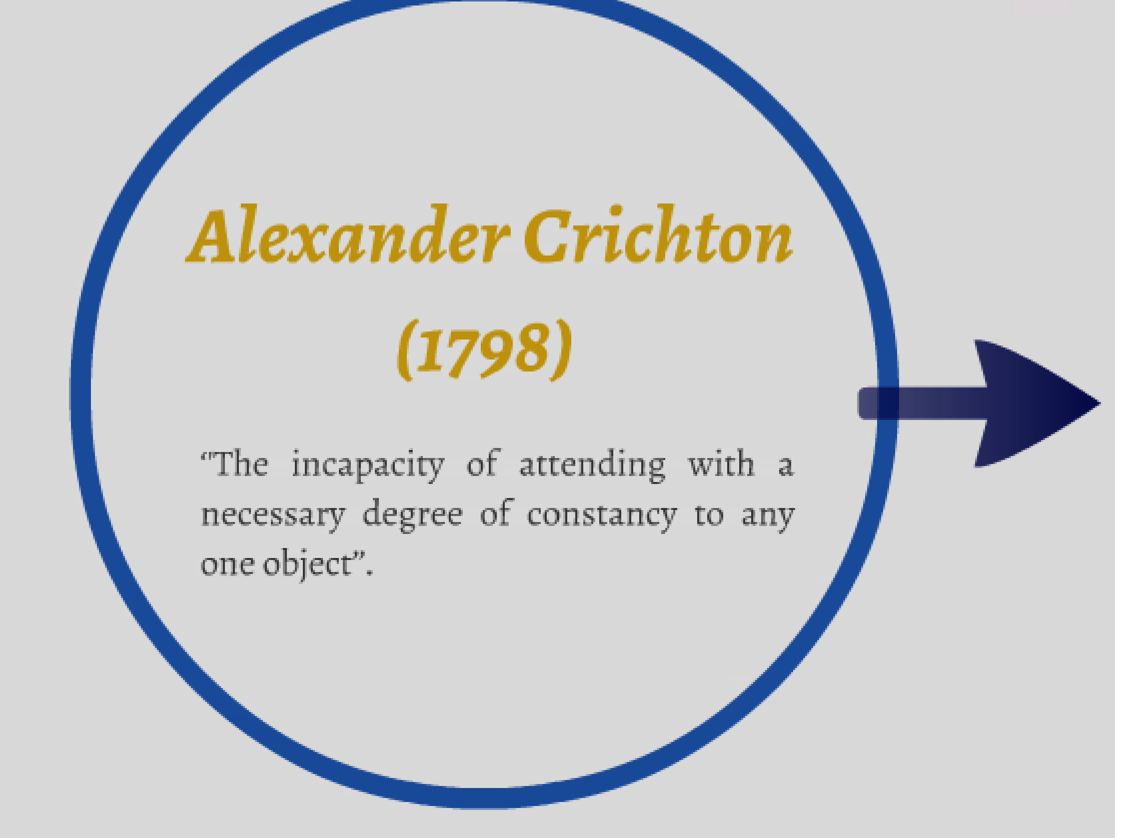

PSX_003 Counselling Psychology
PSX_006 Psychotherapy
PhDr. Pavel Humpolíček, Ph.D
Autumn 2016
Attention-Deficit
Hyperactivity Disorder
ADHD
Cristiana Leite 464345,
Mónica Cardoso 464323,
Rita Almeida 464279


Introduction


History of ADHD
Alexander Crichton
(1798)
Frederic Still
(1902)
Encephalitis Epidemics
(1915–1920)
Kramer & Hans
(1932)
Late 1950s and 1960s
In the 1970s

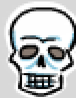

Alexander Crichton
(1798)
"The incapacity of attending with a necessary degree of constancy to any one object".

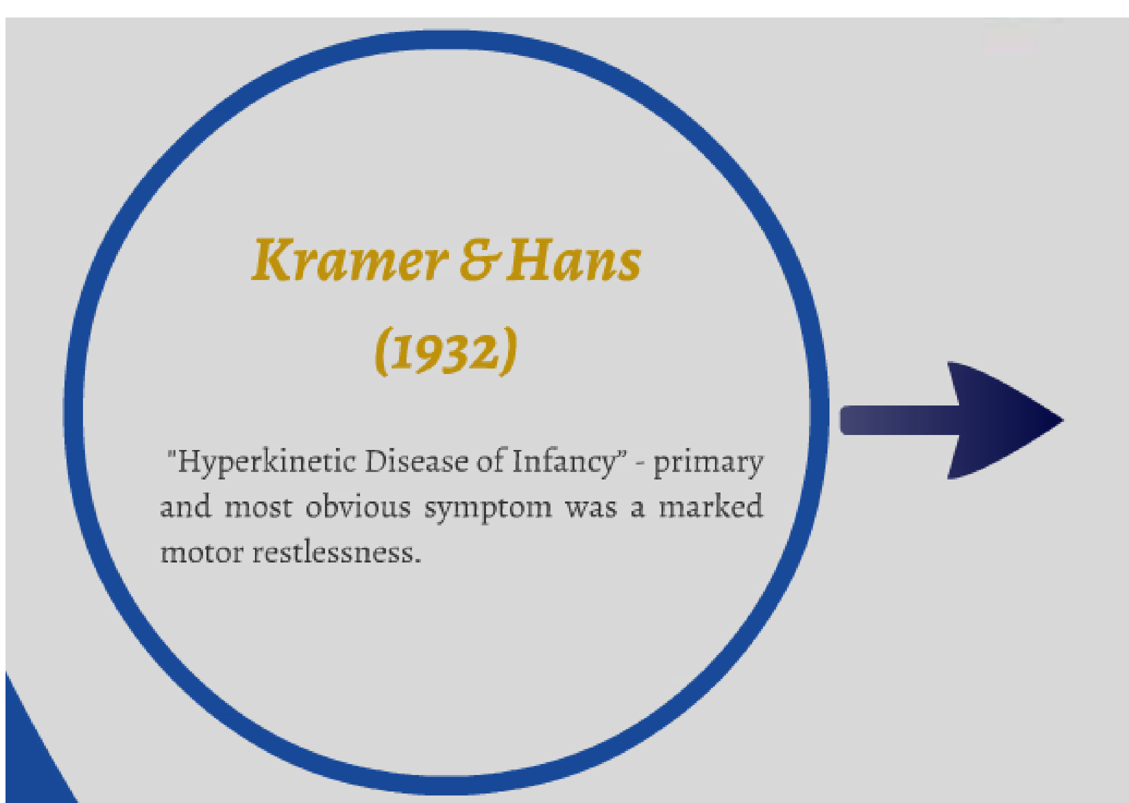
"Defect of moral control as a morbid manifestation, without general impairment of intellect and without physical disease".

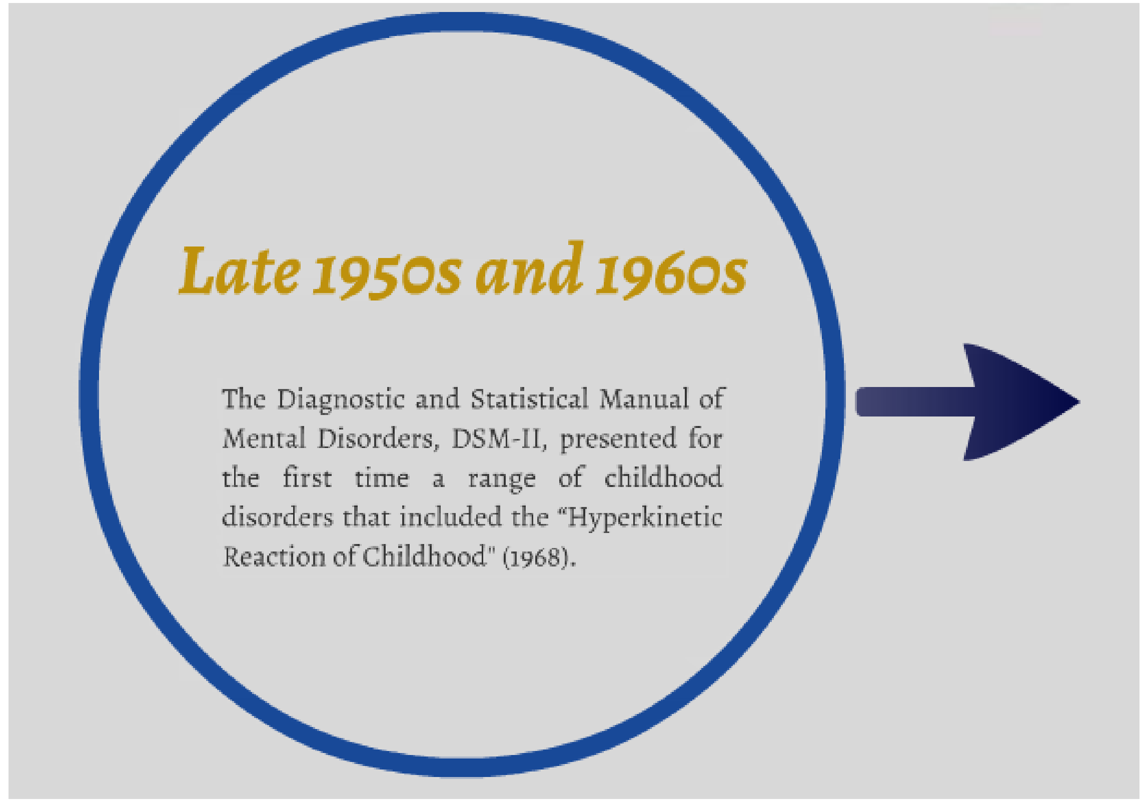
Encephalitis Epidemics

(1915–1920)

"Minimal Brain Dysfunction" (MBD)




Kramer & Hans
(1932)
"Hyperkinetic Disease of Infancy" - primary and most obvious symptom was a marked motor restlessness.


Late 1950s and 1960s
The Diagnostic and Statistical Manual of Mental Disorders, DSM-II, presented for the first time a range of childhood disorders that included the "Hyperkinetic Reaction of Childhood" (1968).

In the 1970s

Douglas's Model (1972) - "Attention Deficit Disorder" (ADD)

DSM-III revised edition (1987) - "Attention-Deficit Hyperactivity Disorder" (ADHD)

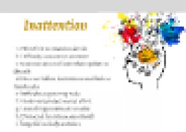
DSM-IV (1994) - Two distinct yet correlated dimensions or domains of behavior

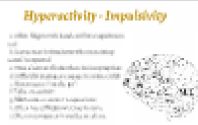
DSM-V - Definition and Classification

Inattention

Hyperactivity

Impulsivity





Inattention

a. Often fails to attend to details
b. Difficulty sustaining attention
c. Does not seem to listen when spoken to directly
d. Does not follow instructions and fails to finish tasks
e. Difficulty organizing tasks
f. Avoids sustainded mental effort
g. Loses things necessary to tasks
h. Distracted by extraneous stimuli
i. Forgetful in daily activities

Hyperactivity - Impulsivity

a. Often fidgets with hands or feet or squirms in seat
b. Leaves seat in situations when remaining seated is expected
c. Runs about or climbs when it's inappropriate
d. Difficulty playing or engage in leisure quitly
e. Motor excess ("on the go")
f. Talks excessively
g. Blurts out an answer to questions;
h. Often has difficulty waiting his turn;
i. Often interrupts or intrudes on others.

Specifiers

Combined presentation

Predominantly inattentive presentation

Predominantly hyperactive/impulsive presentation

In partial remission

Mild

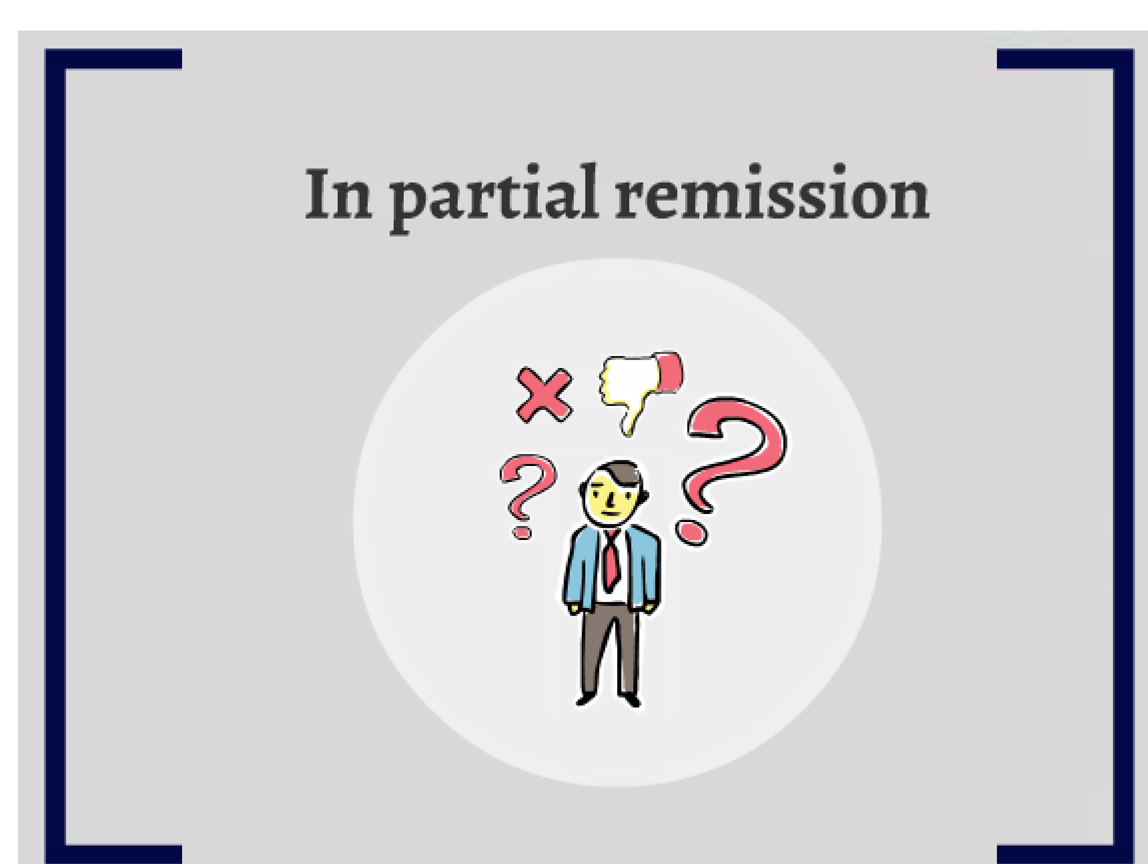
Moderate

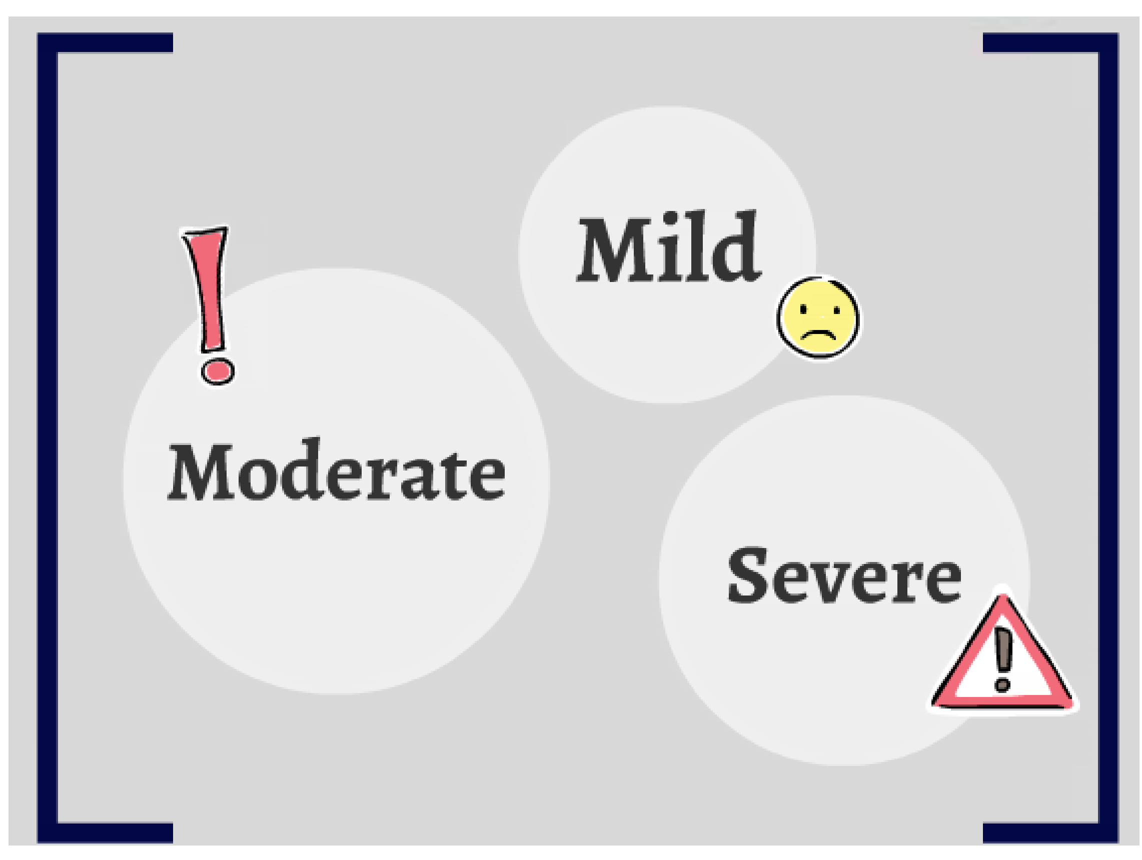
Severe

Combined presentation

Predominantly inattentive presentation

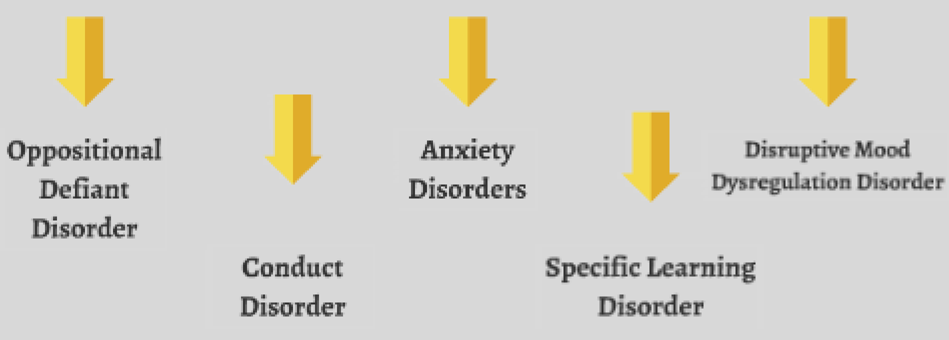
Predominantly hyperactive/impulsive presentation


In partial remission


Mild
Moderate
Severe

Comorbility

The existence of a diagnosis of ADHD is often accompanied by another disease in the individuals, and, therefore, the existence of comorbid disorders in ADHD is very frequent.



Definition and Classification

ICD-10 → **Hyperkinetic Disorder (HKD)**

- early onset
- combination of overactive, poorly modulated behaviour with marked inattention and lack of persistent task involvement
- pervasiveness over situations and persistence over time

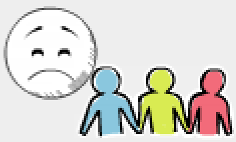
(Organization, 1992)

Characteristic problems

early in development

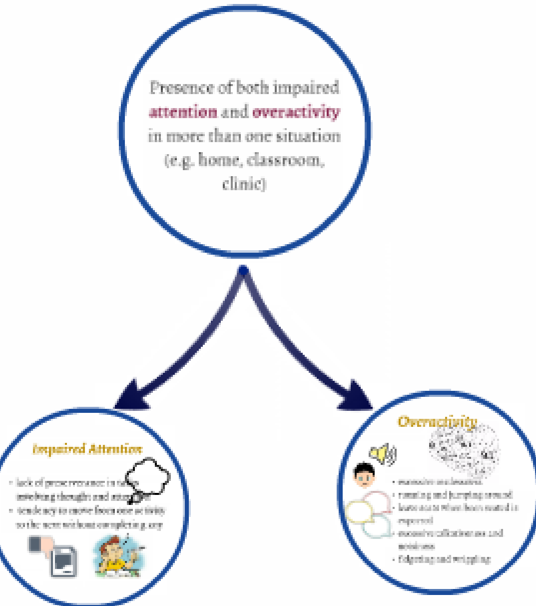
- lack of persistence
- tendency to move between activities without completion
- disorganized and excessive activity

Abnormalities associated with HKD



reckless and impulsive
prone to accidents
breache rules without thinking
unreserved with adults
unpopular with other children
cognitive impairment
specific delays in motor and language development
scholastic problems

Diagnostic Guidelines



Associated features

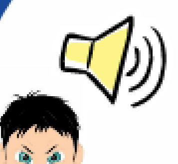
- **Disinhibition in social relationships**
- **Recklessness in situations involving danger**
- **Impulsive flouting of social rules**

Presence of both impaired **attention** and **overactivity** in more than one situation (e.g. home, classroom, clinic)

Impaired Attention

- lack of preserverance in tasks involving thought and attention
- tendency to move from one activity to the next without completing any

Overactivity



- excessive restlessness
- running and jumping around
- leave seats when been seated is expected
- excessive talkativeness and noisiness
- fidgeting and wriggling

Overview of the ICD-10 medical classification system for ADHD

- Require hyperactivity, impulsivity, and inattention all to be present
- Symptoms prior to 6 years of age and of long duration
- Impairment present in two or more settings
- An exclusion of the diagnosis if mania, depression, and/or anxiety disorders are also present

HKD → subgroup of patients with combined type ADHD with the most severely impairing symptomatology

Diferential Diagnosis

- **Disturbance of activity and attention** (without conduct disorder)
- **Hyperkinetic conduct disorder** (with conduct disorder)
- If the criteria for anxiety disorders, mood affective disorders, pervasive developmental disorders and schizophrenia are met, **HKD should not be diagnosed**

Epidemiology

Prevalence of HKD diagnosis

around 1.5% in school-age children

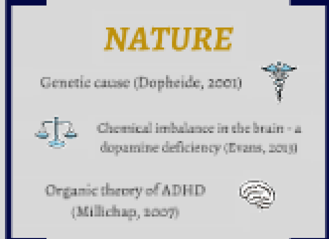
ADHD

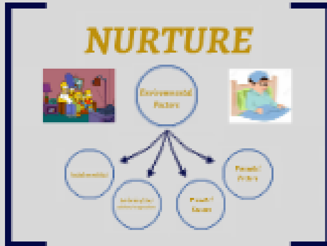
Gender: more frequent in males than females (2:1 in children and 1.6:1 in adults)

Age: most commonly diagnosed in school-aged children (5% of children and about 2.5% of adults)

Etiology – Causes and Theories

"Does ADHD qualify as a "nature" or a "nurture" disorder, or some combination of factors?"



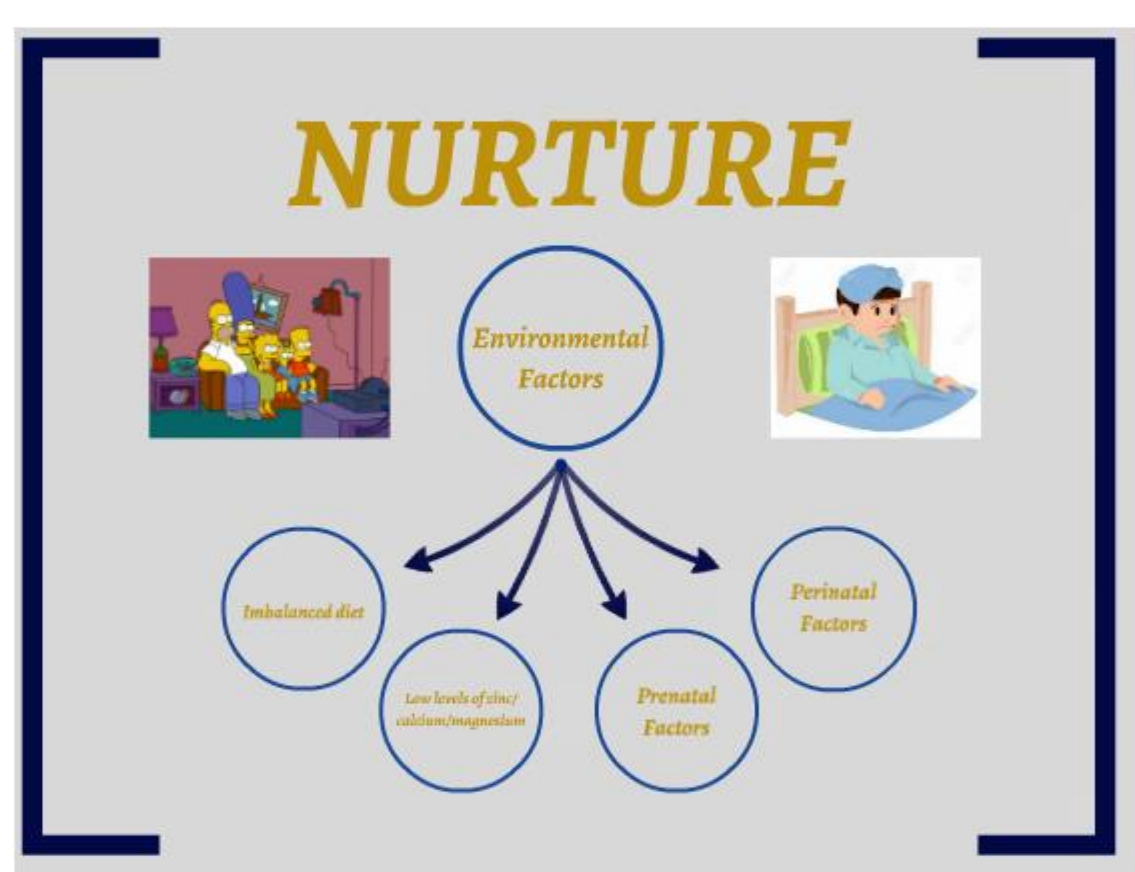


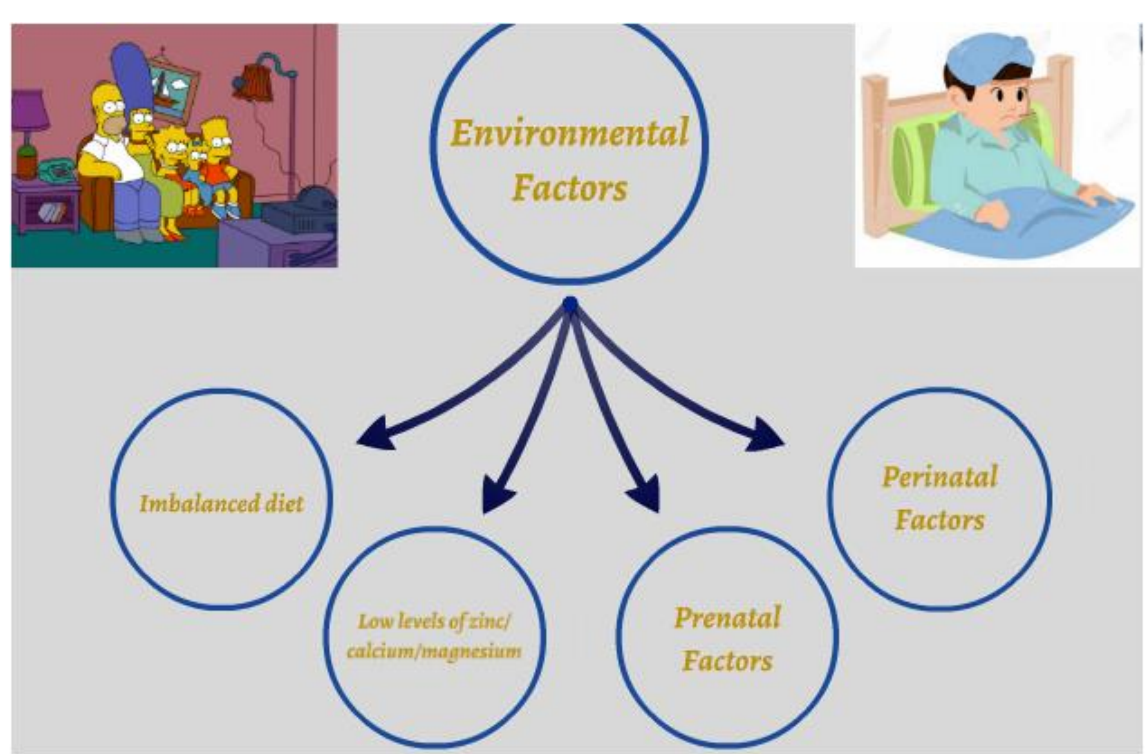
NATURE

Genetic cause (Dopheide, 2001)

Chemical imbalance in the brain - a dopamine deficiency (Evans, 2013)

Organic theory of ADHD (Millichap, 2007)





Top-down Models

Unifying theory of Barkley (1997)

Bottom-up Models

Motivational and emotional regulation theories

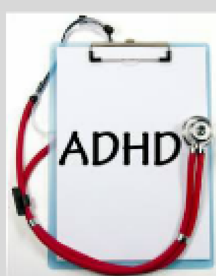
Consequences

Assessment

Observations

Interviews

Questionnaires



Full Assessment:

- Clinical interview with the parents;
- A separate interview with the child;
- Preshool, Kindergarten and school information;
- School observation and investigations;

Collection of data from every possible sources (Children, Parents, Theachers)

Interview schedules

Clinical interview with the parents

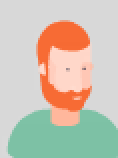
General Evaluation

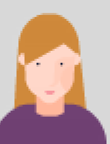
of the child, their problems and the context within which they are occuring

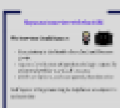
e.g.
Clarify presenting complaints
Make evaluation of symptoms
Family history of ADHD
Pregnancy and birth history
Early developmental history
Medical history
Medication
Family functioning and family problems
Social networks and other resources

Specific questioning

about ADHD and its common comorbidities

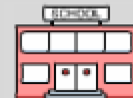






Separate interview with the child

The interview should focus on:



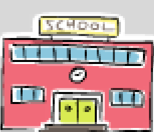
- Functioning in the family, the school and the peer group;
- A general evaluation of psychopathology (especially emotional problems and self esteem);
- child's attitude to, and coping with, their disorder.

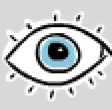
Self report rating scales may be helpful as an adjunct to an interview

Preschool, kindergarten and school information School observations

Information from school :

- Behaviour and behaviour problems;
- Development;
- Social functioning;
- Situational variation in behaviour and symptoms that may indicate comorbid or differential diagnoses





Potential domains of interest in a school observation:

General information
age of child, time of day, setting, number os children, number os adults, activity, room type and set up

Observed behaviours
overactivity, impulsivity, inattention, oppositional behaviours, evidence of mood lability,
level of communication and interaction with others,
ability to use comprehend and use language,
ability to socially interact with others,
reciprocal social interactions,
repetitive behaviours,
ability to imitate others,
ability to play appropriately,
evidence of anxiety.

Treatments

Treatment approaches need to be matched with an individual child's needs

Strongest empirical support: stimulant medications, parent training programs, classroom-based interventions and ADHD summer programs

Stimulant medications vs. Psychosocial treatments

Psychosocial Treatments

For dealing with the psychological and behavioral problems and thus increase the psychosocial functioning of the patient and their quality of life

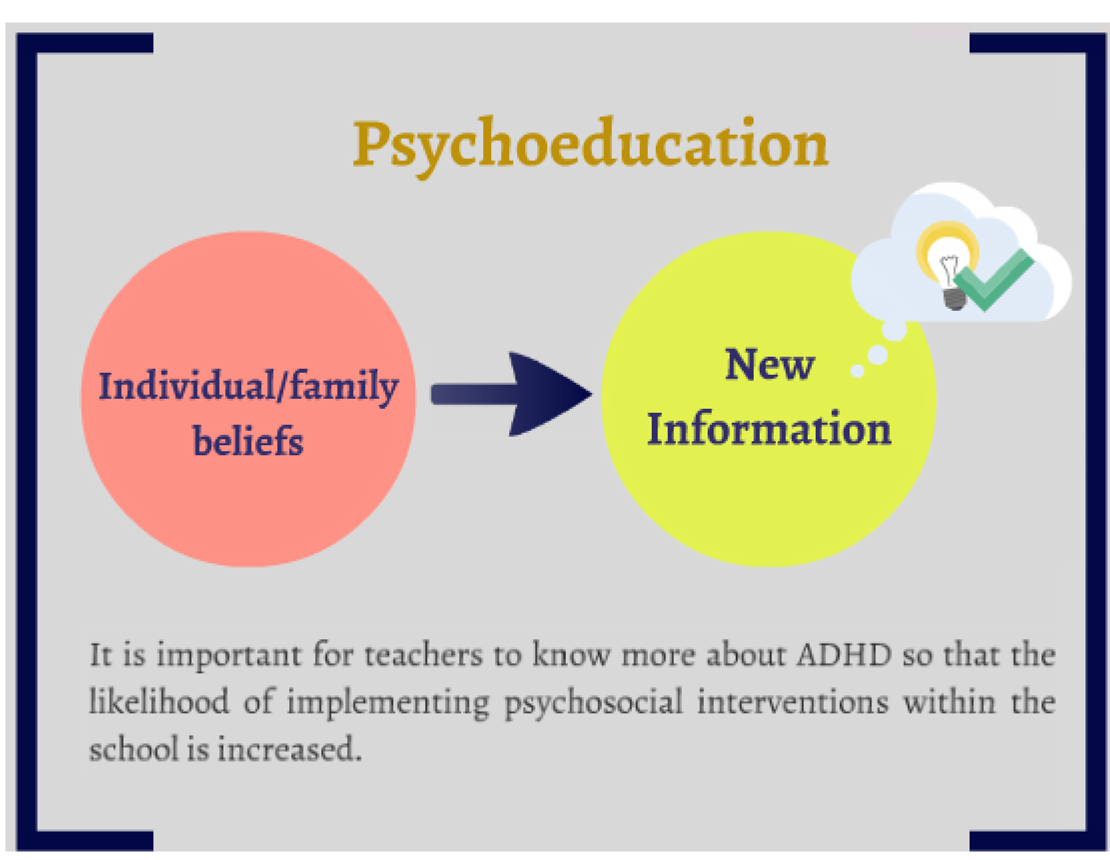
Psychoeducation (child, parents and teachers)

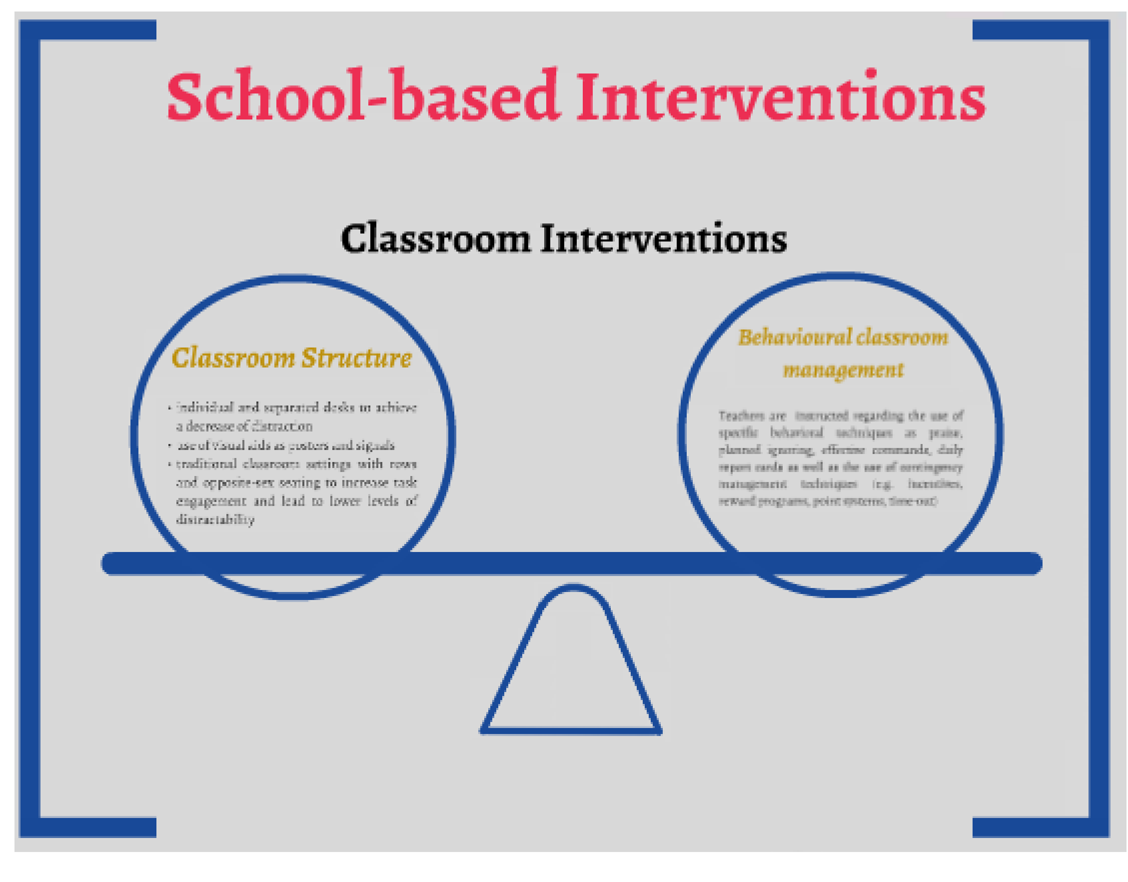
Individual Approaches to Intervention

- School-based Interventions
- Peer Interventions and social skills trainings
- Cognitive Behaviour Therapy

Family-based psychosocial interventions

- Parent Training (BPT)


Psychoeducation
Individual/family beliefs
New Information
It is important for teachers to know more about ADHD so that the likelihood of implementing psychosocial interventions within the school is increased.


School-based Interventions
Classroom Interventions
Classroom Structure
• individual and separated desks to achieve a decrease of distraction
• use of Visual aids as posters and signals
• traditional classroom settings with rows and opposite-sex seating to increase task engagement and lead to lower levels of distractability
Behavioural classroom management

Classroom Structure

- individual and separated desks to achieve a decrease of distraction
- use of visual aids as posters and signals
- traditional classroom settings with rows and opposite-sex seating to increase task engagement and lead to lower levels of distractability

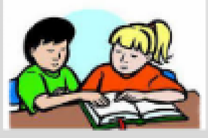
Behavioural classroom management

Teachers are instructed regarding the use of specific behavioral techniques as praise, planned ignoring, effective commands, daily report cards as well as the use of contingency management techniques (e.g. incentives, reward programs, point systems, time-out)

Academic interventions

Focus primarily on manipulating antecedent conditions such as academic instruction or materials in order to improve both behavioral and academic outcomes

Task and instructional modifications
Peer tutoring
Computer-assisted instruction
Strategy training



Peer Tutoring

Instructional strategy whereby two students work together on an academic task with one student providing assistance, instruction and feedback to the other

Task modification involve revision of the curricula

Modification of instructions involves adapting the content and delivery of instructions to meet the needs of ADHD children

Modification of tasks and instructions

Prezi

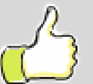
- match the tasks to each child's ability
- reduce task length
- increase specificity or visual stimulation in instruction, use enthusiastic yet task-focused presentation
- use brief and one-at-a-time presentation of academic assignments
- intercalate academic periods with brief periods of physical exercise
- schedule the more academic subjects into the morning hours
- allow extra time for written tests

CAI entails the **manipulation of the task format:**

- highlighting of essential material
- using of multiple sensory modalities
- dividing content material into smaller chunks of information
- providing immediate feedback
- limiting the presentation of nonessential and distracting features

Peer interventions and social skills trainings

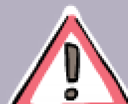
Instruction in social skills, social problem-solving, and behavioral competencies.
Aim: to enhance social competence by encouraging close friendships, and decreasing undesirable and antisocial behaviors



Group format is associated with better outcomes (clinic, summer treatment program, or in school-based settings)

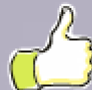
Summer treatment programs - includes social skills training, a reward and response cost system, group practice and instruction in sports skills and team membership.

Cognitive Behavior Therapy

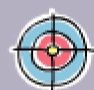


Self-Control

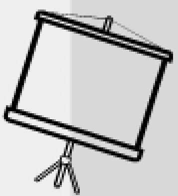
Self-reinforcement



Self-evaluation



Self-monitoring



Specific routines

Goals

Reinforcement

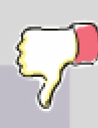
Behavioral parent training (BPT)

Several studies with children with ADHD and their parent showed conflicted parent–child interaction patterns and less positive parenting practice (Deault, 2010).

Reward Positive Behaviors

Raise
Positive attention
Tangible reward

VS



Negative Contingencies

Loss of rewards
Time-out
Ignoring

Gerald Patterson (1982)

Parents of children between the ages of 6 to 16 and it helps parents to identify their sons' specific problematic behaviors.

Videotape Modeling Parent Training

Videotaped lessons that are showed in group situation with a therapist.

Structural Family Therapy

Structural Family Therapy

Strategic family therapy

Brief solution-focused therapy

Barkley and collaborators (1992)

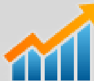
8-10 weekly one hour sessions

Psychodynamic Psychotherapy of ADHD

Two major theoretical camps:
Ego Psychology and Object Relations

key concepts used to understand the child's pathology, both important for treatment

Key practice components for the positive outcomes:



- positive transference
- therapeutic relationship with the child
- developing ego functions
- educative supportive interventions
- encouragement, reassurance and empathy
- expressive component
- active listening

- facilitative comments to encourage expression and reflection
- summarizing a child's statement
- directing attention; interpretations
- "here-and-now" interpretations
- parent work
- collaborative conferences with teacher(s)

Dietary Interventions

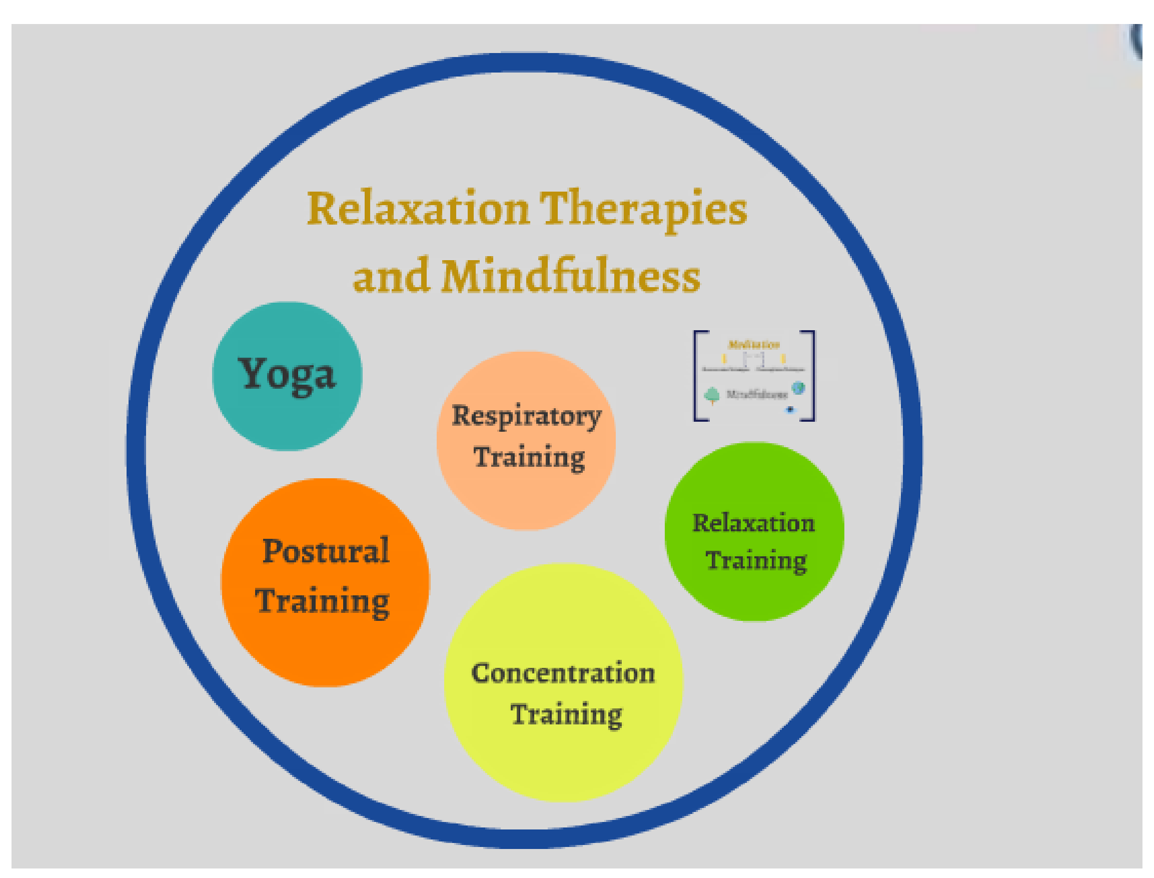
Essential **omega-3** and **omega-6** fatty acids exert a positive effect on neurotransmission

lack of those fatty acids may play a major role in the pathogenesis of ADHD

Need to be obtained from foodstuffs or added as food supplements

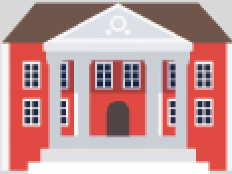
Sugar, several preservatives, food colourings, and potentially allergenic foodstuffs

Their elimination or restriction from the diets of children with ADHD will decrease ADHD-symptoms


Relaxation Therapies
and Mindfulness
Yoga
Respiratory
Training
Postural
Training
Relaxation
Training
Concentration
Training

Meditation
Transcendental Meditation
Concentration Techniques
Contemplation Techniques
Mindfulness

Transcendental Meditation

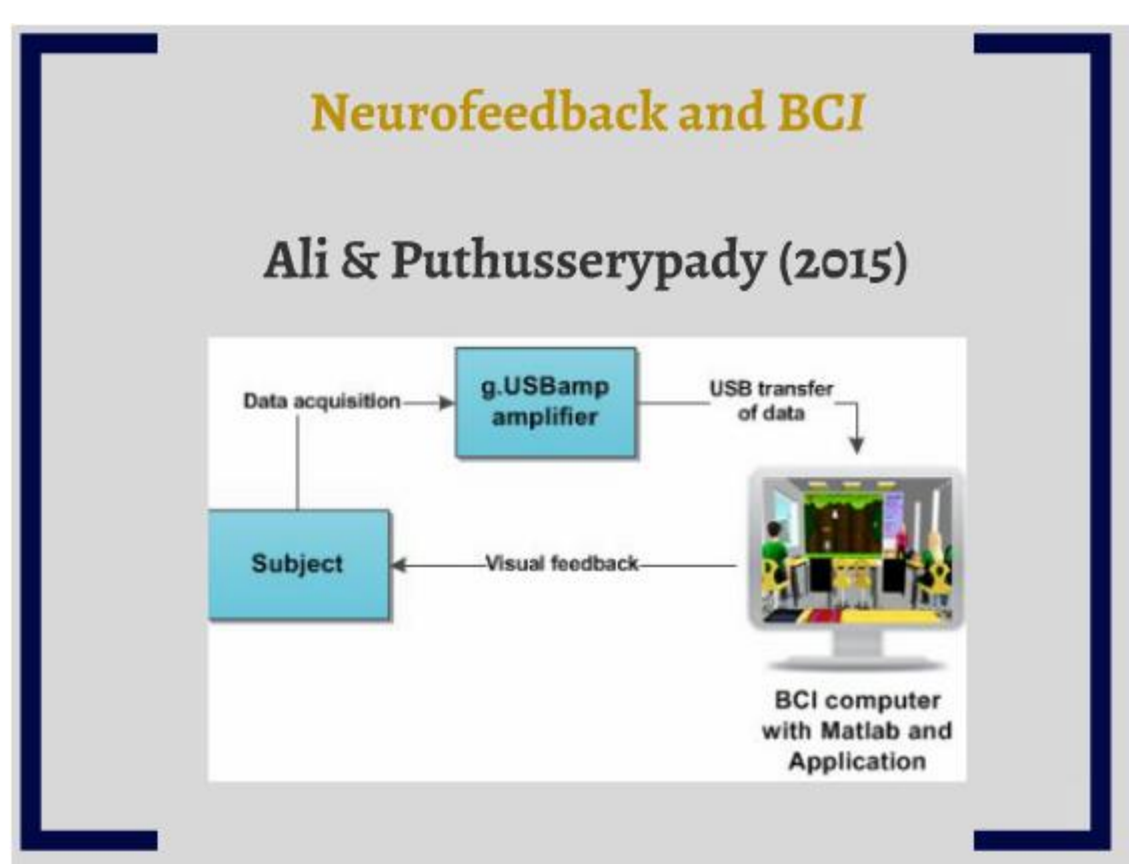


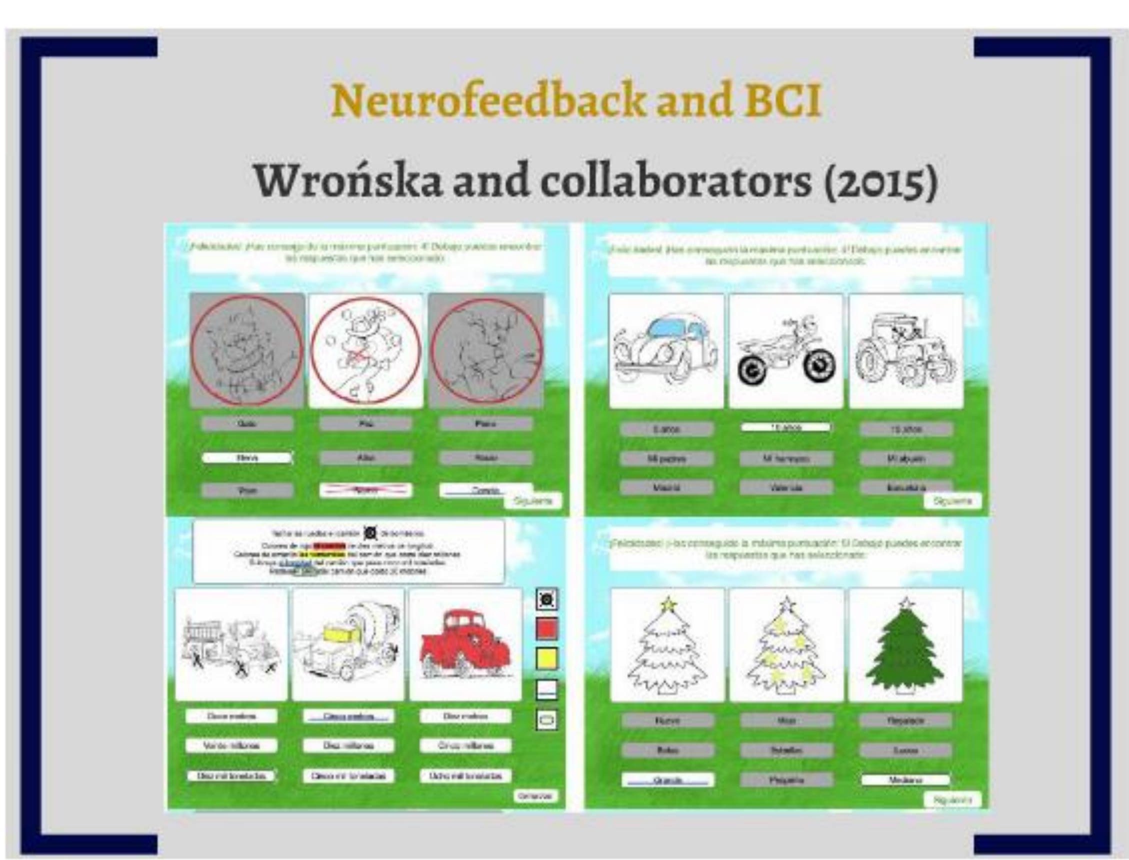
Neurofeedback and BCI

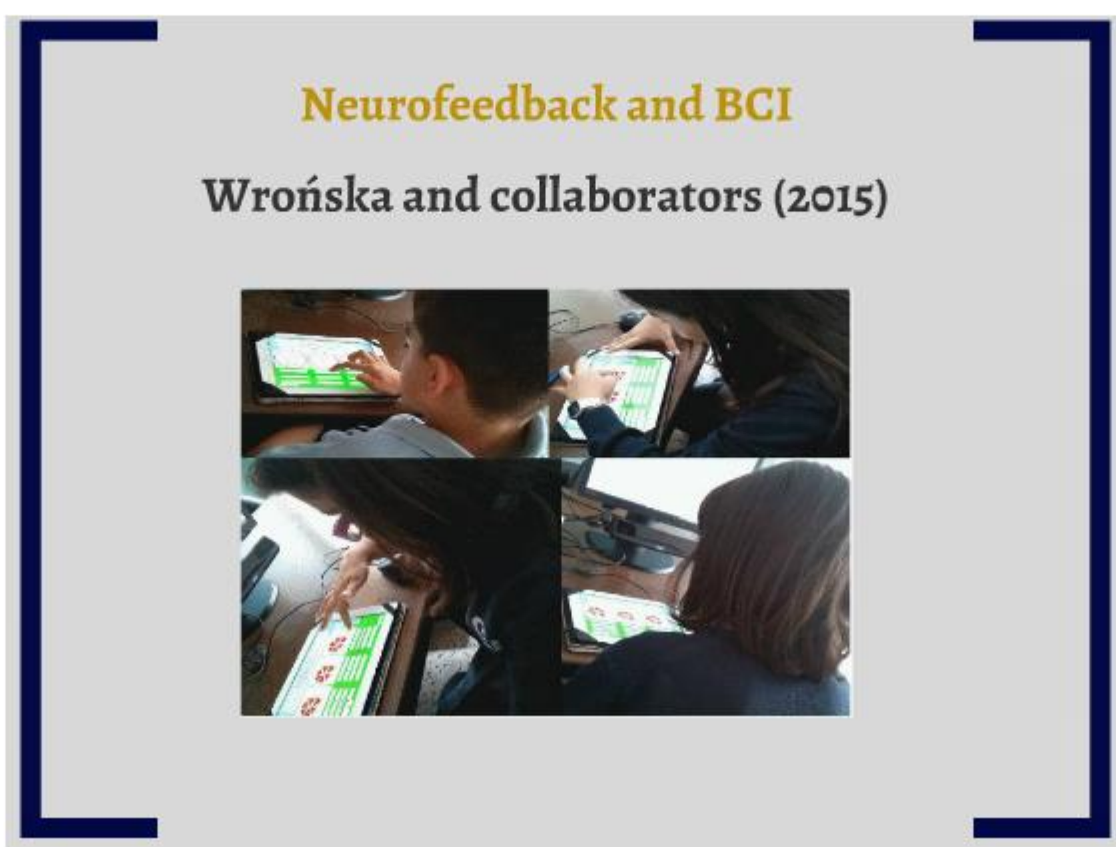
Uses electroencephalography (EEG) to measure the individual's brain activity.

Based on an operant conditioning process in which only the desired brain activity is rewarded (Mayer et al, 2015).

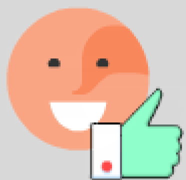
Tries to achieve self-control through feedback and positive reinforcement hoping to implement these self-regulation skills in every day activities (Micoulaud-Franchi et al 2014)


Neurofeedback and BCI
Ali & Puthusserypady (2015)
Data acquisition
g.USBamp amplifier
USB transfer of data
Subject
Visual feedback
BCI computer with Matlab and Application


Neurofeedback and BCI
Wrońska and collaborators (2015)


Neurofeedback and BCI
Wrońska and collaborators (2015)

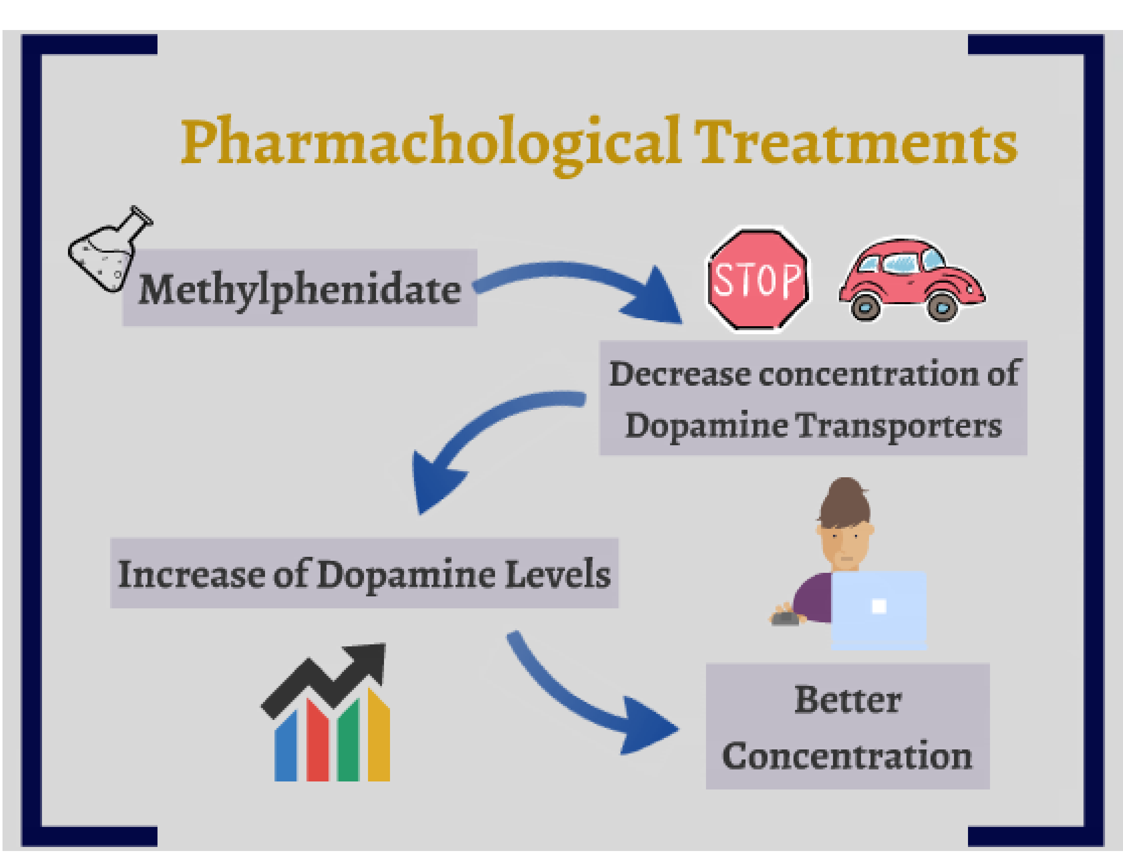
Individual Counseling and Support Groups



Children participating in individual counseling learn to better understand their disorder and to identify and develop their strengths.

Support groups are important in providing information and education about the disorder, as well as a social support system.

Pharmachological Treatments



Conclusion

Multimodal
Interventions