

Gender Differences in ADHD and How They Affect Learning



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ADHD

- ▶ There are three presentations.
- ▶ There is a similarity between the genders.
- ▶ Phenotypic core AD/HD symptoms that is very similar in girls to what has been observed in boys.

Gender Differences in AD/HD

- ▶ Ratio males/females: 2-3/1
- ▶ Boys more hyperactive
- ▶ Girls more inattentive
- ▶ Boys more disruptive behaviors/ODD/CD
- ▶ Girls more self-esteem issues, anxiety, and depression
- ▶ Girls diagnosed later with more problems after puberty

Differences by Gender and Subtype

- ◆ Girls have more somatic complaints than boys
- ◆ Boys have poorer social functioning than girls
- ◆ Combined type Boys were rated as more impaired than girls on:
 - Social problems
 - Schoolwork difficulties
 - Self-esteem
- ◆ Inattentive type girls were more impaired or equal to boys with ADHD-Inattentive in these same areas

Girls: How does their AD/HD affect them?

Boys: How does their AD/HD affect others?

What Prevents Girls from Being Diagnosed?

- ▶ Dependent upon others for referral
- ▶ Studies show inattentive type harder to recognize
- ▶ Girls work harder to please and compensate for their ADHD



“Take home message”

Good grades and satisfactory teacher reports in school cannot rule out ADHD in girls

How are differences manifested?



- ▶ Symptoms may look different
- ▶ Diagnosed later
- ▶ More self-blame and self-attribution
- ▶ Low self-esteem and demoralization which moves into anxiety and depression

Outcomes of Girls with ADHD Compared to Girls without

When compared to control group, girls with ADHD after 11 years prospective follow-up were at increased risk for the following:

- ▶ 6.8 major depression
- ▶ 2.1 anxiety
- ▶ 3.5 antisocial behavior when compared to control group
- ▶ 2.7 substance use disorders
- ▶ 4.3 eating disorders

Developmental Issues Associated with ADHD

- ▶ **Maturational lags**
- ▶ **Difficulty applying learning to new situations**
- ▶ **Problems in self-monitoring**
- ▶ **Problems with simultaneous events**
- ▶ **Difficulty with transitions**

Puberty with AD/HD

- ▶ Boys' hyperactivity decreases
- ▶ Girls' symptoms typically increase
- ▶ Mood swings, emotional reactivity
- ▶ Addictive behaviors (a greater risk in girls)
- ▶ Increase in anxiety and depression
- ▶ Eating disorders in girls

Need to Rethink ADHD

- ▶ Not as a “behavior disorder”
- ▶ More as a “learning disorder” and “life management” disorder
- ▶ In HA type, much of focus is on behavior management
- ▶ In IA types, we need to focus more on how they are affected by ADHD

How Does ADHD Affect Learning?

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graph BT; SI[Sensory input] --> A[Alertness (sleep issues)]; SI --> V[Visual-spatial]; SI --> E[Emotion anxiety]; SI --> M[Memory]; SI --> L[Language]; SI --> S[Sequencing]; SI --> AT[Attention];
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The diagram illustrates the factors that affect learning in individuals with ADHD. At the bottom, 'Sensory input' and 'Alertness (sleep issues)' are listed. A central vertical arrow points upwards from these factors to a group of cognitive skills: 'Memory', 'Language', 'Sequencing', 'Attention', 'Visual-spatial', and 'Emotion (anxiety)'. From this group, two diagonal arrows point upwards towards the main title, 'How Does ADHD Affect Learning?'.

Memory

Language

Sequencing

Attention

Visual-spatial

Emotion (anxiety)

Sensory input

Alertness (sleep issues)

Attention is linked to:

- ▶ Movement
- ▶ Motivation

- ▶ Inattention symptoms are significant risk factors influencing educational outcome
- ▶ Teacher rating of inattention in grades 1 and 2 → poorest academic performance

- ▶ The famous "**Stroop Effect**" is named after J. Ridley Stroop who discovered this strange phenomenon in the 1930s.
- ▶ Here is your job: Name the colors of the following words. **Do NOT read** the words...rather, **say the color** of the words. For example, for the word **BLUE**, you should say "RED". Say the colors as fast as you can. It is not as easy as you might think!

BLUE

PINK

GREY

TAN

GREEN

RED

BLACK

WHITE

YELLOW

ORANGE

PURPLE

BROWN



The words themselves have a strong influence over your ability to say the color. The interference between the different information (what the words say and the color of the words) your brain receives causes a problem. There are two theories that may explain the Stroop effect:

- ▶ Speed of Processing Theory: the interference occurs because words are read faster than colors are named.
- ▶ Selective Attention Theory: the interference occurs because naming colors requires more attention than reading words.

IN THE CLASSROOM:

- ▶ Messiness, disorganization
- ▶ Often doesn't finish assignments
- ▶ Off-course when called upon by teacher
- ▶ More frequent teacher solicitations
- ▶ Poor test performance when compared to in-class work
- ▶ Frequently forgets homework or assignments and turns them in late

Classroom, cont'd.

- ▶ Withdrawn in class
- ▶ Somatic complaints, frequent absences
- ▶ Disheveled appearance
- ▶ Often loses personal items
- ▶ Trouble following multi-step directions
- ▶ Careless errors
- ▶ Problems with mechanics of writing

Question and Answer Session

