Training day for

Attention Deficit/ Hyperactivity Disorder: Morning Session

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Goals for the Day

1. *What do you want?*
2. *Basic understanding of ADHD*
   - *What it looks like, causes and diagnosis*
3. *Outline basic treatment approaches*
4. *Practical strategies to use when teaching*
5. *Problem solve real cases*

What is ADHD?

Behavioural Diagnosis

Neurological condition

Characterised by:

- overactive behaviour
- impulsive behaviour
- difficulty in paying attention.

Not a disorder of attention
but of inhibition
and self-control

Key Features

- Difficulty suppressing impulse
- They don’t fail to pay attention but pay attention to more cues than the average person
- Fail to pause, consider the situation and options before acting
- Appear overactive or restless

Incidence

- 2-4 times greater in boys
- Approximately 3-9% of school aged (NICE 2006)
- 2% adults worldwide
- Rates vary from 1.7 % to 16%
- Carry rates to adulthood vary (11%, 18% and 68%)
- Age 30-40 years most people do not meet criteria for diagnosis

How is it diagnosed?

- Paediatrician or expert psychiatrist
  - physical exam
  - Medical, behavioural and educational sources
  - reports from teachers, parents, the child, others.
- DSM IV or ICD-10
- Six or more symptoms give a diagnosis of:
  - inattention
  - hyperactivity and acting impulsively
  - Combined (6 in each section)

Key diagnostic points

- Early onset:
  - Symptoms must have started before 7 years old
- Duration:
  - For at least six months
- Severity
  - Different to children of similar development age
- Setting
  - Present in multiple settings
- Impact
  - Affect academic or social life
- Not be accounted for by other disorders

Risks

- Co-morbidity + Personality disorders
- Substance abuse
- Traffic violations + Traffic accidents

- Antisocial behaviour
- Education and job difficulties
- Family difficulties

(Biederman and Faraone 2005)

Does it occur with other difficulties?

40-60% have co-morbidity (up to 70% has been discussed).

(Barkley, 1990a; Jensen, Hinshaw, Kraemer, et al., 2001; Jensen, Martin, & Cantwell, 1997; Beiderman *et al.* 1991)

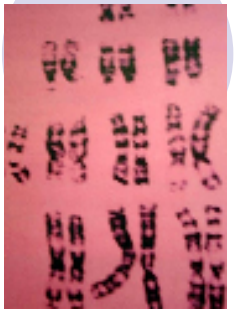
Might include:

- 26% conduct disorder
- 35% ODD
- 26% anxiety disorder
- 18% depressive disorder
- 50% Developmental Coordination Disorder

Pritchard (2006) in British Medical Journal

1/3 have a learning disability (NIMH 1999)

What causes ADHD?



The debate rages on:

- **Genetics?**
  - Twin Studies
  - 1/2 of parents with ADHD have a child with ADHD
  - 10-35% of children have a first degree relative with ADHD
  - Likely to be moderated by environment and gender
- **Environment?**
  - Toxins exposure (drugs/alcohol in utero; lead etc.)
  - Psychosocial adversity
- **Biological?**
  - Brain infections (e.g. Encephalitis)

Little evidence linked to only environmental or biological factors

Heritability of ADHD

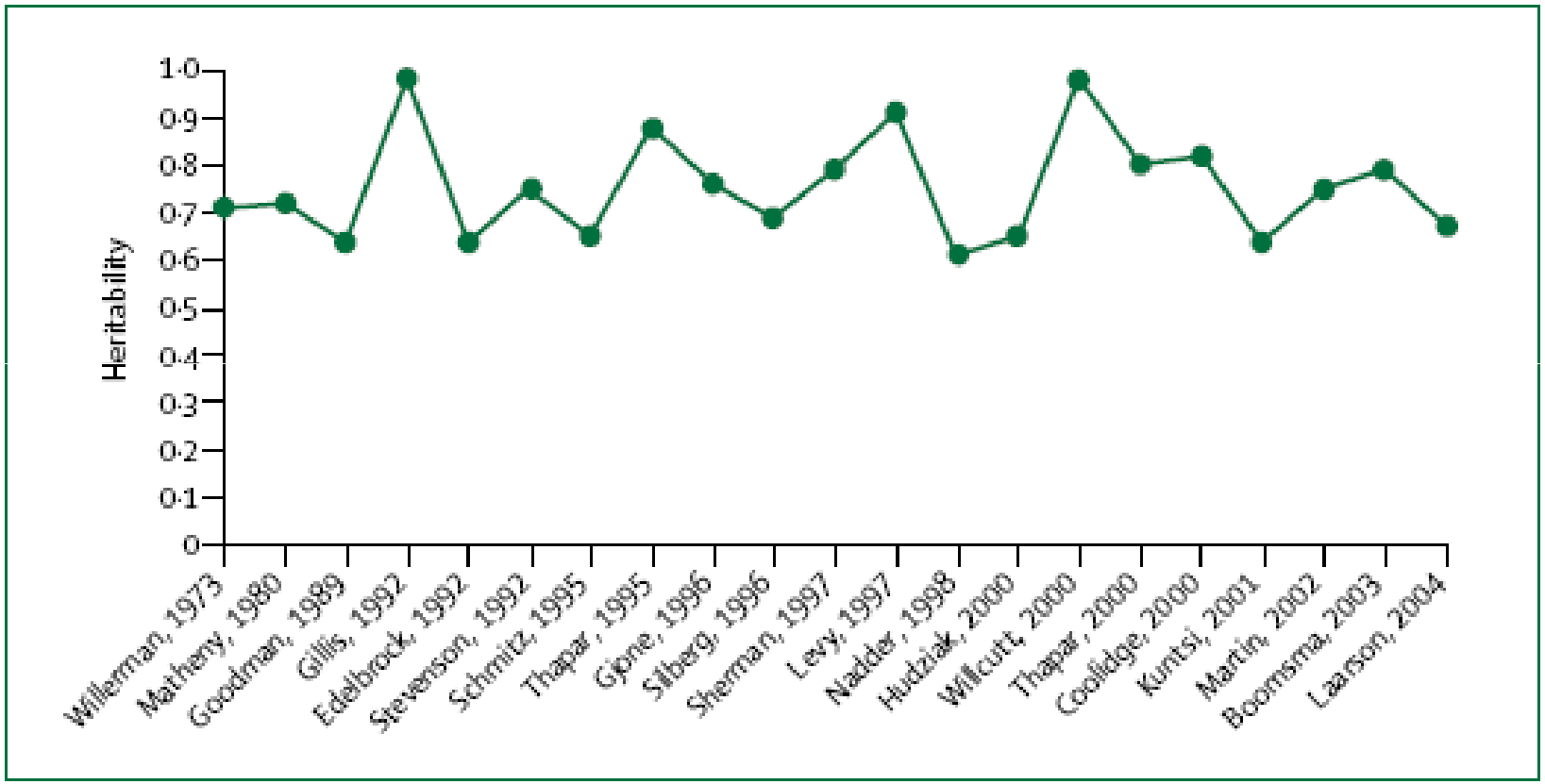


Figure 1: **Heritability of ADHD**

Biederman and Faraone, 2005

What goes wrong?

Many theories

One main theory

- Executive functioning in brain affected
- Frontal lobes implicated
- Decreased dopamine release
- Decreased inhibition and self regulation

What works?

- Early intervention
  - minimises educational and psychosocial difficulties
- Stimulants work short term but no long term studies to date.
- Multimodal intervention has benefits (Jensen, 2001)

What is the result for the child?

•Talk out of turn.
•Flit from one task to another
•disorganised in thoughts and actions.
•Difficulty staying with a subject unless very interested.
•More easily visually or auditorily distracted.
•“Fly off the hook”.
•Not aware of the impact of their actions on others.
•Remorseful but lack insight.

- Fall out of friendships with other children.
- Often unpopular with other children
- Tend to become isolated.(22%)
- Reckless.
- Accident prone.
- Break rules.
- Low self esteem.
- Impulsive
- Fidgety.

What is the result for parents?

- Increased stress (Fisher 1990)
- Often overly negative
- More directive
- Fewer rewards
- Less interactive
- Decreased self esteem for parents (Mash and Johnstone 1983)
- Less consistent disciplinarians

  (Murray and Johnston, 2006)

Parents

- Not all parents have difficulties with child relationships
- Interaction difficulties begin in preschool and carry on through childhood and adolescence

What to consider?

Based on Chu 2007

- Family Support
- Environment
- The task
- The child
  - Neurological level
  - Psychological level
  - Behavioural level

Family Support

- Parent child interactions essential
- Marital relations
- Parental adjustment
- Stability and support from home essential
- Does intervention meet families' needs?

Environment

- ADHD does not arise only out of environmental factors (Barkley, 1990)
- Structured and stable environment
- Sensory considerations
- Is it the same across environments?
- Socialisation

The task

- Is the task hard or easy?
- Does it engage the child?
- Is it relevant?

The child

- Health
- Level of ADHD
- Co-morbidity
- Medication
- Child values and goals
- Sensory processing
- Attention levels and distractibility