



Inattentive AD/HD in the DSM-5®: Finding Consensus or Igniting Debate?

Kevin T. Blake, Ph. D., P.L.C.

Tucson, Arizona

Cross Country Education

Brentwood, Tennessee

In the effort to comply with the appropriate boards/associations, I declare that I do have affiliations with or financial interest in a commercial organization that could pose a conflict of interest with my presentation.

Inattentive AD/HD in the DSM-5®: Finding Consensus or Igniting Debate?

Kevin T. Blake, Ph.D., P.L.C.

owns shares in the following companies:

Amgen, Inc.

Johnson & Johnson, Inc.

Cross Country Education
Leading the Way in Professional Development.
www.CrossCountryEducation.com

**“DSM[®], DSM-IV-TR[®], and DSM-5[®]
are registered trademarks of the
American Psychiatric Association.
The American Psychiatric
Association is not affiliated with nor
endorses this webinar.”**

DSM-5®

- **DSM-5® became available in May 2013**
- **Writing began in 2007**
- **It is not a cutting edge manual for Specific Learning Disorder, AD/HD and ASD**

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)®. Washington, DC: American Psychiatric Association.

Author (2010). DSM-5® Development. Washington, DC: American Psychiatric Association; www.dsm5.org/Pages/Default.aspx

Author (May 1, 2012). An Attention Deficit/Hyperactivity Disorder-Rationale: Rationale for Changes in ADHD in DSM-5® From the ADHD and Disruptive Behavior Disorders Workgroup. From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

The Four Types of AD/HD in DSM-IV, TR®

- **Attention-Deficit/Hyperactivity Disorder, Combined Type**
- **Attention-Deficit/Hyperactivity Disorder, Predominately Inattentive Type**
- **Attention-Deficit/Hyperactivity Disorder, Predominately Hyperactive/Impulsive Type**
- **Attention-Deficit/Hyperactivity Disorder, Not Otherwise Specified**

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision®. Washington, DC: American Psychiatric Association.

SCT and DSM-5®

Adams, Z.W., Milich, R., and Fillmore, M.T. (June, 2010). A Case for the Return of Attention-Deficit Disorder in DSM-5. ADHD Report, 18 (3), pp. 1-6.

DSM-5® AD/HD from 2010 Through May 1, 2012

- **Attention-Deficit/Hyperactivity Disorder:**
 - **Combined Presentation**
 - **Predominately Inattentive Presentation**
 - **Predominately Hyperactive/Impulsive Presentation**
 - **Inattentive Presentation (Restrictive)**
 - **Other Specified Attention-Deficit Hyperactivity Disorder**

DSM-5® AD/HD From 2010 Through May 1, 2012

➤ **Age**

➤ **Symptom**

➤ **Inattentive Presentation (Restrictive)**

Author (2010). Attention-Deficit/Hyperactivity Disorder®. Washington, DC: American Psychiatric Association: <http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=383>.

Author (May 3, 2012). DSM-5® Development, Attention Deficit/Hyperactivity Disorder, Rationale. Washington, DC: American Psychiatric Association; From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>

DSM-5®

❖ **Attention-Deficit/Hyperactivity Disorder**

- **Combined Presentation**
- **Predominately Inattentive Presentation**
- **Predominately Hyperactive/Impulsive Presentation**

DSM-5®

➤ **Age**

➤ **Symptom**

DSM-5®

❖ Other Specified Attention-Deficit/Hyperactivity Disorder

DSM-5®

❖ **Unspecified Attention-Deficit/Hyperactivity**

❖ **This may be the best diagnosis for Restrictive Inattentive AD/HD (AKA) Sluggish Cognitive Tempo (SCT)**

DSM-5®

➤ **Severity**

Reference

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)®. Washington, DC: American Psychiatric Association, 59-60.

ASD And AD/HD

DSM-5[®] says that Autism Spectrum Disorders can be comorbid with AD/HD however most will have the *restrictive* Inattentive/Sluggish Cognitive Tempo type.

Author (May 3, 2012). DSM-5 Development, Attention Deficit/Hyperactivity Disorder, Rationale[®]. Washington, DC: American Psychiatric Association; From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)[®]. Washington, DC: American Psychiatric Association, 50-66.

Goldstein, S., and Naglieri, J.A. (August, 2011). Neurocognitive and Behavioral Characteristics of Children with ADHD and Autism: New Data and Strategies. The ADHD Report, 19(4), 10-12,16.

And now the *INSIDE* Story of the DSM-IV, & AD/HD

“Don’t forget DSM-IV® was voted on in a hotel room in New York City.” (Ratey, 1996)

Ratey, J. (1996). ADD and Other Brain Based Disorders. Paper presented at the International Conference of the Orton Dyslexia Society, Boston, MA.

And now the *INSIDE* Story of the DSM-IV®, TR & AD/HD

- **The DSM-IV® field trial included 4 to 16 year olds, primarily males.**
- **Until two week prior to going to press there were 24 symptoms of AD/HD in the DSM-IV®.**
- **The field trial study was completed after DSM-IV® was printed.**

Ratey, J. (1996). ADD and Other Brain Based Disorders. Paper presented at the International Conference of the Orton Dyslexia Society, Boston, MA.

And now the *INSIDE* Story of the DSM-IV®, & AD/HD

- **DSM-IV® is not based on research done on AD/HD adults or females.**
- **The *Sluggish Cognitive Tempo* items were not included.**
- **The symptoms prior to the age of 7 criteria was an arbitrary number not established by science.**

Ratey, J. (1996). ADD and Other Brain Based Disorders. Paper presented at the International Conference of the Orton Dyslexia Society, Boston, MA.

Mild Combined Type vs. Inattentive Type/SCT

30% to 50% of those with Inattentive AD/HD have the Sluggish Cognitive Tempo (SCT) subtype. The remainder are Shadow Syndrome (Mild) Combined Type.

Barkley, R.A. (2002) Mental and Medical Outcomes of AD/HD. Pre-Conference Institute, # TPA1, Thursday October 17, 2002, 14th Annual CHADD International Conference, Miami Beach, FL.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 37.

ASD And AD/HD

DSM-5[®] says that Autism Spectrum Disorders can be comorbid with AD/HD however most will have the *restrictive* Inattentive/Sluggish Cognitive Tempo type.

Author (May 3, 2012). DSM-5 Development, Attention Deficit/Hyperactivity Disorder, Rationale.
Washington, DC: American Psychiatric Association; From website:
<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5).
Washington, DC: American Psychiatric Association, 50-66.

Goldstein, S., and Naglieri, J.A. (August, 2011). Neurocognitive and Behavioral Characteristics of Children with ADHD and Autism: New Data and Strategies. The ADHD Report, 19(4), 10-12,16.

AD/HD and Autism Spectrum Disorders (ASD)

- **26% of children with PDD-NOS, or ASD have comorbid Combined Type AD/HD**
- **33% of children with PDD-NOS, or ASD have comorbid Inattentive AD/HD**
- **59% of Children with PDD-NOS, or ASD have some type of AD/HD**

Goldstein, S. and Naglieri, J.A. (August, 2011). Neurocognitive and Behavioral Characteristics of Children with ADHD and Autism: New Data and Strategies. The ADHD Report, 19(4), 10-12,16.

AD/HD & DSM-5®

In DSM-5® there is one type of Attention-Deficit/Hyperactivity Disorder and it is be Attention-Deficit/Hyperactivity Disorder, Combined Type. Since DSM-IV was published in 1994, longitudinal studies have found Attention-Deficit/Hyperactivity Disorder/Impulsive Type is the early manifestation of Combined Type AD/HD...

AD/HD & DSM-5®

... in preschool and early grade school. As the child ages and his/her frontal lobe develops, they gain more control of their hyperactive motor movements and begin to appear as what was called (in DSM-IV® and DSM-IV, TR®) Combined Type. This process continues until their late 20's/early 30's when their frontal lobes are fully developed. By that time they appear to be the *Inattentive Type*...

AD/HD & DSM-5

...when their current adult behavior is compared to their preschool behavior. Remember, when you diagnose someone with AD/HD, you compare them to their non-AD/HD age peers.

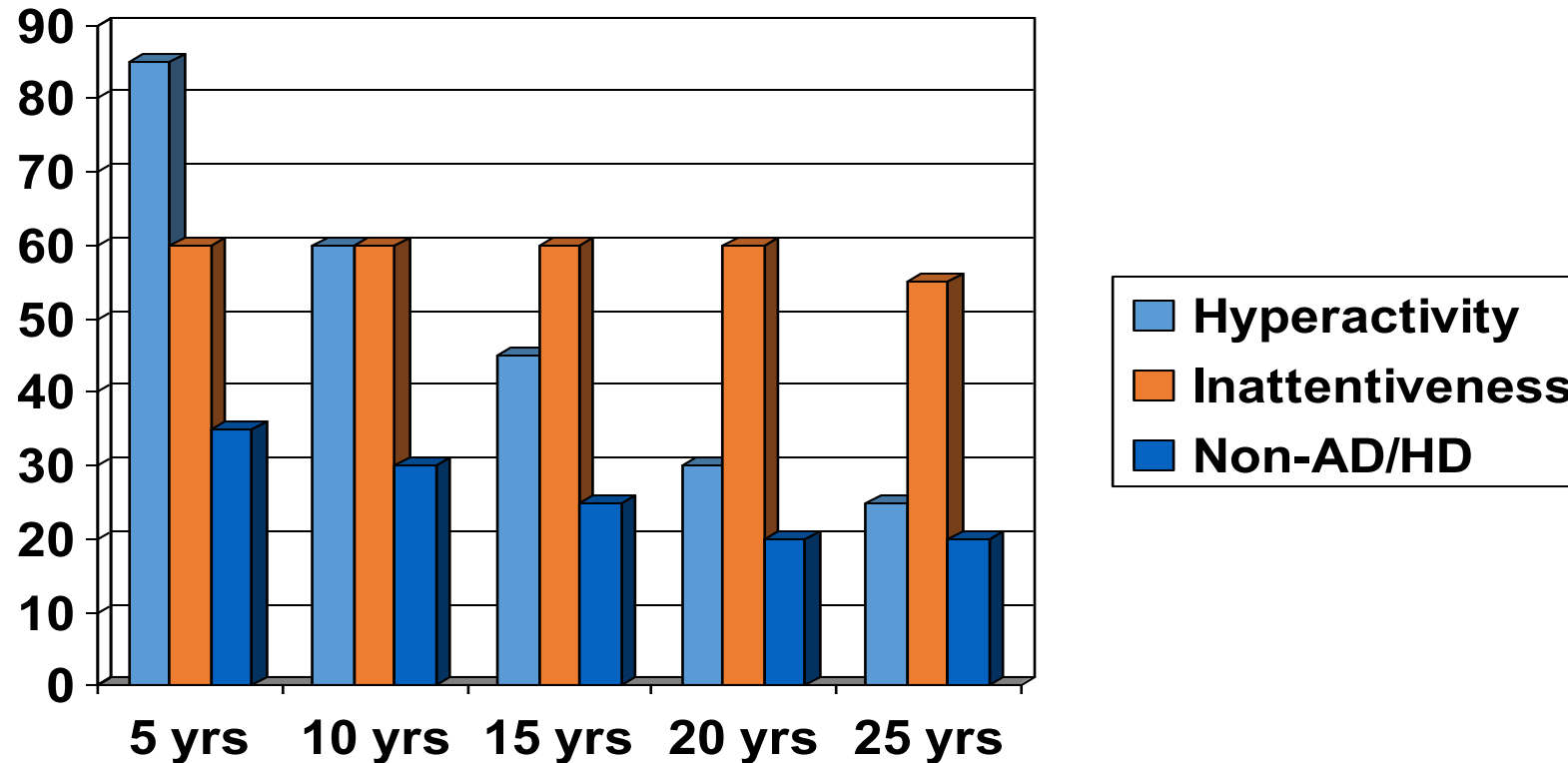
Swanson, J., Hinshaw, S., Hechtman, L. and Barkley, R. (November 9, 2012). Research Symposium 1: Montreal Study; Milwaukee Study; Berkeley Girls ADHD Longitudinal Study (BGALS). Symposium presented at the 24th Annual CHADD International Conference, November 8-10, 2012, Burlingame, CA.

Brown

Brown called those who met DSM criteria for Hyperactive-Impulsive Type or Combined Type in Childhood, but only met criteria for Inattentive Type in Adulthood, 'CROSSOVERS'.

Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), A Comprehensive Guide to Attention-Deficit Disorder in Adults. New York: Bruner/Mazel, pp. 93-108.

Longitudinal Studies of AD/HD



Barkley, R.A., Murphy, K.R., & Fischer, M. (2008). ADHD in Adults: What The Science Says. New York, NY: Guilford.

Weiss, G. and Hechtman, L. (1993). Hyperactive Children Grown Up. New York, NY: Guilford.

Barkley on Hyperactive/Impulsive ADHD

“The HI-Type (Hyperactive/Impulsive Type ADHD, sic.) is apparently a milder or earlier stage of the C-Type (Combined Type ADHD, sic.), most commonly Identified in preschool age children” (p. 1).

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Attention-Deficit/Hyperactivity Disorder, Predominately Hyperactive-Impulsive Type

- **Tzelepis stated she has only seen Combined Type adults in her work and doubts the Predominately Hyperactive-Impulsive Type exists in adults.**

Tzelepis, A. and Mapou, R. (1997, May). Assessment. Paper presented at the Pre-Conference Professional ADD Institute of the 3rd Annual National ADDA Adult ADD Conference, St. Louis, MO.

- **Barkley, Murphy and Fischer make similar observations.**

Barkley, R.A., Murphy, K.R., & Fischer, M. (2008). ADHD in Adults: What The Science Says. New York, NY: Guilford, p. 37-38.

Changes in AD/HD Subtypes Over Time

“We found two hyperactivity-impulsivity trajectories (low, high/decreasing) and two inattention trajectories (low, high/increasing). Twin modeling revealed a substantial genetic component underlying both the hyperactivity-impulsivity and the inattention trajectory. Joint trajectory analyses identified four groups of adolescents with distinct developmental patterns of hyperactivity-impulsivity and inattention: a low/low group, a primarily hyperactive, a primarily inattentive and a combined (high/high) trajectory type...”

Changes in AD/HD Subtypes Over Time

“... These trajectory combinations showed discriminant relations to adjustment problems in early adulthood. The hyperactive, inattentive and combined trajectory subtypes were associated with higher rates of family risk environments compared to the low/low group.” (p. 254)

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Inattentive AD/HD?

What about Attention-Deficit/Hyperactivity Disorder, Inattentive Type? It is a separate and distinct disorder behaviorally, neurobiologically and genetically from AD/HD. It is not included in the DSM-5[®]. In research it may be referred to as AD/HD, Inattentive (Restrictive) Presentation, or Sluggish Cognitive Tempo.

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Resources

- **Author (2010). Attention-Deficit/Hyperactivity Disorder. Washington, DC: American Psychiatric Association®:**
<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383>.
- **Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.**

CHADD Conference November, 2012

Barkley (November 9, 2012) stated the ADHD and Disruptive Behavior Disorders Workgroup of the DSM-5[®] had decided in October 2012 not to include Attention-Deficit/Hyperactivity Disorder, Inattentive Presentation (Restrictive) in the manual's revision. He also mentioned the committee would probably not have adult norms and cutoffs for AD/HD...

CHADD Conference 2012

Barkley (November 9, 2012) continued that the DSM-5[®] committees had been told by a large group of health insurance companies, the Administration, the Department of Health, Education and Welfare as well as the Social Security Administration not to add new disorders or do anything that would increase the prevalence of disorders. Hence, the decisions of the previous slide.

CHADD Conference, 2012

At the end of Barkley's SCT seminar there was a lively discussion about what to call SCT. Focused Attention Disorder (FAD) was suggested. But people did not like the acronym FAD, implying the disorder is a passing fad. Sluggish Cognitive Tempo, Developmental Concentration Disorder, Atypical AD/HD, Pathological Mind Wandering among others were considered, but none of these were thought to convey the true nature of the disorder and/or to be pejorative. Hence, they did not arrive at a name.

CHADD Conference, 2012

Barkley, R. A. (November 9, 2012) The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment, and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Author (May 1, 2012) Attention Deficit/Hyperactivity Disorder- Rationale: Rationale for Changes in ADHD in DSM-5[®] From the ADHD and Disruptive Behavior Disorders Workgroup. From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.

Mild Combined Type vs. Inattentive Type/SCT

30% to 50% of those with Inattentive AD/HD have the Sluggish Cognitive Tempo (SCT) subtype. The remainder are Shadow Syndrome (Mild) Combined Type.

Barkley, R.A. (2002) Mental and Medical Outcomes of AD/HD. Pre-Conference Institute, # TPA1, Thursday October 17, 2002, 14th Annual CHADD International Conference, Miami Beach, FL.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 37.

Attention-Deficit/Hyperactivity Disorder, Predominately Inattentive Type

Brown believes the Inattentive Type has all the symptoms of the Combined Type except Hyperactivity-Impulsivity.

Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), Attention-Deficit Disorder in Adults. New York, NY: Bruner/Mazel, 93-108.

Brown, T. E. (2013). A New Understanding of ADHD in Children, Adolescents and Adults: Executive Function Impairments. New York, NY: Routledge, 25.

Inattentive AD/HD

Brown believes the following are the areas of difficulty in the Inattentive Type:

- 1. Difficulty organizing and activating for work**
- 2. Problems sustaining attention and concentration**
- 3. Problems sustaining energy and effort**
- 4. Problems managing affective interference**
- 5. Problems utilizing working memory and accessing recall**

Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), Attention-Deficit Disorder in Adults. New York, NY: Bruner/Mazel, 93-108.

Brown, T. E. (2013). A New Understanding of ADHD in Children, Adolescents and Adults: Executive Function Impairments. New York, NY: Routledge.

Inattentive AD/HD

Brown continued the only difference between Inattentive AD/HD and Combined Type AD/HD was *ACTION*. Those with Combined Type AD/HD have significant impairment with ACTION, which is being able to predict with reasonable accuracy how their personal actions could negatively effect others and how that could come back to haunt them in the future. They have, as Barkley calls, time blindness. Those with Inattentive AD/HD do not have time blindness.

Brown, T.E. (1995). Differential Diagnosis of ADD Versus ADHD in Adults. In K.G. Nadeau (Ed.), Attention-Deficit Disorder in Adults. New York, NY: Bruner/Mazel, 93-108.

Brown, T. E. (2013). A New Understanding of ADHD in Children, Adolescents and Adults: Executive Function Impairments. New York, NY: Routledge.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford.

Inattentive Type AD/HD = “Focused/Selective Attention Disorder?”

- **Barkley wrote that this should be called *Focused* or *Selective Attention Disorder*.**

Barkley, R.A. (1998B). Attention Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.

- **Willcutt, Chhabildas, and Pennington Stated that Inattentives significantly slower processing speed than do those without AD/HD or those with the Combined Type.**

Willcutt, E.G., Chhabildas, N. ,and Pennington, B.F. (2001). Validity of the DSM-IV Subtypes of ADHD.ADHD Report,, 9 (1), pp. 2-5.

Sluggish Cognitive Tempo

- **Willcutt, Chhabildas, and Pennington said that those with the Inattentive Type have: “Sluggish Cognitive Tempo”**
- **“Sluggish Cognitive Tempo” (SCT) :
Hypoactive, Slow to Respond, Easily Confused**

Willcutt, E.G., Chhabildas, N. ,and Pennington, B.F. (2001). Validity of the DSM-IV Subtypes of ADHD. ADHD Report, 9 (1), pp. 2-5.

Sluggish Cognitive Tempo

McBurnett wrote Inattentive AD/HD is, “...characterized by slow retrieval and information processing, low levels of alertness, and mild problems with memory and orientation. These features of inconsistent alertness and orientation (sluggishness, drowsiness, apparent daydreaming) were statistically extracted as a distinct factor termed ‘sluggish cognitive tempo’ (SCT) “...The sluggish cognitive tempo factor was found to be associated with the inattention factor, but only when hyperactivity was not present” (p. 6).

McBurnett, K. (2001). Sluggish Cognitive Tempo: Left Behind on the way to DSM-IV. ADHD Report, 9 (10), pp. 6-7.

Barkley's 2013 SCT Symptoms

- Daydreaming excessively
- Trouble staying alert or awake in boring situations
- Easily confused
- Spacey or *in a fog*; mind seems to be elsewhere
- Stares a lot
- Lethargic, more tired than others
- Underactive or have less energy than others
- Slow moving or sluggish
- Doesn't seem to understand or process information as quickly or accurately as others

Barkley's 2013 SCT Symptoms

- **Apathetic or withdrawn; less engaged in activities**
- **Gets lost in thought**
- **Slow to complete tasks; needs more time than others**
- **Lacks initiative to complete work or effort fades quickly**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Willcutt, Chhabildas and Pennington's Sluggish Cognitive Tempo Symptoms

- **More problems with math achievement than Combined Type and controls.**
- **More Internalizing Problems than Combined Type/Few, if any Externalizing Problems**
- **Significant Processing Speed Problems**

Willcutt, E.G., Chhabildas, N. and Pennington, B.F. (2001). Validity of the DSM-IV® Subtypes of ADHD. ADHD Report, 9 (1), pp. 2-5.

Processing Speed: SCT Vs. ADHD

- **The processing speed difficulties for those with SCT is related to slow response time and processing. They are prone to error on speeded tasks.**
- **The processing speed difficulties for those with AD/HD is related to variability in reaction time which is 3 times more than those without AD/HD.**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

The Two Dimensions of SCT

- **Sluggishness/Lethargy**
- **Daydreaming**
 - **These are correlated to each other .40 to .50**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment, and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Sluggish Cognitive Tempo

“Study 1 results supported the factor structure of the BAARS-IV, with the optimal model comprising 4 correlated but distinct factors: SCT, Inattention, Hyperactivity, and Impulsivity. After controlling for correlated demographic variables and ADHD symptoms, SCT was significantly related to academic impairment (including grade point average), anxiety, and depression. In Study 2, SCT again contributed unique variance to internalizing symptoms and academic impairment after controlling for correlated participant characteristics (i.e., sex, age, race, parent education level, family income, ADHD medication use, and mental health service utilization) and ADHD symptom severity...”

Sluggish Cognitive Tempo

“These results fill an important gap in the literature by (a) confirming SCT to be distinct from ADHD in emerging adulthood, (b) demonstrating SCT to be strongly linked to college student adjustment, and (c) providing support for the hypothesis that SCT is associated with psychosocial functioning in both individuals with and without ADHD”.

Becker, S.P., et al. (September 24, 2013). Sluggish Cognitive Tempo is Associated With Academic Functioning and Internalizing Symptoms in College Students With and Without Attention-Deficit/Hyperactivity Disorder. Journal of Clinical Psychology. DOI: 10.1002/jclp.22046.

SCT Age of Onset

The average age of onset for SCT is 8 to 10 years old. Two to 3 years older than those with AD/HD.

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD– Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Barkley On Gender Ratio

➤ **SCT is as common in males as in females.**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment, and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Barkley On Prevalence

- **Symptoms and severity are stable throughout life.**
Prevalence in children 4.7%; in adults 5.1%

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment, and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Barkley On SCT

Adults with SCT have symptoms distinctly different from those with Combined Type ADHD. This has been demonstrated with children as well. These differences were not caused by the subject's age, sex or ethnicity

- **46% of those with SCT did not have any type of ADHD**
- **54% of those with SCT did not have symptoms of ADHD**

Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance online publication. DOI: 10.1037/a0023961.

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Barkley On SCT

SCT and ADHD (All types) are separate and distinct disorders but can be comorbid:

- **68% of Inattentive ADHD had comorbid SCT**
- **10% of Hyperactive/Impulsive ADHD had SCT**
- **65% of Combined Type ADHD had SCT**

Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance online publication. DOI: 10.1037/a0023961.

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Barkley On SCT

- **49% of those with SCT had Inattentive ADHD**
- **8% of those with SCT had Hyperactive/Impulsive ADHD**
- **43% of those with SCT had Combined Type ADHD**

Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance online publication. DOI: 10.1037/a0023961.

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Barkley On SCT

- Those with SCT and comorbid ADHD were the most impaired. Their group had the most unemployment.
- Some believe Inattentive ADHD is a mild form of Combined Type ADHD.
- SCT may be a separate and distinct type of disorder from the Inattentive Type ADHD.
- SCT may be comorbid with Inattentive ADHD.

Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance online publication. DOI: 10.1037/a0023961.

Barkley, R.A. (October, 2011). Sluggish Cognitive Tempo Is a Distinct Disorder from ADHD in Adults. The ADHD Report, 19(5), 1-6.

Executive Function and SCT

- **Barkley (2012) found those with SCT have no problems with Executive Functions whereas those with AD/HD have it in all areas.**
- **The only area of impairment SCT children have that is more severe than those with AD/HD is in sports. AD/HD children are more impaired in all other areas.**
- **Those with ADHD and comorbid SCT are the most impaired overall.**
- **About 50% with AD/HD have comorbid SCT.**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD—Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Major Depression and AD/HD

Hynd indicated 4% of those with Inattentive AD/HD will meet criteria for Major Depression.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA, November 16.

Generalized Anxiety Disorder

Roffman wrote, “Adults with LD/ADHD often experience pressure as they work to cope with their symptoms. Anxiety develops out of such day-to-day occurrences as the loss of yet another set of keys...” (p. 49).

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

Brown indicated anxiety is a common symptom experienced by adults with Inattentive AD/HD.

Brown, T.E. (1996). Brown Attention-Deficit Disorder Scales. San Antonio, TX. The Psychological Corporation.

Avoidant Disorder

Hynd indicated 4% of those with Inattentive AD/HD will meet criteria for Avoidant Disorder.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA November 16.

AD/HD and Learning Disorders

- **Barkley stated 35% to 50% of adults with AD/HD have Specific Learning Disorder.**
- **Hynd reported that 60% of those with Inattentive AD/HD have Specific Learning Disorder.**
- **AD/HD is not a Specific Learning Disorder. In DSM-5® AD/HD is a Neurodevelopmental Disorder.**

Barkley, R.A. (1996). ADHD in Children, Adolescents, and Adults: Diagnosis, Assessment, and Treatment. Cape Cod Symposia, August, Pittsfield, MA.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA, November 16.

Author (May 18, 2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Washington, DC: American Psychiatric Association, 67-69.

AD/HD and Learning Disorders

Hynd indicated of those with Inattentive AD/HD:

- **21% have Reading Disorder**
- **33% have Mathematics Disorder**
- **4% have Spelling/Disorder of Written Expression**

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA, November 16.

Inattentive ADHD and Dyslexia

- **“Using an unselected general population sample, we confirmed previous reports that reading difficulties show higher phenotypic and genetic correlations with ADHD inattention symptoms, compared to hyperactivity-impulsivity symptoms”.**
- **There maybe a disrupted neurocognitive process specific to cases with inattentive ADHD and cormorbid reading disorder.**

Paloyelis, Y., Rijdsdijk, F., Wood, A.C., Asherson, P., and Kuntsi, J. (2010). The Genetic Association Between ADHD Symptoms and Reading Difficulties: The Role of Inattentivenss and IQ. Journal of Abnormal Child Psychology 38 (8), 1083-1095.

Inattentive AD/HD and LD

➤ Inattentive AD/HD is often confused with LD.

Barkley, R.A. (1998). ADHD In Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment, New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

➤ Inattentive Type MAY be related to Central Auditory Processing Disorder (CAPD)

Barkley, R.A. (2002B). ADHD and Oppositional Defiant Children. Seminar presented, February 19-20, Phoenix, AZ.

AD/HD and Central Auditory Processing Disorder

- **What appears to be comorbid CAPD in those with AD/HD may be a problem with inhibition and subsequent distraction leading to uncertainty of what was heard.**
- **There may only be a symptom overlap with CAPD.**

Author (February, 2003). Performance of ADHD Children on Auditory Tasks Related to Behavioral Inhibition, Not CAPD. ADHD Report, 11, p. 11/ Summary of: Brier,J.I., et. al. (2002). Dissociation of Sensitivity and Response Bias in Children with Attention Deficit/Hyperactivity Disorder During Central Auditory Masking. Neurology, 16, pp. 28-34.

CAPD Defined

“Central auditory processing disorders (CAPDs) are breakdowns in the brain’s ability to use auditory information sent to it from the peripheral auditory system (e.g., outer, inner, middle ears and the auditory nerve). The central auditory processes identified to date broadly fall into one of three types: auditory discrimination, binaural processing, and temporal processing. Substantial research has indicated that a deficit in any of the central auditory processes can co-exist with or be a significant contributing factor to other functional deficits including learning disabilities, speech-language impairment, attention deficit, or developmental disabilities”.

Reference

Ferre, J.M. (February 2014). Auditory Processing and Common Core. Baltimore, MD: International Dyslexia Association. From website:

http://www.interdys.org/DC_Jan14_Auditory%20Processing.htm.

Executive Function and SCT

- **Barkley (2012) found those with SCT have no problems with Executive Functions whereas those with AD/HD have it in all areas.**
- **The only area of impairment SCT children have that is more severe than those with AD/HD is in sports. AD/HD children are more impaired in all other areas.**
- **Those with ADHD and comorbid SCT are the most impaired overall.**
- **About 50% with AD/HD have comorbid SCT**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Adults with SCT & Impairment

- **Adults with SCT are more significantly impaired in the following areas than are those with AD/HD and the non-disabled:**
 - **Work**
 - **Education**
 - **Sexual behavior**

Barkley, R. A. (2011, May 23). Distinguishing Sluggish Cognitive Tempo From Attention-Deficit/Hyperactivity Disorder in Adults. Journal of Abnormal Psychology. Advance. online publication. doi: 10.1037/a0023961.

Brown, Inattentive AD/HD & Executive Function

Brown believes those with inattentive AD/HD have problems with executive function those with AD/HD have without the problems with Action (Time Blindness).

Brown, T. E. (2013). A New Understanding of ADHD in Children, Adolescents and Adults: Executive Function Impairments. New York, NY: Routledge.

Validity of SCT Diagnosis

“Generally, items representing slowness and low initiative failed these criteria. SCT factors (termed Daydreaming, Working Memory Problems, and Sleepy/Tired) showed good convergent and discriminant validity in EFA and in a confirmatory model with ADHD factors. Simultaneous regressions of impairment and comorbidity on SCT and ADHD factors found that Daydreams was associated with global impairment, and Sleepy/Tired was associated with organizational problems and depression ratings, across both informants. For teachers, Daydreams also predicted ODD (inversely); Sleepy/Tired also predicted poor academic behavior, low social skills, and problem social behavior; and Working Memory Problems predicted organizational problems and anxiety. When depression, rather than ADHD, was included among the predictors, the only SCT-related associations rendered insignificant were the teacher-reported associations of Daydreams with ODD; Working Memory Problems with anxiety, and Sleepy/Tired with poor social skills. SCT appears to be meaningfully associated with impairment, even when controlling for depression. Common behaviors resembling Working Memory problems may represent a previously undescribed factor of SCT” (p. 37).

Reference

McBurnett, K., et al. (January, 2014). Structure and Validity of Sluggish Cognitive Tempo Using an Expanded Item Pool in Children with Attention-Deficit/Hyperactivity Disorder. Journal of Abnormal Child Psychology, 42(1), 37-48. DOI: 10.1007/s10802-013-9801-5.

SCT Factors

“Inattention was the strongest correlate of lower scores on neuropsychological, achievement, and psychosocial measures. Externalizing problems were most strongly associated with hyperactivity-impulsivity, and internalizing problems were most strongly associated with parent-rated SCT and teacher-rated Inattention. SCT was not associated with executive function but was negatively associated with math. Inattention accounted for a disproportionate amount of ADHD-related impairment, which may explain the restricted discriminant validity of DSM-IV types. The distinct factors of hyperactivity-impulsivity and SCT had unique associations with impairing comorbidities and are roughly equivalent in predicting external correlates of ADHD-related impairment” (p. 683).

Reference

Bauermeister, J.J., et al. (July 2012). Validity of the Sluggish Cognitive Tempo, Inattention, and Hyperactivity Symptom Dimensions: Neuropsychological and Psychosocial Correlates. Journal of Abnormal Child Psychology, 40(5), 683-697. DOI: 10.1007/s10802-011-9602-7

The Genetics of the Inattentive Type

- **Brown believed it is a genetically separate and distinct disorder form the Combined Type, but changed his mind about this recently.**

Brown, T. E. (1997). Impairments of Memory In ADD and Learning Disorders. Paper presented at the 3rd Annual National ADDA Adult ADD Conference, St. Louis, Mo.

Brown, T. E. (2013). A New Understanding of ADHD in Children, Adolescents and Adults: Executive Function Impairments. New York, NY: Routledge, 25.

- **Barkley has believed SCT is a separate and distinct disorder from AD/HD for some time .**

Barkley, R. A. (1998A). ADHD In Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Barkley, R.A. (January, 2014). Sluggish Cognitive Tempo (Concentration Deficit Disorder?): Current Status, Future Directions, and a Plea to Change the Name. Journal of Abnormal Child Psychology, 42(1), 117-125. DOI: 10.1007/s10802-013-9824-y.

Possible Etiology of SCT

Barkley said the Inattentive Type involves the posterior cortex, especially the parietal-occipital-thalamus complex. Abnormal evoked potentials have been found in the initial phase, but not the P-300 like in the Combined Type. BEAM scans suggest the anterior lobes.

Barkley, R.A. (1998). ADHD in Children, Adolescents, and Adults: Diagnosis, Assessment, and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Possible Etiology of SCT

ADHD, Combined Type..., “may be a problem in the functional level of prefrontal-limbic pathways, particularly the striatum...whereas ADHD-PI (SCT, sic.) may involve more posterior associative cortical areas and/or cortical-subcortical feedback loops, perhaps including the hippocampal system” (p. 204).

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 204

Possible Etiology of SCT

AD/HD appears to involve the neurotransmitter dopamine and SCT appears to involve norepinephrine. Epinephrine urine excretion may be significantly correlated with inattention in SCT children.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 204.

Possible Etiology of SCT

- **It may be caused by anomalies in the attentional area at the rear of the brain**
- **Or, it may be caused by brain differences in the brain stem.**

Barkley, R.A. (2012). The Other Attention Disorder: Sluggish Cognitive Tempo Vs. ADHD. Seminar presented to the Medical School at the University of South Carolina. From website: http://www.youtube.com/watch?v=IR_rohjoCG4.

Possible Etiology of SCT

“Lab studies suggest that children with SCT may manifest significantly more errors with information processing, set shifting, focused attention, and possibly memory retrieval that are not evident in ADHD-C” (sic., ADHD, Combined Type) (p. 80).

Barkley, R.A., (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 80.

Possible Etiology of SCT

“These findings intimate that children with ADHD-PI (sic., SCT) may have more of a problem with memory, perceptual-motor speed, or even central cognitive processing speed, whereas children with ADHD-C (sic., Combined Type) manifest more problems with behavioral disinhibition and poor attention to tasks, in addition to their over activity.” (p. 203)

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder. New York, NY: Guilford, p. 203.

Joel Nigg on the Inattentive Type

- Those with Inattentive ADHD have more problems with response inhibition than controls, but less than those with Combined Type ADHD.
- Those with Inattentive ADHD have an abnormal attentional blink that indicates they have a neurologically different frontal-parietal system than those with Combined Type ADHD.
- However, ADHD subtypes are unstable over time and this applies somewhat to the Inattentive Type.

Nigg, J. (November 11, 2010). Mechanisms and Causes of ADHD. Paper presented at the 22nd Annual CHADD International Conference, Atlanta, GA, November 11-13, Session TA-1.

Nigg, J., et al (November 11, 2010). Through The Looking Glass: Gaze Into The Future of DSM-5®. Paper presented at 22nd Annual CHADD International Conference, Atlanta, GA November 11-13, Session TB-1.

CHADD Conference, Martha Denckla, and Sluggish Cognitive Tempo

- **During the question and answers portion of her keynote address I asked Dr. Denckla for her insights into SCT.**
- **She said she believes SCT exists and it is a form of extremely slow processing that is often found to be associated with AD/HD. These people have extremely slow response times. They are starting to perform electrophysiology studies of SCT because fMRI is too slow.**

Denckla, M.B. (November 10, 2012). Closing Keynote: Understanding the Neurobiological Basis of ADHD: 25 Years of Innovation in Research. Paper presented at the 24th Annual CHADD international Conference, Burlingame, CA; November 8-10, 2012.

Causes of SCT

- **Currently the causes of SCT are not known. However, we do know:**
 - **SCT is more common in children with low SES parents who have less education and lower levels of employment.**
 - **SCT may be caused in some children who have been treated for childhood leukemia. It is due to the chemotherapy and radiation, not the leukemia.**

Causes of SCT

In some SCT may be related to Fetal Alcohol Effects/Syndrome

“Alcohol-exposed children exhibited elevated SCT scores. Elevations were related to increased parent ratings of internalizing and externalizing behaviors and attention. These findings are observed in alcohol-exposed children regardless of ADHD symptoms and specific SCT items proved useful in distinguishing exposed children, suggesting clinical utility for this measure in further defining the neurobehavioral profile related to prenatal alcohol exposure.”

Graham, D.M., Crocker, N., Deweese, B.N., Roesch, S.C., Coles, C.D., Kable, J.A., May, P.A., Kalberg, W.O., Sowell, E.R., Jones, K.L., Riley, E.P. and Mattson, S.N. (July 20, 2011). Prenatal Alcohol Exposure, Attention-Deficit/Hyperactivity Disorder and Sluggish Cognitive Tempo. Alcoholism, Clinical and Experimental Research. doi: 10.1111/j.1530-0277.2012.01886.x.

Causes of SCT

- **SCT may be a form of hypoarousal almost like narcolepsy.**
- **It may be a dysfunction of the orientation-action attention network at the back of the brain.**
- **It may be related to an anxiety disorder. Anxiety Disorders are highly comorbid with SCT.**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD—Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

SCT and Anxiety

Tzelepis (Tzelepis and Maypou, 1997) stated that Inattentive AD/HD may in reality be an anxiety disorder. She observed there was an extraordinarily high rate of anxiety disorders among those with Inattentive AD/HD.

Tzelepis, A., and Mapou, R. (May, 1997). Assessment. Paper presented at the Pre-Conference Professional ADD Institute of the 3rd Annual National ADDA Adult ADD Conference, St. Louis, MO.

Causes of SCT

**SCT may be related to Pathological Mind Wandering.
The following may be the cause of the mind wandering:**

- **They cannot inhibit their mind from wandering.**
- **They are trying to avoid boredom.**
- **They are trying to avoid anxiety.**
- **They have some obsessive component of Obsessive Compulsive Disorder.**

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD—Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Barkley's Explanation of Pathological Mind Wandering

“Mind-wandering is a normally occurring feature of human cognition in which an individual may be performing some routine and simple primary task that requires little effortful processing freeing up executive functioning capacity and other higher –level cognitive abilities to engage in some secondary task or goal, such as thinking about one’s upcoming workday schedule while driving...”

Barkley's Explanation of Pathological Mind Wandering

“...However, when such mind-wandering interferes with performance of a primary task, as when a person driving to work misses the turn into their parking lot, and this kind of circumstance occurs frequently to produce significant impairment then it can be considered pathological” (p. 3).

Barkley, R.A. (November 2013). A Plea to Rename Sluggish Cognitive Tempo (SCT) as Concentration Deficit Disorder (CDD). The ADHD Report, 21(7), 1-4.

Inattentive AD/HD Rating Scales

- **Barkley, R.A. (February, 2011). Barkley Adult ADHD Rating Scales IV, (BAARS-IV). New York, NY: Guilford.**
- **Barkley, R.A. (February, 2011). Barkley Functional Impairment Scale, (BFIS). New York, NY: Guilford.**
- **Barkley, R.A., Murphy, K.R. (2005). Attention-Deficit Hyperactivity Disorder: A Clinical Workbook, Third Edition. New York, NY: Guilford.**

Inattentive AD/HD Rating Scales

- **Brown, T.E. (1996). Brown Attention-Deficit Disorder Scales (for Adults). San Antonio, TX: PsychCorp.**
- **Brown, T.E. (2001). Brown Attention-Deficit Disorder Scales (for Children and Adolescents). San Antonio, TX: PsychCorp.**
- **Brown, T.E. (1996,2001): Brown ADD Diagnostic Forms (Children, Adolescents and Adults). San Antonio, TX: PsychCorp.**

Inattentive AD/HD Rating Scales

- **Conners, C.K. (2008). Conners Comprehensive Behavior Rating Scales. North Tonawanda, NY: MHS.**
- **Conners', C.K. (1998). Conner's Adult ADHD Rating Scales (CAARS). North Tonawanda, NY: MHS.**
- **Penny, A.M., Waschbusch, D.A., Klien, R.M. Corkum, P., Eskes, G. (2009). Developing a Measure of Sluggish Cognitive Tempo for Children: Content Validity, Factor Structure, and Reliability. Psychological Assessment, 21 (3), 380-389.**

Barkley stated:

Those who diagnose AD/HD should have training in the differential diagnosis of Mental Disorders and in AD/HD using either the DSM and/or ICD format(s).

Barkley, R.A. (1998). ADHD in children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

THE THREE MOST IMPORTANT THINGS IN DIAGNOSING SCT:

➤ ***HISTORY***

➤ ***HISTORY***

➤ ***HISTORY***

**Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment.
New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.**

Get Extensive Information From Collaterals

- **Parents**
- **Significant Others/Spouses**
- **Employers**
- **Teachers/Professors**
- **Friends**

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Diagnosing SCT

- **Have them complete information relating to client's past and present history and behavior using:**
 - **Checklists**
 - **Questionnaires**
 - **Semi-structured Interview**

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Diagnosing SCT

- **Review Teacher's Comments on Past Report Cards**
- **Review Past Reports of Evaluations**
- **Contact Past Mental and Medical Health Professionals Who Worked with Client**

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Diagnosing SCT

- **Client Completes Questionnaires, and checklists about past and present history and behavior**
- **Client completes Inventory(s) to Screen Mental Health Status (i.e., SCL-90R, MMPI-2, etc.)**

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Diagnosing SCT

Client and at least one collateral participates in a semi-structured interview with mental health professional.

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Barkley On Collaterals

“Nevertheless, the combined results of these studies suggest that agreement between self-reported information and that given by others about ADHD may increase with age and be of acceptable levels especially by the early 30s. Such information should not be trusted as reliable (agreeing with others), however, in those with ADHD in their teens and early 20s” (p. 127).

Barkley, R.A., Murphy, K.R. and Fischer, M. (2008). ADHD In Adults: What The Science Says. New York, NY: Guilford.

Medical Screening

During a physical examination, a physician should rule out:

- **Thyroid Disorder**
- **Lead poisoning**
- **Anemia**
- **Hearing and Vision Problems**

Barkley, R.A. (1995). Taking Charge of ADHD. New York, NY: Guilford, 122.

Diagnosing SCT & Feigned Disability

Conners, et.al. suggested administering the Pauhus Deception Scales to control against socially desirable responding by client to questionnaires, checklists, and semi-structured interview items.

Conners, C.K., et. al. (1999). Conners' Adult ADHD Rating Scales (Technical Manual). North Tonawonda, NY: Multi-Health Systems.

Diagnosing SCT & Feigned Disability

Robert Mapou recommended:

- **Word Memory Test (WMT)-**
www.wordmemorytest.com/
- **Test of Memory Malinger (TOMM)—**
<http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8070-836&Mode=summary>

Mapou, R. L. (2009). Adult Learning Disabilities and ADHD: Research Informed Assessment. New York, NY: Oxford University Press.

Diagnosing SCT In Teens and Adults

- Wilens, Spencer and Biederman wrote, “Because alcohol and drug-use disorders are frequently encountered in adults with ADHD, a careful history of substance abuse should be completed.” (p. 170)
- Barkley suggested a drug screening urine test if medications are to be used.

Wilens, T.E., Spencer, T.J., and Biederman, J. (1995). Pharmacotherapy of Attention-Deficit/Hyperactivity Disorder. In K. Nadeau (Ed.), A Comprehensive Guide to Attention Deficit Disorder in Adults. New York, NY: Bruner/Mazel, pp. 168-188.)

Barkley, R.A. (1998). AD/HD in Children, Adolescents, and Adults: Diagnosis, Assessment and Treatment. New England Educational Institute, Cape Cod Symposium, August, Pittsfield, MA.

Medication and Inattentive AD/HD

- **Only about 20% of those with Inattentive AD/HD respond to Stimulant Medication.**
- **Those with Sluggish Cognitive Tempo probably do not respond.**

Barkley, R.A. (2002) Mental and Medical Outcomes of AD/HD. Pre-Conference Institute, # TPA1, Thursday October 17, 2002, 14th Annual CHADD International Conference, Miami Beach, FL.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 202.

Ramsay, R. (2010). Nonmedication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press, p. 15.

AD/HD Response Rate to Stimulant Titration

“If methylphenidate (sic., ritalin) is not effective or if there are side effects then the next alternative is dextroamphetamine (sic., dexedrine)...If the diagnosis has been appropriately made, the response rate is about 80% to 96%.”

Mahoney, W. (2002). The Use of Stimulant Medication in the Treatment of Attention Deficit Hyperactivity Disorder. Pediatrics & Child Health, 7 (10), pp. 693-696; From website: www.ncbi.nlm.nih.gov/pmc/articles/PMC2796531.

Medication and Sluggish Cognitive Tempo AD/HD

- **Strattera (Atomoxetine):**
 - **Selective Norepinephrine Reuptake Inhibitor**
 - **Good for depression & anxiety too**
 - **Schedule II: Not Controlled – Call in Scripts**
 - **Side Effects: insomnia, nausea, dry mouth, constipation, dizziness, decreased appetite, urinary difficulty, erectile disturbance, decreased libido, slight increase in blood pressure and pulse, liver problems (rare)**

Author (2004). Managing Medication for Adults with AD/HD. National Resource Center on AD/HD (A Program of CHADD), p. 1-12; From Website: www.helpforadhd.org/documents/wwk10.pdf.

Medications and Sluggish Cognitive Tempo AD/HD

- Provigil (Modafinil)
 - Will be marketed as “*Sparlon*” as an AD/HD medication
 - Significantly reduces inattention, hyperactivity and impulsivity in home and school, no withdrawal rebound
 - Few side effects: Insomnia (28%), Headache (22%), Decreased Appetite (18%), Abdominal Pain; Insomnia and Appetite problems decrease with time
 - Low abuse potential/Not a controlled substance- Schedule IV Medication
 - May increase right frontal lobe wakefulness, alerting and executive functioning

Medication and Sluggish Cognitive Tempo AD/HD

- The FDA recently rejected approving Modafinil as an AD/HD medication.

Author (February/March, 2006) Two New Medications Promise Greater Convenience, Smaller Potential for Abuse. ADDitude, 6 (4), p. 11.

www.fda.gov/ohrms/dockets/ac/06/briefing/2006-4212b1-01-09-fda-tab9.pdf

Mechcatie, E. (September, 2006). FDA Cites Stephens-Johnson in Modafinil. ADHD Rejection. Clinical Psychiatry News, 1-2. From website: www.findarticles.com/p/articles/mi_hb4345/is_9_34/ai_n29293254/

Author (2007). Modafinil (marketed as Provigil): Serious Skin Reactions. FDA Drug Safety Newsletter, 1(1). From website: <http://www.fda.gov/Drugs/DrugSafety/DrugSafetyNewsletter/ucm115974.htm>

Biederman, J., Swanson, J., Wigal, S.B., Kratochvil, C.J., Boellner, S.W., Earl, C.Q., Jiang, J. and Geenhill, L. (December, 2005). Efficacy and Safety of Modafinil Film-Coated Tablets In Children and Adolescents with Attention-Deficit/Hyperactivity Disorder: Results of a Randomized, Double-Blind, Placebo-Controlled Flexible-Dose Study. Pediatrics, 116 (6), pp. e-777-e-784; From Website: <http://pediatrics.aappublications.org/cgi/content/full/116/6/e777> .

Modafinil Side Effects

“Headache, nausea, nervousness, anxiety, dizziness, and difficulty sleeping may occur. If any of these effects persist or worsen, notify your doctor or pharmacist promptly.”

From website:

<http://www.rxlist.com/provigil-drug/consumer-side-effects-precautions.htm>

“A very serious allergic reaction to this drug is rare. However, stop taking this medication and seek immediate medical attention if you notice any of the following symptoms of a serious allergic reaction: rash, itching/swelling (especially of the face/tongue/throat), skin blisters/peeling, severe dizziness, trouble breathing.”

(Stephens Johnson Syndrome)

Barkley On SCT

- SCT children are more likely to have Mathematics Disorder/Dyscalculia.
- SCT children are passive, shy and withdrawn socially and not socially rejected.
- They appear to have deficits in social skills.
- SCT children do not respond to stimulants.
- SCT = Processing Problem/Selective Attention
- SCT finish school work...accuracy problem

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder, Third Edition. New York, NY: Guilford, p. 202.

Barkley, R.A. (2008). Advances in ADHD: Theory, Diagnosis and Management. J & K Seminars, L.L.C., 1861 Wickersham Lane, Lancaster, PA 17603; 800-801-5415; www.jkseminars.com.

New Treatments for SCT

“Behavioral psychosocial treatment, when specifically adapted for ADHD-I and coordinated among parents, teachers and children, appears efficacious in reducing symptoms and impairment associated with ADHD-I.” (p. 1041)

Pfiffner, L.J., Mikami, A.Y., Huang-Pollock, C., Easterlin, B., Zalecki, C. and MCBurnett, K. (August, 2007). A Randomized Controlled Trial of Integrated Home-School Behavioral Treatment for ADHD, Predominately Inattentive Type. Journal of the American Academy of Child and Adolescent Psychiatry, 46(8), 1041-1050. From website: [http://www.jaacap.com/article/S0890-8567\(09\)61554-9/abstract](http://www.jaacap.com/article/S0890-8567(09)61554-9/abstract).

Accommodating SCT in School

- Behavioral interventions that focus on noncompetitive external rewards for meeting specific goals.
- Extended time to address slow processing speed.
- Social skills training in groups without conduct disordered kids. SCT kids benefit from social training.
- About 60 % have comorbid SLD. Treat comorbidities.

Barkley, R.A. (2006). Attention-Deficit Hyperactivity Disorder. New York, NY: Guilford, p. 552.

Barkley, R.A. (2008). Advances in ADHD: Theory, Diagnosis and Management. J & K Seminars, L.L.C., 1861 Withersham Lane, Lancaster, PA 17603; 800-801-5415; www.jkseminars.com.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GA, November 16.

Accommodating SCT in School

SCT children experience significantly more anxiety than children with other types of ADHD. They may respond better to behavioral treatments that focus on reducing their anxiety.

Ramsay, R. (2010). Non-medication Treatments for Adult ADHD. Washington, DC: American Psychological Association Press, p. 15.

In Reality...

Barkley said we don't know much about the Inattentive type because there has only been a handful of studies of it.

Barkley, R. A. (2002). Mental Health Outcomes of AD/HD. Pre-Conference Institute, 14th Annual CHADD International Conference, October 17, 2002, Miami Beach, FL.

SCT is NOT new!



Alexander Crichton may have written about what we call SCT in 1798!

Crichton, A. (2008). An inquiry into the nature and origin of mental derangement: On attention and its diseases. Journal of Attention Disorders, 12, 200-204 (Original work published 1798).

Barkley, R. A. (November 9, 2012). The Other Attention Disorder: Sluggish Cognitive Tempo (ADD/SCT) Vs. ADHD— Impairment and Management. Paper presented at the 24th Annual CHADD International Conference on ADHD, Burlingame, CA, November 8 – 10, 2012.

Crichton Syndrome

I wrote Barkley on Monday (November 12, 2012) and suggested the name, “Crichton Syndrome” for SCT. The name does not suggest the cause, because we currently do not know it, it gives Andrew Crichton credit for first observing it and it demonstrates how long we have known about it. In addition it is not pejorative and by using the word syndrome it indicates we don’t know much about it, but it merits more study.

Crichton Syndrome

Barkley (November 13, 2012) responded he liked the name and would re-examine Crichton's work to make absolutely sure he merits credit for the "discovery." So stay tuned Sluggish Cognitive Tempo MAY become "Crichton Syndrome."

Barkley & “Concentration Deficit Disorder”

“Symptoms of sluggish cognitive tempo (SCT) have been recognized for nearly 30 years as comprising a semi-independent set(s) of symptoms from the inattentive (IN) and hyperactive-impulsive (HI) symptoms involved in attention-deficit/hyperactivity disorder (ADHD). It has only been within the past decade that research focusing specifically on SCT symptoms and on samples of SCT cases chosen independently from ADHD samples has increased so as to address the question of whether SCT is a distinct condition from ADHD or other disorders. All but two of these studies have focused on children but the two extant large scale studies on adults have replicated those findings. This Commentary highlights not only those findings concerning SCT that appear to be relatively robust, but also those patterns that appear to be emerging yet in need of further research to corroborate their association with SCT, as well as those barely or unexplored areas that may deserve more research...”

Barkley & “Concentration Deficit Disorder

“...Evidence to date, including the many findings in this special issue, is nearing a critical mass that likely supports the conclusion that SCT is a distinct disorder of attention from ADHD, yet one that may overlap with it in about half of all cases. SCT has unique symptom dimensions and comorbidities from ADHD, probably distinct though lesser domains of impairment and demographic correlates, and perhaps unique cognitive deficits, causes and life course risks. These latter areas, however, are in need of substantially more research as is SCT in adults and treatments specifically designed for cases of SCT. Meanwhile, the name of the condition is premature, implying a known cognitive deficit that is as yet unknown, and is proving derogatory and offensive to patients, leading this author to recommend a change to Concentration Deficit Disorder” (p. 117).

Reference

Barkley, R.A. (January, 2014). Sluggish Cognitive Tempo (Concentration Deficit Disorder?): Current Status, Future Directions, and a Plea to Change the Name. Journal of Abnormal Child Psychology, 42(1), 117-125. DOI: 10.1007/s10802-013-9824-y.

Dr. Blake & Cross Country Education

www.crosscountryeducation.com

❖ **Other Seminars Dr. Blake does for Cross Country Education (6 CEUS, **CDs available***, **Video DVDs available@**):**

- **Social Difficulties of Learning, Attentional and Autism Spectrum Disorders: Screening and Treatment-2013 Edition***
- **Neurosocial Disorders: Creating a Comprehensive Treatment Plan***
- **Assessment and Treatment of Dyslexia in Adolescents and Adults: No Adult Left Behind***
- **Building a Life Skills Tool Kit: Helping Prepare the Adolescent with Autism Spectrum Disorder for Adult Life**
- **Life-changing Interventions for the New AD/HD: Beyond the DSM-5®@**
- **Developmentally Disconnected: Evidence-Based Tools for Transforming Social Competence**

Dr. Blake & Cross Country Education

www.crosscountryeducation.com

❖ Webinars Dr. Blake does for Cross Country Education (1 CEU available):

- **Understanding Inattentive ADHD: Evidence-Based Screening and Treatment Strategies (Recently Updated!)**
- **Everyone is a Stranger: Face Blindness in Children with Autism Spectrum Disorders**
- **“No! I Don’t Want to Give My Child a Drug to Treat Their ADHD”: Complementary and Alternative Treatments for ADHD**
- **Healthy Sexual Development In Those With Autism Spectrum Disorder**
- **Inattentive AD/HD in the DSM-5®: Finding Consensus or Igniting Debate?**
- **Getting Back On Track: Understanding and Treating Executive Function and AD/HD**

Kevin T. Blake, Ph.D., P.L.C.

- ***Dr. Blake's personal story seminar:***
 - **I Pulled an All-Nighter for My High School Graduation and Other Adventures of a Dyslexic, Hearing Impaired Psychologist**
- ***Secondary & Post Secondary Education and Employer Consultation***
- ***Program Development***
- ***Staff Training & Conference Presentations-Learning Disorders, Dyslexia, AD/HD, Autism Spectrum Disorders; Children, Adolescents & Adults***
 - **520-327-7002**
 - **www.drkevintblake.com**