ADHD in the Middle School Student

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Consensus Definition

A Developmental Disorder of:
- Inattention and/or
- Hyperactivity-Impulsivity
  - These are largely delays in rate but can be acquired in some cases (20-25%?)
- Developmentally Inappropriate Levels of Symptoms
- Childhood Onset (Symptoms - Impairment)
- Cross-setting Occurrence of Symptoms
- Significant Impairment in Major Life Activities
- Exclusion of Other Disorders (MR, PDD ??, Psychosis)
IT SAYS HERE THAT ATTENTION DEFICIT DISORDER MAY BE HEREDITARY.

'DID YOU SAY SOMETHING?'
DSM-IV Criteria:
6 of 9 Inattention Symptoms

- fails to give close attention to details
- difficulty sustaining attention
- does not seem to listen
- does not follow through on instructions
- difficulty organizing tasks or activities
- avoids tasks requiring sustained mental effort
- loses things necessary for tasks
- easily distracted
- forgetful in daily activities
DSM-IV Criteria:

6 of 9 Hyperactive-Impulsive

- fidgets with hands or feet or squirms in seat
- leaves seat in classroom inappropriately
- runs about or climbs excessively
- has difficulty playing quietly
- is “on the go” or “driven by a motor”
- talks excessively
- blurts out answers before questions are completed
- has difficulty awaiting turn
- interrupts or intrudes on others
Other DSM-IV Criteria

- Developmentally Inappropriate Levels
- Duration of 6 Months
- Cross-setting Occurrence of Symptoms
- Impairment in Major Life Activities
- Onset of Symptoms/Impairment by 7
- Exclusions: Severe MR, PDD, Psychosis
- Subtyping into Inattentive, Hyperactive, or Combined Types
Problems with Self-Regulation

- Behavior
- Emotion
- Attention
- Motivation
- Motor Hyperactivity
- Time
- Understanding self/environment
- Planning/Organizing thoughts/materials
Prevalence (United States)

- Varies by sex, age, social class, & urban-rural
- 2-3% of children (DSM-III or III-R)
- 5-10% of children (DSM-IV) (recently 7-8%)
  - Adding Inattentive Type doubles prevalence over III-R
  - If only rating scale is used, its 7-23%
    - (Teacher reports yield 2-3x more cases than parent reports)
  - 12-15% of U.S. military dependents (DSM-III-R)
- 5% of adult population (DSM-IV - All Types)
- 3:1 males: FEMALES (community samples)
  - 5:1 to 9:1 (clinical samples)
Prevalence (Internationally)

- Canada: 3.8-9.4% kids (DSM-III-R)
- Australia: 3.4% of kids (DSM-III-R)
- New Zealand: 6.7% kids, 2-3% teens (DSM-III-R)
- Germany: 9.6% (DSM-III); 4.2% children (DSM-III-R)
- India: 5-29% children (DSM-III)
- China: 6-9% children (DSM-III-R)
- Netherlands: 7.8% kids (DSM-IV)
- Puerto Rico: 9.5% child & teens (DSM-III)
- Spain: 8% (DSM-III-R)
- Japan: 7.7% children (DSM-III-R ratings)
- Colombia: 2-13% (DSM-IV ratings)
Cognitive Impairments

- Slower, more variable reaction time
- More impulsive errors and missed signals
- Poor interference control (distractible)
- Reduced sensitivity to errors
- Poor mental computation and memory for verbal sequences (digit span reversed)
- Deficient delayed spatial memory
- Delayed internalization of speech
- Poor time reproduction (not estimation)
- Concrete, disorganized story recall
- Diminished olfactory identification (adults)
Comorbid DSM-IV Disorders

- Oppositional Defiant Disorder (40-70%)
  - ADHD contributes to and likely causes ODD
- Conduct Disorder (20-56%)
- Delinquent/Antisocial Activities (18-30%)
  - Psychopathy – rates unknown but 20% of CD
- Anxiety Disorders (10-40%; largely referral bias!)
  - Related more to poor emotion regulation than to fear
- Major Depression (0-45%; 27% by age 20)
  - Likely genetic linkage to ADHD
- Bipolar Disorder (0-27%; likely 6-10% max.)
  - Not documented in any follow-up studies to date
Childhood Developmental Risks

- **Language Disorders** (Expressive: 10-54% Pragmatic deficits in 60%)

- **Central Auditory Processing Disorder** (45-75%?)
  - Recent research shows no perceptual deficits with errors resulting from impulsive/distractible behavior during audiology exam
  - CAPD not a scientifically validated entity at this time

- **Developmental Coordination Disorder** (50+%)

- **Reduced Physical Fitness, Strength, & Stamina** (using standard physical fitness tests)

- **Accident Proneness**
  - 1.5 to 4x risk of injuries (non-head) (28 vs. 6% in Worcester 4-6 year olds) (greater in ODD subset)
  - 3x risk for accidental poisonings (23 vs. 7.7% of clinic referrals; 7.3 vs. 2.3% in community)
Social-Emotional Impairments

- Increased parent-child conflict & stress
  - Greater parental commands and reduced responsiveness, more child noncompliance and negativity, reduced duration of compliance
  - Reduce self-confidence in parental role
  - Greater maternal depression
    - Especially problematic for ODD/CD subgroup

- Peer Relationship Problems (50-70%+)
  - Less sharing, cooperation, turn-taking
  - More talking, commanding, intrusive, hostile
  - Most serious in ODD/CD subgroup

- Poor Emotional Control
  - More anger, frustration, hostility (ODD/CD)
  - Less self-regulation of other emotional states
Childhood Academic Impairments

- **Poor School Performance (90% +)**
  - (reduced productivity is greatest problem)

- **Low Academic Achievement (10-15 pt. deficit)**
  - May be deficient even in preschool readiness skills

- **Low Average Intelligence (7-10 point deficit)**
  - An apparent failure to keep pace with peers but could also result from poor executive functioning that partly affects IQ

- **Learning Disabilities (24-70%)**
  - Reading (15-30%; 21% in Barkley, 1990)
  - Spelling (26% in Barkley, 1990)
  - Math (10-60%; 28% in Barkley, 1990)
  - Handwriting (60%)
  - ADHD may contribute to later reading comprehensions deficits through its impact on working memory
Educational Outcomes

More grade retention (25-45%; MKE: 42 vs. 13)
- Pagani et al. (2001) showed that retention is harmful

More placed in special educational (25-50%)

More are suspended (40-60%; MKE: 60 vs. 19)
- Reflects disciplinary action and so more associated with CD

Greater expulsion rate (10-18%; MKE: 14 vs. 6)

Higher drop out rate (30-40%; MKE 32 vs 0)

Lower Class Ranking (MKE: 69% vs. 50%)

Lower GPA (MKE: 1.7 vs. 2.6)

Fewer enter college (MKE: 22 vs. 77%)

Lower college graduation rate (5 vs. 35%)

MKE = Milwaukee Young Adult Outcome Study
ADHD Dilemmas in Adolescence

- Increasing Developmental Drive for Independence vs. Diminished Capacity for Autonomy (Developmental Lag).
  1. 1/3 Rule
  2. Homework/schoolwork
  3. Sexual Behavior
  4. Demands for Autonomy
  5. Medication Problems
  6. Mood/Emotion Problems
  7. Increased Need for Peer Affiliation
Sexual-Reproductive Risks

Assessed via self-reports: (MKE study)

- Begin Sexual Activity Earlier (15 vs 16 yrs.)
- More Sexual Partners (18.6 vs. 6.5)
- Less Time with Each Partner
- Less Likely to Employ Contraception
- Greater Risk of Teen Pregnancy (38 vs. 4%)
- Ratio for Number of Births (42:1)
  - 54% Do Not Have Custody of Offspring
- Higher Risk for STDs (16 vs. 4%)
ADHD Dilemmas in Adolescence

Medication/Mood problems (con’t)

- Medication Problems
  1. Medication Refusal
  2. Substance Abuse

- Mood/Emotion
  1. Increased developmental volatility
  2. Decreased emotional regulation
ADHD Dilemmas in Adolescence

Increased Need for Peer Affiliation.

1. Greater Levels of Immaturity.
2. Diminished Application of Social Skills.
4. Increased Danger of Affiliation with Deviant Peer Group.

Con’t
Antisocial Activities
(adolescence)
The Milwaukee Follow-up study

- Theft (38-44 vs. 9-15%)
- Lies (49 vs. 5%)
- Truant (21% vs. 3%)
- Breaking & Entering (9 vs. 1%) (NS)
- Deliberately Destroyed Property (21 vs 5%)
- Cruelty to animals (15 vs. 0%)
- Cruelty to people (15 vs. 0%)
- Physically fights (9-21 vs. 0-2%)
- Carries/uses a weapon (10-17 vs. 0-2%)
- Set Fires (28 vs. 0%)

Such outcomes mainly in those CD in late childhood or by early teens
Classroom Management: Curriculum Adjustments

- Don’t retain in grade!
- Sept is to establish behavioral control
- Decrease total workload, or
- Give smaller quotas of work at a time
- Use traditional desk arrangement
- Seat child close to teaching area
- Target productivity first, accuracy later
- Don’t send home unfinished class work
- Give weekly homework assignments
- Reducing/eliminating homework
  - 10 minutes total x grade level in school
Peer Tutoring

- Create & distribute scripts (work sheets)
- Teach any new concepts and skills to class
- Provide initial instructions for work, then
- Break class into dyads
- Have one student tutor & quiz the other
- Circulate, supervise, and coach dyads
- Alternate tutor/student roles in dyad
- Re-organize into new dyads weekly
- Graph & post quiz results
Classroom Management: Teaching Styles

- Allow some restlessness at work area
- Give exercise breaks
- Get color-coded binders & book covers
- Try color-coding for reading of texts
- Use participatory teaching methods
- Practice skills drills on computers
- Laminated work slates: Avoid impulsiveness
- Post homework at start of class
- Assign a homework “study-buddy”
Homework Problems

- Writing down assignments correctly
- Bringing assign. and materials home
- Getting started on homework
- Persisting with homework completion
- Repacking completed assign./materials
- Returning completed work to the correct teacher at the correct time
Intersperse low appeal tasks and activities with high appeal ones

- Be more animated, theatrical, and dramatic
- Touch when talking (and otherwise)
- Schedule the most difficult subjects in AM
- Use direct instruction, programmed learning, or highly structured teaching materials
- Follow the “18 Great Ideas”
- Have child pre-state work goals
Extra Help for ADHD/LD cases

- IDEA pre-referral, push-in, pull-out, or self-contained LD assistance
- Keyboarding & word processor training as early as possible
- Link up with after school tutoring, books on tape, videos, & computer training
- Require continuous note-taking during lectures & while reading
# A Daily Behavior Card

1=Excellent, 2=Good, 3=Fair, 4=Poor, 5=Terrible

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The Punishment Hierarchy

- Mild, private, direct reprimands
  - Immediacy is the key: Swift justice!
  - Establish a “chill out” location
  - Formal time out in class or private room
  - In-school suspension or go to BD class
Externalizing Rules and Time

- Posters of rules for each work period
- Laminated color-coded card sets on desks with rules for various class activities
- Child uses vocal self-instruction during work
- Nag tapes - taped reminders from Dad
- Use timers, watches, taped time signals, etc.
- Peer teams - peers help control teammates
Moving to Self-Management

- Child records work productivity on a daily chart or graph on public display
- Child rates self on daily conduct card
- Nonverbal cues for teens (paper clip)
- Severe cases, use videotape feedback