


ADHD AND BEHAVIOUR MODIFICATION

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DIAGNOSTIC CRITERIA

- Core symptoms of inattention, hyperactivity and impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level.
- Present in two or more settings.
- Significant impairment in social, academic or occupational functioning.

COMORBIDITIES

TABLE 1 Prevalence of Comorbid Disorders for Children With ADHD Versus Those Without ($N = 61\,779$)

	No ADHD (%)	ADHD (%)[a]	Adjusted Relative Risk (%)[b]	95% CI
Learning disability	5.3	46.1	7.79	6.86–8.86
Conduct disorder	1.8	27.4	12.58	10.23–15.48
Anxiety	2.1	17.8	7.45	6.08–9.12
Depression	1.4	13.9	8.04	6.09–10.62
Speech problem	2.5	11.8	4.42	3.41–5.73
Autism spectrum disorder	0.6	6.0	8.72	5.97–12.72
Hearing problem	1.2	4.2	2.77	1.87–4.11
Epilepsy or seizures	0.6	2.6	3.93	2.19–7.06
Vision problem	1.4	2.3	1.47	0.98–2.20
Tourette's syndrome	0.09	1.3	10.70	4.72–24.25
Any MH/ND disorder	11.5	68.9	5.12	4.73–5.55

[a] $P < .05$ for χ^2 test.
[b] Rai **Patterns of Comorbidity, Functioning, and Service Use for US Children With ADHD, 2007**
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Kandyce Larson, Shirley A. Russ, Robert S. Kahn and Neal Halfon
Pediatrics; originally published online February 7, 2011;

TREATMENT – PHARMACOLOGICAL

RECOMMENDATION
Medication for **preschoolers** should be initiated by a child psychiatrist OR a paediatrician familiar with the management of ADHD in this goup. (Grade C)
Stimulants OR atomoxetine should be used. (Grade A)
Long acting stimulants or atomoxetine should be considered due to convenience, adherence and stigma reduction. (Grade B)
When stimulants or atomoxetine do not produce response or have serious side effects, TCAs or neuroleptics may be prescribed. (Grade B)
If medication does not result in satisfactory treatment, a review of diagnosis and management should be considered. (Grade A)

TREATMENT - PSYCHOEDUCATION

- Education parents, children as well as educators about the condition
  - 'your brain works differently right now'
  - 'lots of smart people have ADHD'
  - Medication is not 'to make you behave'
  - 'we need to help you learn tricks so you don't always get into trouble'
- General advice
- Help improve behavioural and academic functioning

TREATMENT – BEHAVIOUR MODIFICATION

- Specific interventions with an aim to alter behaviour
- Implemented by training parents to modify the way a child behaves and is able to self regulate his own behaviour
- Reduction of internalising symptoms
- Stimulant medication alone had better effect on core symptoms of ADHD than behaviour therapy alone

TREATMENT - MULTIMODAL

- MTA study showed that combining treatment modalities had the following benefits:
  - Greater improvements in conduct measures and oppositional behaviour as well as academic performance
  - Lower dosages of stimulants hence fewer adverse effects
  - Parents and teachers more satisfied with treatment plan

BEHAVIOUR MODIFICATION

- Clear
  - Be clear when setting rules and boundaries.
  - Speak in a language that the child understands.
    - 'finish one page of English in 10minutes' vs 'get back to your homework'
    - Give one instruction at a time
  - Use visual methods eg writing rules on paper around the house or even in a book.
  - State clearly what the rewards are too.

BEHAVIOUR MODIFICATION

- Consistent
  - Be consistent.
  - Parents and schools need to work together. What is not acceptable at home should also be not acceptable in school if possible.
  - Between parents too there should be consistency, not one parent only implementing the plan.
  - It is very easy to lapse especially when adults are tired but we must be consistent from day to day.

BEHAVIOUR MODIFICATION

- Calm
  - Be calm and positive
    - 'sit down on the sofa' vs ' stop jumping on the sofa'
  - Remember that children will always emulate us.
  - If we scream or use physical punishment, it gives them the green light to do the same.

REMEMBER THE 3 Cs
CLEAR, CONSISTENT AND CALM

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BEHAVIOUR MODIFICATION

- Develop a regular schedule / routine
  - Make it visual
  - Incorporate more physical activities earlier in the evening and quieter activities nearer bedtime
  - Try and keep routines the same if children are in different households
- Give more regular feedback
  - Immediate vs discussing events which happened several hours before or in a different environment
- Target only a maximum of 3 behaviours at a time and do not expect him to fulfill targets all day

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BEHAVIOUR MODIFICATION

- Teach quiet sitting
  - Through games, timing
- Engage in less aggressive games or activities which may trigger unwanted behaviours
- Love your child unconditionally
  - 'I love YOU but I don't like your behaviour'
- Communicate with teachers and carers
  - Behaviour charts, email
  - Keep it simple, teachers are busy people too

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BEHAVIOUR MODIFICATION - TECHNIQUES

Technique	Description	Example
Positive reinforcement (BE GENEROUS)	Providing rewards or privileges based on the child's performance. Immediate.	Child completes an assignment and is permitted to play on the computer for 15 minutes.
Time-out (NOT TOO LONG)	Removing access to positive reinforcement based on performance of unwanted or problem behavior.	Child hits sibling impulsively despite a warning and is required to go to a time-out place to calm down for 5 minutes.
Response cost	Withdrawing rewards or privileges based on the performance of unwanted or problem behavior.	Child loses free time privileges for not completing homework.
Token economy	Combining positive reinforcement and response cost. The child earns rewards and privileges contingent on performing desired behaviors and loses the rewards and privileges based on undesirable behavior.	Child earns stars or points for completing assignments and loses stars or points for getting out of seat. The child cashes in the sum of stars at the end of the day for a prize.

BEHAVIOUR MODIFICATION – USING THE ABC CHART

Antecedent	Behaviour	Consequence
Teacher says she is going to give a spelling test in Mandarin	Taking stationery from other children	Disruptive and sent out of the class
Sees friend with a sticker he likes	Stealing money from other children	Able to buy what he wants from the bookshop

BEHAVIOUR MODIFICATION – USING THE ABC CHART

- When / where / with whom / what time is the behaviour most likely to occur?
- When does it not occur?
- What does the behaviour achieve for the child?
- Does the child avoid, escape any activity by engaging in the behaviour?
- Are there any rewards by engaging in this behaviour?
- What might the child be attempting to communicate?

BEHAVIOUR MODIFICATION – USING THE ABC CHART

- Work out a behaviour plan
  - Alternative or more appropriate skill to eliminate their need to engage in this behaviour
  - Changes to the environment or the child's schedule in order to decrease their exposure to triggers
  - Address the need that the child was trying to communicate
  - Review the need for rewards in the short term
  - Communicate your plan to everyone who will be caring for the child

BEHAVIOUR MODIFICATION – SOCIAL SKILLS

- Peer problems are very common
  - Provide a comfortable environment for him to interact eg home
  - Invite only one or two friends at a time and limit it to two or three hours only
  - Preplan activities with your child and create a schedule. Have back up plans too.
  - Be free to supervise
  - Intervene immediately with inappropriate behaviours
  - Don't embarrass your child in front of his or her peers

BEHAVIOUR MODIFICATION – SCHOOL BASED INTERVENTIONS

- In partnership with parents and the child
- Classroom adaptations
- Modified work assignments and examinations
- Effective in reducing ADHD symptoms as well as improving academic and social outcomes when combined with pharmacological therapy.

Summary

- Behaviour modification has important positive effects in the treatment of ADHD
- Families, carers and teachers play an important role in working together
- Involve children in their own behaviour programmes
- Goals should be achievable