Tiltak for barn og unge med ADHD

Bakteppe:

– Myter
– Trender
– Evidensbaserte tiltak

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Psycho-social and neuro-cognitive treatments for ADHD

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Child and adolescent psychiatry
Research on QEEG and neurofeedback
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Outline of the lecture

• Some general issues / perspectives
• Specific interventions:
  – Behavior therapy / cognitive behavior therapy
    • Parent Management Training (PMT)
    • Social skills training
  – Collaborative problem solving
  – School based interventions
  – Neurofeedback (EEG biofeedback)
  – Computerized training of Working Memory
  – (Practical advice)
  – NICE guidelines
  – Kenneth: A success story
Some general issues

• Different from others or ”ill”?:
  – ”A hunters mind in a farmers world”
  – Compare with:”Autistic pride movement”:
    • ”Neurodivergents and neurotypicals”.
  – Positive aspects of ADHD

• ADHD as a disability:
  – Limitations of the person AND requirement of the environment

• Treatment should be based on diagnosis:
  – Accommodate – compensate – accept – treat – train / teach
Some general issues, cont.

• Accommodate:
  – Remove obstacles, but keep challenges.

• Compensate:
  – Use assets/ strengths – individual learning style
  – (Technological) remedies / aids

• If training weak functions:
  – 80% success – check if training has effects

• Focus on comorbidities?
Some general issues, cont.

• What sources can we trust?
  – Official web-sites:
    • .org and .edu
    • Web sites of patient organizations like CHADD, ADHD Europe, ADHDNorge…..
    • Internet is 90% advertising
  – Be skeptical when:
    • A cure with no side effects
    • Only testimony, or general phrases; ”research shows that…”
    • High prices
PMT: Parent Management Training

• Different names, same theory:
  – Social learning theory, communication theory
  – Structured learning more than sharing of experiences
  – Parent(s) of one child or parent group
  – Homework

• Topics covered:
  – Mechanisms behind problem behavior
  – Building positive relations to the child
  – Constructive ways of praise and reinforcement
  – Clear communication
  – Systematic use of reinforcement
  – Time out and mild punishments – setting limits
Mechanisms fostering behavior problems

- Biological vulnerability
  - (ADHD, autism, bipolar…..)
- Basic attachment can be weaker than usual
  - Partly because of the temperament of the child.
- Parents less consequent in enforcing discipline.
  - Partly because of the temperament of the child
- Unintentional reinforcement of negative behavior.
- Less involved in their children
- Less reinforcement of positive behavior.
  - ”Peace at last”, or ”gets more hyper when praised” –
  - ”Nothing to praise – everyone his age…”
Mechanisms fostering behavior problems, cont.

• Parents accept more negative behavior than they should.
  – To avoid conflicts

• Use more ”punishing praise”
  – ”At last you managed to…….”

• Parents more diffuse and less predictable

• Parent ”pathology” - negative peer models…. 
Summary of research on PMT

• Several studies show effect, also long term.
  – See Bloomquist –96, Barkley –95 /-98, Frick –98
• Best effect if children are under 7-8 years and have moderate problems.
• Effects at home do not automatically generalize to school behavior.
• Serious behavior problems should be treated as a chronic disorder.
Social Skills Training

• Definition

• Principles of training
Definition and examples:

• Behavior that fosters positive interaction and avoids unacceptable actions.
• Examples:
  – Follow directions – make friends – expressing one’s opinion acceptably – react to teasing constructively – anger control – joining other children playing - cooperate - help…………
Principles of training

- **Modeling:**
  - Observe and show
- **Role playing**
- **Practicing:**
  - Overt behavior – mentally verbally
- **Feedback / reinforcement**
- **Generalization – training; repetitions**
- **Positive relation to the child**
- **Motivate the child**

Attention and motivation
Problem- Solving Skills
Training

Alan Kazdin
PSST: Problem Solving Skills Training

- PSST complementing PMT
- Stand-alone method when PMT is not possible
- 10 – 20 weekly sessions for child with therapist
- Train to automate problem solving strategies:
  - What is the problem?
  - What are the options?
  - What happens if I choose A or B or C?
  - What happened (afterwards)?
• Ross Greene: The Explosive Child:
  – Some children are highly explosive.
  – They often have diagnosis like:
    • ADHD
    • Tourettes syndrome
    • High functioning autism, Aspergers syndrome,
    • Learning disabilities.
    • Depression – bipolar disorder
  – Often problems with self regulation / executive function”
Ross Greene:
The explosive child

• Chronically rigid and explosive children:
  – Lack flexibility when frustrated.
  – Very low threshold of frustration.
  – Extremely intense emotions when frustrated.
  – Thinking is rigid, concrete, black / white.
  – Not easily influenced by rewards or punishment.
  – Explosions often ”out of the blue”.
  – Inflexibility may be related to certain topics (i.e. food, clothes)
  – Often more extreme when tired or hungry.
User friendly environment

– Unnecessary frustrations removed.
– You act before, not during or after an explosion.
– You communicate to the child that you understand his/her problems with flexibility and frustration.
– You recognize the signals of danger.
– You don’t take attacks personally.
– You don’t put fuel to the fire.
– You help the child keep calm when frustrated.
– Adults share a common understanding of the child.
User friendly environment, cont.

• When explosions threaten:
  • Distract, change the situation, use humor

• You describe the child constructively:
  • Easily frustrated, problems thinking clearly
  • Instead of : Manipulating, bad…

• Helping the child tolerate frustrations requires:
  – User friendly environment
  – (S)he sees you as a helper, not an enemy.
  – Good communication.
Plan A - Plan B - Plan C

• Plan A:
  – Demands that must be met, even if conflict, no room for negotiations.
  – Use Plan A as little as possible

• Plan B:
  – Most important. Find a solution that is acceptable for parent as well as for child
  – Child has to explain what you want
  – You have to explain to the child what (s)he wants

• Plan C:
  – Demands that can be postponed
Prioritizing:

• Priority no 1:
  – Reduce explosions to a minimum.

• Handling explosions:
  – Ask the child how when calm.
  – Physical contact and asking ”why” often make things worse.

• Plan A:
  – Demand so important that you accept an explosion?
  – Can you follow through?
ADHD in school

• Be clear and tolerant at the same time
• ”Catch them being good”
• Use reinforcement systems
• The amount of work is as important as the level of expectations
• Teachers must know what ADHD is
  – ”lazy”, ”bad will” or ”unable to learn control” are not constructive concepts
• ”30% - rule”
  – Expectations = Age minus 30%
• Frequent feedback – divide tasks in smaller units
ADHD in school, cont.

- Prioritize: Academic and social goals
- Find agreements with parents about homework
- Do not overlook the inattentive subtype of ADHD – often passive, dreamy and slow
  - Problems getting started and problems with tempo
Challenges in school

• Trouble with sustained attention:
  – What do you do?

• Problems with working memory:
  – What do you do?

• Reduced processing speed:
  – What do you do?

• Need frequent feedback:
  – What do you do?

• Trouble planning and organizing:
  – What do you do?
Challenges in school, cont.

• More theory – more years in school – sitting still
• Flexible groups – less structure
• Working in groups; sometimes in open landscape
• Responsibility for one’s own learning
• More liberal discipline?
EEG biofeedback and ADHD

What is EEG biofeedback (Neurofeedback)?
How is therapy done?
What are the effects?
EEG and QEEG

- EEG is registration from the scalp of electrical activity inside the brain
- Neurologists are trained to inspect the raw signals and look for pathology like epilepsy and tumors
- In quantitative EEG (QEEG) signals are analyzed electronically and often compared to a database
  - Relative dominance of certain frequencies
- We look for deviances from norm, not pathology
EEG and mental states

- The relative dominance of frequency bands (delta – theta – alpha – beta) changes with mental state.
- Training up low beta (13 – 18 Hz) and training down theta (4 – 7 Hz) is often a goal in EEG biofeedback.
- Feedback is PC screen telling you if you are on the right track – changes in bar – points in game…
Results of EEG biofeedback in ADHD

• Many studies have used selected patients and no control groups; low quality studies
• Recent studies of high scientific standards show that 20 – 40 sessions can have significant positive effects in ADHD – probably long term effects.
• Our pilot study found better results with medication, but some patients seemed to be responders to feedback, and we think some changes will give better results.
Computerized training of cognitive functions

• Cogmed / Robomemo:
  – Focus on working memory training

• Captains Log / Brain Train:
  – Computerized training of various cognitive functions including attention, memory, logic thinking
Working memory is the ability to keep a limited amount of information ”online” and manipulating it at the same time.

and use that information in thinking
Results of working memory training in ADHD

• Daily sessions of 45 minutes for five weeks show positive changes in working memory AND attention / ADHD symptoms

• Effects seem to be preserved 3 months later
NICE guidelines

• Based on systematic reviews of best available evidence.

• Diagnostic recommendations:
  – DSM IV or ICD 10 criteria – leads to impairment – pervasive – assessment of needs and coexistent problems.

• Treatment recommendations:
  – Preschool:
    • PMT and educational programs
    • Not drugs (Drugs not proven efficient for this group)
NICE guidelines cont.

• School age and young people with moderate levels of ADHD:
  – PMT (behavioral management and relationship building)
  – Social skills training
  – Info to schools. They should apply behavioral interventions
  – Drug treatment when this is not enough

• School age and young people with severe ADHD:
  – Drugs normally first choice
  – Supply with PMT, social skills training..
NICE guidelines cont. II

• Adults:
  – Drugs (methylphenidate)
  – Psychosocial interventions if wanted by patient

• Dietary advice:
  – Elimination of additives and artificial coloring not generally recommended (lacks evidence)
ADHD:
Who is responsible for what at which time?

Clinical pathways for children and adolescents with ADHD in the county of Østfold - Norway
(www.adhd-behandlingslinje.no)
Practical advice
Kenneth: A success story

• **Practical advice**
  – Experience and some research

• **Kenneth: A sucess story**
  – When guidelines are followed
Resources

• Webster- Stratton: The Incredible Years
• Ross Greene: The Explosive Child
• Russel Barkley: Defiant Children
• Arns et al (2009):
  – Efficacy of neurofeedback treatment in ADHD: the effects on inattention, impulsivity and hyperactivity: a meta-analysis.
• www.cogmed.com
• www.braintrain.com