

# **Attention Deficits: Treating functional impairments and enhancing growth opportunities in children and adolescents**

*Tapestry of Life*

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# Objectives

- Explore core diagnostic criteria and functional impairments related to attention deficits
- Identify treatment strategies to effectively address functional impairments related to attention deficits
- Develop effective treatment planning to enhance growth in those who experience attention deficits

# Definition

CDC, MMWR, Sept 2, 2005, 54(34);842-847

Attention-deficit/hyperactivity disorder (ADHD) is a “**neurobehavioral** disorder characterized by pervasive inattention and hyperactivity-impulsivity that often results in **substantial functional impairments**”

# Vulnerable To Problems and Abuse

KARR-MORSE & WILEY, 1997

“The neurological and behavioral characteristics that combine in ADHD/ADD clearly render a child vulnerable to early learning and social problems”

# Reason Referred for Treatment

“Discriminating between children with ADHD and classmates using peer variables”, 2009,  
Journal of Attention Disorders

Often, children are referred for treatment based on functional impairments (e.g., not completing work, poor hygiene, defiance, not listening, arguing with peers, etc.); however, treatment often focuses on the core symptoms (i.e., inattention and hyperactivity/impulsivity)

# What we will cover today

- Research and statistics
- Theories (basic overview)
- Core diagnostic criteria (basic overview)
- Functional impairments and treatment considerations
- Treatment planning strategies

# ADHD and Learning Disability Study

CDC (July 2008) "Diagnosed ADHD and Learning Disability: US, 2004-2006"

- Report presents national estimates of the prevalence of diagnosed ADHD and LD in U.S. children 6-17 years of age
  - Household survey of non-institutionalized population
  - Focused on children in the child sample of years 2004, 2005, and 2006
  - Younger children referred to 6-11 yrs of age
  - Older children referred to 12-17 yrs of age

# ADHD and Learning Disability Study

CDC (July 2008) "Diagnosed ADHD and Learning Disability: US, 2004-2006"

- Report cont'
  - Focuses on three conditions (diagnoses)
    - ADHD without LD
    - LD without ADHD
    - Both

# ADHD and LD Statistics

CDC (July 2008) "Diagnosed ADHD and Learning Disability: US, 2004-2006"

- No change for ADHD among younger children
- 4% change for ADHD among older children
- **Gender**
  - Boys (6.7%) were more than twice as likely as girls (2.5%) to have ADHD without LD
  - Boys (5.1%) were about twice as likely as girls (2.3%) to have both conditions (ADHD and LD)
  - Boys (5.6%) were about one-third more likely than girls (4.3%) to have LD without ADHD

# ADHD and LD Statistics

CDC (July 2008) "Diagnosed ADHD and Learning Disability: US, 2004-2006"

- **Low Birth Weight**

- Children with low birth weight were more likely than children without low birth weight to have LD (with and without ADHD)
- Low birth weight was NOT associated with ADHD without LD

# ADHD and LD Statistics

CDC (July 2008) “Diagnosed ADHD and Learning Disability: US, 2004-2006”

- **Family Structure**

- **Children** who lived in a **mother-only family** were more likely than those in a two-parent family to have **each of the three conditions (DXs)**
- In each **sex** and **age group**, children living in a **mother-only family** were more likely than those living in a two-parent family to have **both ADHD and LD**

# ADHD and LD Statistics

CDC (July 2008) "Diagnosed ADHD and Learning Disability: US, 2004-2006"

- **Health Insurance Coverage**
  - **Children with Medicaid coverage**, were more likely than uninsured children and privately insured children to have **each of the diagnoses**

# ADHD and LD Statistics

CDC (July 2008) “Diagnosed ADHD and Learning Disability: US, 2004-2006”

- **Mother’s Level of Education**
  - In each **sex and age group**, children with the **least educated mothers** were more likely than children with the most educated mothers to have **LD without ADHD**
  - Among **older children**, those with the **most educated mothers** were twice as likely as children with least educated mothers to have **ADHD without LD**

# ADHD and LD Statistics

CDC (July 2008) “Diagnosed ADHD and Learning Disability: US, 2004-2006”

- Discussion
  - ADHD and LD are among the most widely researched Diagnoses in the U.S.
  - Estimated that 4.5 million school-aged children (5-17 yrs of age) have ever been diagnosed with ADHD
  - Estimated that 4.6 million school-aged children (5-17 yrs of age) have ever been diagnosed with LD

# ADHD and LD Statistics

CDC (July 2008) “Diagnosed ADHD and Learning Disability: US, 2004-2006”

- Discussion<sub>cont'</sub>

- Calculated the annual societal “cost of illness” for ADHD to be between \$36 and \$52 billion in 2005 dollars

# More LD and ADHD Statistics

CDC, Sept. 2007, "Summary Health Statistics for US Children: 2006"

- In families with income less than \$20,000 the percent of children w/LD was twice that of children in families with income of \$75,000 or more
- Children with fair or poor health status were five times as likely to have a LD and almost three times as likely to have ADHD than children with excellent or very good health

# Prevalence

AMEN, WINDOWS INTO THE ADD MIND, 1997

- 52% of ADHD children have poor motor coordination, especially fine motor
- 35% of kids with untreated ADD drop out of high school
- 43% of boys w/ADD and aggressiveness are arrested in their life time

# Prevalence<sub>cont'</sub>

AMEN, WINDOWS INTO THE ADD MIND, 1997

- Up to 50% of the prison population has ADD or some type of LD
- 52% of adults w/ADD abuse drugs
- 60% chance of having ADD if 1 parent has ADD;  
90% chance w/2 ADD parents

# Research

NIMH, "ADHD medication treatment associated with higher academic performance in Elementary School", Pediatrics, May 2009

Children with ADHD who take medication to treat the condition tend to do better in math and reading compared to peers with ADHD but do not take medication

# Research

NIMH, "Short-term intensive treatment not likely to improve long-term outcomes for children with ADHD" Journal of the American Academy of Child and Adolescent Psychiatry, March 2009

- Initial positive results gleaned from intensive treatment of childhood ADHD are unlikely to be sustained over the long term
  - The type or intensity of a 1-yr tx for ADHD in childhood does not predict future functioning
  - After tx, youth with ADHD still had significantly more academic and social problems compared to peers who did not have ADHD – also had more conduct problems, depression, and hospitalizations

# Research

NIMH, "Short-term intensive treatment not likely to improve long-term outcomes for children with ADHD" Journal of the American Academy of Child and Adolescent Psychiatry, March 2009

- A majority (61.5%) of the children who were medicated at the end of the 14-month trial had stopped taking medication by the 8-yr follow-up...
  - ***suggesting that medication treatment may lose appeal with families over time***
  
- Children who were no longer taking medication at the 8-yr follow-up were generally functioning as well as children who were still medicated...
  - ***raising questions about whether medication treatment beyond 2 years continues to be beneficial or needed by all***

# Research

NIMH, “Age-related decline of ADHD symptoms disrupted by middle school”, Journal of Clinical Child and Adolescent Psychology, July 2008

- Although ADHD symptoms can last into adulthood, they usually decline as a child gets older; however, the stressful transition from elementary school to middle school complicates this pattern and may even disrupt it
  - Routine dramatically changes when entering middle school
    - Multiple classes with multiple teachers
    - More homework with increased planning and organizing demands
    - More responsible for their own success

# Research

NIMH, “Age-related decline of ADHD symptoms disrupted by middle school”, Journal of Clinical Child and Adolescent Psychology, July 2008

- Children taking medication for ADHD symptoms faired no better than those not taking medication during the transition
  - “While medication is highly effective in treating ADHD symptoms, it is unlikely to help a child develop the specific skills needed to succeed in middle school, such as *time management, organization, planning, and study skills*”
- Environmental changes associated with the transition to middle school can worsen a child’s ADHD symptoms or disrupt the typical pattern of decline

# Theories

# Theories

KELLY & RAMUNDO (1993), NIMH (2008)

- Neurotransmitter
  - Dopamine deficit
    - Difficulty blocking out stimuli
- Frontal Lobes
  - Reduced blood flow to frontal lobes, an area believed to be responsible for executive functions such as planning, initiative, behavior and emotion regulation
    - Causes impulsivity, mood swings, hyperactivity

# Theories<sub>cont'</sub>

KELLY & RAMUNDO (1993); NIMH (2008)

- Primary Sleep Disorder
  - Sleeps poorly
  - High activity level as an effort to stay awake
  
- Parenting or Heredity
  - Inherited trait, parent or close relative with ADD/ADHD
  - Parenting and personal characteristics passed on to child
  - Twin studies indicate heredity

# Theories<sub>cont'</sub>

KELLY & RAMUNDO (1993); NIMH (2008)

- **Pregnancy and Childbirth Complications**
  - Pre and post birth problems...causing minor brain injury or damage...may be factors in the development of ADD/ADHD
    - Poor maternal health
    - Maternal age of 20 or less
    - Long labor
    - Fetal distress
    - Premature birth
- **Exposure to lead** (plumbing fixtures or paint)

# Theories<sub>cont'</sub>

KELLY & RAMUNDO (1993); NIMH (2008)

- Parental abuse of substances before and during pregnancy
  - Substances are believed to harm the sperm and egg prior to conception; believed to harm the fetus while in the womb
  - Substance use implicated in brain development deficits in fetuses leading to ADD/ADHD

Tobacco

Cocaine

Crack

Heroin

Alcohol

# Core Diagnostic Criteria

# Three Major Core Symptoms

- Inattention
- Impulsivity
- Hyperactivity

# Inattention

KELLY & RAMUNDO, 1993

Attending to an activity is more than simply paying attention

- Process of attention
  - Choosing the right stimulus to focus on
  - Sustaining the focus over time
  - Dividing focus between relevant stimulus
  - Shifting focus to another stimuli

# Impulsivity

KELLY & RAMUNDO, 1993

- Failure to stop and think
- Difficulty controlling impulses
- Difficulty delaying gratification

# Hyperactivity

KELLY & RAMUNDO, 1993

- Physical over activity or generalized restlessness or impatience
  - Bounce off walls
  - Hang from light fixtures
  - Rapid speech
  - Fidget, tap, twirl hair
  - Numerous hobbies, second jobs
- Hyperactivity can be an asset if quality of behavior is purposeful and productive!!!!

# Affects on Brain Functions

KARR-MORSE & WILEY, 1997

- *Capacity for planning*

- Decreases ability to reflect and think before acting

- Poor problem solving abilities
    - Rush through tasks
    - Make careless mistakes

# Affects on Brain Functions

KARR-MORSE & WILEY, 1997

- *Capacity for Selectivity*
  - Decreases ability to determine relative importance of information over other details
    - Often focus on irrelevant information...master of trivia

# Affects on Brain Functions

KARR-MORSE & WILEY, 1997

- *Capacity to resist distractions*
  - Difficulty filtering out extraneous distractions
  - Difficulty controlling own fidgety movements
  - Inability to inhibit verbalizations
    - Often speaks out of turn

# Affects on Brain Functions

KARR-MORSE & WILEY, 1997

- *Capacity for attention continuity*
  - Often unpredictable
  - Fluctuations in attention behaviors ranging from over concentration to flightiness
    - “Can spend hours playing video games”

# Affects on Brain Functions

KARR-MORSE & WILEY, 1997

- *Capacity to self monitor*
  - Difficulty with self awareness and self regulation
  - Not as responsive to positive and negative reinforcements as other children
  - Difficulty reading and responding to social cues

# Functional Impairments and Treatment Considerations

# Internal & External Challenges

Problems associated with ADD/ADHD originate *not only within a child* but also within the interactions with the child and demands placed upon the child (the environment!)

# Treatment Considerations

ADHDcentral.com

- Emotional Development (ED)

- In children with ADHD , Emotional Development is 30% slower than non-ADDers (10 y/o = 7 y/o development)

- Learning Disabilities (LD)

- One fourth of children with ADD have serious learning disabilities
  - Oral expression
  - Listening skills
  - Reading and math comprehension

# Treatment Considerations cont'

ADHDcentral.com

- Behavioral Problems
  - Sixty five percent of ADHD children exhibit defiance or other problems with authority figures
    - Verbal hostility
    - Temper tantrums
  - Boys ...75% have hyperactivity
  - Girls...60% have hyperactivity

# Treatment Considerations cont'

ADHDcentral.com

- Sleep Problems

- Fifty percent of ADHD children experience sleep problems

- Legal Problems (SAFETY!!!)

- Adolescents with ADHD have almost 4 times as many traffic citations as non-ADDers
  - Four times as many car accidents and seven times more likely to have a second accident

# Treatment Considerations cont'

ADHDcentral.com

- School Problems

- Twenty-one percent of teens with ADHD skip school on a regular basis
- Thirty-five percent drop out of school before finishing high school
- Forty-five percent have been suspended from school at least once
- Thirty percent have repeated a year of school

# Treatment Considerations

“Psychological symptomatology of siblings of children with ADHD” Journal of Addiction Disorders, 2008

- Family Relationship Problems

- Siblings of ADHD children:

- Feel victimized by their ADHD siblings
    - Believe their families overlook or minimize their feelings
    - Feel resentful that the family is controlled by the ADHD child
    - Feel powerless over the situation
    - Feel sorrowful for not having a normal family life, privacy, and an identity that was not associated with their sibling with ADHD

# Treatment Considerations cont'

“Psychological symptomatology of siblings of children with ADHD” Journal of Addiction Disorders, 2008

- Family Relationship Problems cont'
  - Siblings of ADHD children:
    - Report family conflict as a problem
    - Feeling angry at their parents for holding them to different rules and standards than their ADHD sibs
    - Feeling embarrassment, fear, jealousy, rejection, guilt, and loneliness in regard to their family relationships
    - Wanted more attention to their emotional needs than they were currently receiving from their parents

# Treatment Considerations

“Discriminating between children with ADHD and classmates using peer variables”  
Journal of Addiction Disorders, 2009

- Co-occurring Problems

- Oppositional behaviors
- Conduct problems
- Academic failure
- Difficulty in relationships with peers and adults

- Peer Relationship Problems

- Considered by the authors to be the most “disconcerting functional problems that children with ADHD experience”

# Treatment Considerations cont'

“Discriminating between children with ADHD and classmates using peer variables”  
Journal of Addiction Disorders, 2009

- Peer Relationship Problems cont'
  - Children with ADHD more likely than non-ADDers to be rejected by the peer group
    - They become rejected within hours or days of entering a new peer group primarily because of their negative, disruptive behavior and lack of social skills
    - Difficulties often persist into adolescence and the impairments in social functioning predicts negative outcomes later on, including conduct disorder and substance use problems

# Treatment Considerations cont'

“Discriminating between children with ADHD and classmates using peer variables”  
Journal of Addiction Disorders, 2009

- Peer Relationship Problems cont'

- Peer rejection

- Behaviors displayed by children with ADHD that increase peer rejection include: *dominating and aggressive verbal and physical behaviors, inattention, violating rules, and academic difficulties*
- Children with ADHD often like their peers more than their peers like them; and often they are unaware of their negative social status and don't perceive significant peer relationship problems

# Treatment Considerations

KELLY & RAMUNDO, 1993

- Growing up with ADD...ADDers:
  - See self as being different...defective
  - Often experience disappointment in self, rejection, humiliation, and inadequacy
  - Want to be accepted and try hard to fit in
  - Develop defense mechanisms to protect self from emotional harm
    - “Bad is better than stupid”
    - “Blamer”
    - “Master Manipulator”
    - “Withdrawal”

# Treatment Considerations

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

By 6 or 7, ADD has a significant negative impact on self-esteem, because...

Child in frequent conflict with parents, friends, teachers, and others...negative self-talk and thinking patterns

Behavior incites negative responses, “Where was your head? Your brother doesn’t act like that. You would do better if you would try harder”

# Treatment Considerations<sub>cont'</sub>

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

*Inaccurate self assessment*: Poor judgment of own abilities...often due to devalued strengths and focus on failures (or sometimes a sense of grandiosity)

*Chronic failure*: They experience a lot of failure...they begin to expect failure of self and don't try their best or don't try at all

*Negative bonding* with parents: Lots of strain in family, bonding becomes negative and child may begin to not care about others

# Treatment Considerations<sub>cont'</sub>

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

- **Impact upon relationships:**
  - Social isolation: Become loners because of fear of pain associated with numerous failed relationships...refuses to get into relationships or displays behaviors that ostracize them from others
  - Teases others and/or gets teased by others because they are different
  - Fighting is typical: "conflict driven"...may be related to "saying things without thinking," stimulation-seeking, misperceptions, and rage outbursts

# Treatment Considerations cont'

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

- **Impact upon relationships cont':**
  - Conversation is interrupted...ADDER loses interest, cuts people off, misinterprets what is being said, says things without thinking, misses parts of conversation
  - Immediate gratification results in difficulty taking turns
  - Difficulty completing tasks/chores...gets distracted from task, disorganized, causes others great frustration and resentment

# Treatment Considerations cont'

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

- **Impact upon relationships cont':**
  - Difficulty playing and being quiet...often noisy and activity level is high
  - Excessive talking...self-stimulating
  - Takes high risks...seeks thrills, worries people and causes rift in relationships
  - Tantrums and rage outbursts...85% with ADHD have rage outbursts, causes others to withdraw out of fear

# Treatment Considerations cont'

AMEN, D., WINDOWS INTO THE ADD MIND, 1997

- **Impact upon relationships cont':**

- Chronic anxiety and restlessness...searches for ways to relax such as sex, food, alcohol, etc.
- Difficulty seeing others' needs...others feel unimportant
- Lack of learning from past...repeat same mistakes over and over
- Chronic procrastination...irritates people who have to pick up the loose pieces

# Treatment Planning Strategies

# Intervention Strategies for Clients with Attention Deficits

- **Parent education** is the most important and critical component of successful therapy for all age groups
- **Structuring the environment for success**....Structure is another important component (includes allowing parents to remain in the room to observe how to establish and maintain structure)
- **Social skills development**...Teaching clients how to initiate and maintain positive communication is a critical component for success in the world
- **Emotional regulation**...Teaching clients about emotions, how they feel, and how to express them in an acceptable manner is important for relationship development and maintenance
- **Self esteem enhancement**...This important component often keeps your client motivated toward attending sessions because they feel success in your office

# Parent Education

## Caregivers

...become very frustrated

...feel anxious, fearful, angry, and powerless

...experience a great sense of desperation

# Parent Education<sub>cont'</sub>

- Those who are diagnosed with ADD/ADHD have brains that are wired differently...THEY ARE NOT DEFECTIVE
- They have tremendous capabilities...are very productive when their environment is “user friendly”
- They can be taught to compensate for their special needs
- Their frontal lobe process is “uniquely” wired

# Parent Education<sub>cont'</sub>

- Adults become temporary control system for child while teaching self control
  - Do not tell child what you don't want...leaves them guessing what you do want (“don't put your feet on the couch” so they put them on the coffee table”)
  - Tell them what you do want...very clear and specific
- Use positive reinforcement to teach self control
  - Use timer to reinforce positive behavior

# Parent Education<sub>cont'</sub>

- “Positive practice”
  - Have child repeat appropriate behavior a set number of times
    - Make request with smile on face letting child know that you are not angry
- Use positive and encouraging words to teach

*Goal: Must say 10 positive things about the child per day*

# Parent Education<sub>cont'</sub>

- Be able to identify incompetent and non-compliant behaviors
- Think creatively
- Be positive and tell child what you want
- Learn and develop interventions that increase competence
- Modify punishments and rewards for specific needs of the child

# Structure Environment

*Make the environment “user friendly” through proper balance of structure and freedom*

- Remove excess stimuli from environment when child needs to be less excited
- Study/learning area should be in quiet area with few sources of stimuli
- Allow for shorter periods of attention, gradually lengthening the time span when applicable

# Structure Environment<sub>cont'</sub>

- Provide consistent schedules that are somewhat flexible for activities such as sleeping, meals, relaxation, hobbies, physical exertion
- Frequently elicit child's thoughts of own abilities and celebrate successes
- Assist child with identifying important stimuli for given tasks and filtering irrelevant details

# Structure Environment<sub>cont'</sub>

- Use visual images for future recall...such as a hula hoop for setting personal space boundary
- Designate rest, relaxation, and quiet zones...written rules for “right to privacy”
- Establish and maintain order for events such as meal time...written rules and procedures for such things as the conversation, asking for food to be passed, leaving table when having a bad day

# Teaching Social Skills

- Social stories
  - Help them to understand social environment and expectations
  - Help them to better understand cause and effect
  - Help them to understand ways to make better choices
- Role plays
  - In the office, waiting room, hallways, etc.
  - Have parents practice in office and in other settings!!!!

# Playland Express

A structured method for working  
with kids with attention deficits  
and their families

# Playland Express

- **“Hard Stuff”**

- Parents (and siblings) and child client discuss challenges that occurred throughout the week
- Encourage child to initiate discussion
- Intervene if parents become punitive or too negative; or if I need to role model how to discuss challenges in positive manner
- Keep focus on behaviors and validating parents’ frustration
- End with ways to help resolve challenges

# Playland Express

- **Station 1**...Once the “hard stuff” is completed, invite child client to Station 1. Review expectations of the station outlined on the “Ticket to Graceland (Station 2)” and include:
  - Practicing a proper greeting
  - Identifying a goal for the session
  - Reminder about minutes in the playroom for free play
  - Learning about a social skill (e.g., following directions) through short stories, puppets, games, etc.
  - Practicing the social skill
  - Complete the Ticket to Graceland

# Playland Express

- **Station 2...**Review expectations outlined on the “Ticket to Wonderland”. Focuses on:
  - Social skill development through challenging games and activities
  - Important to allow the child client to experience a lot of success
  - Make sure all of the activities are appropriate for the client’s developmental level

# Playland Express

- **Station 3...**Review expectations outlined on the “Ticket to Playland”. Activities related to:
  - Emotional regulation
    - Begin by teaching about feelings, identifying feelings by sight (pictures), identifying feelings and sensations in own body
    - Talk about triggers and ways to effectively manage emotions when triggered
    - Includes social skill component in this station as well

# Playland Express

- **Station 4...**The child client is allowed to play with anything in the playroom for the established amount of time. This is a time I usually either speak with parents about what they witnessed during the session or I remain with the client and use play therapy techniques to engage the child
- If siblings are involved, I engage with them in this station

# Adolescents

- Progressive counting strategies and tapping (or other tactile stimulation to increase attention)
- Internal resource building
- Use homework assignment to help teach how to organize, plan, and accomplish tasks

# What Works For One May Not Work For Another

Each ADHD child is different

Finding ways to assist the child make successful transitions in life will be different for each child