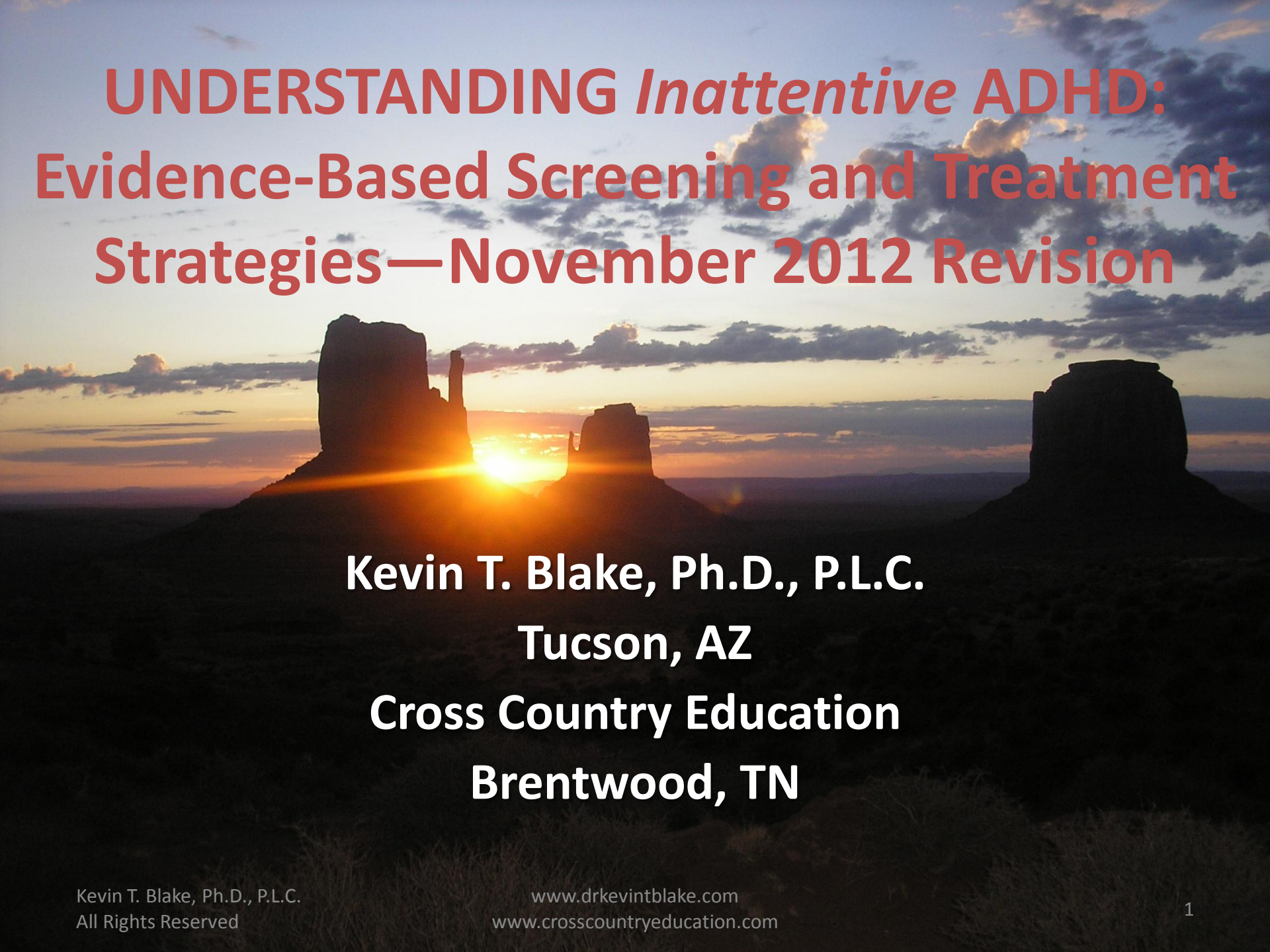
UNDERSTANDING *Inattentive* ADHD: Evidence-Based Screening and Treatment Strategies—November 2012 Revision



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CHADD Conference Last Week

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

CHADD Conference Last Week

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, and 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 Last Week

At the end of Barkley's SCT seminar their was a lively discussion about what to call SCT. These were suggestions of Focused Attention Disorder (FAD). But, people did not like the anachron (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 they were all thought not to convey the true nature of the disorder and/or to be pejorative. Hence, no name was arrived at.

CHADD Conference Last Week

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). A 06 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#.

CHADD Conference, Martha Denckla, and Sluggish Cognitive Tempo

- **During the question and answers portion of her keynote address I asked Dr. Denckla what were 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 do 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.

The Two Dimensions of SCT

- **Sluggishness/Lethergy**
- **Daydreaming**
  - **These are correlated to each other .40 to .50**
- **SCT is as common in males and in females**
- **Symptoms and severity are stable throughout life. Prevalence in children 4.7%; in adults 5.1%**

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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.**

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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.**

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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 that those with AD/HD is in sports. AD/HD children are more impaired in all areas.**
- **Those with ADHD and comorbid SCT are the most impaired overall.**

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Adults with SCT & Impairment

- **The areas of impairment adults with SCT are more significantly impaired that those with AD/HD and the non-disabled are as follows:**
  - **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.

Causes of SCT

- **Currently the causes of SCT are not known. But, following is what is known.**
  - **SCT is more common in children with low SES parents who have less education and lower employment.**
  - **SCT may be caused in some children who have been treated for childhood leukemia. It's the chemotherapy and radiation that cause it, not the leukemia.**

Causes of SCT (Continued)

–SCT appears to be highly heritable.

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Causes of SCT(Continued)

- 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(Continued)

- **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.**

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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(Continued)

- **SCT may be related to Pathological Mind Wandering. They 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 form of Obsessive component of Obsessive Compulsive Disorder**

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Pathological Mind Wandering

"Mind wandering (i.e. engaging in cognitions unrelated to the current demands of the external environment) reflects the cyclic activity of two core processes: the capacity to disengage attention from perception (known as perceptual decoupling) and the ability to take explicit note of the current contents of consciousness (known as meta-awareness). Research on perceptual decoupling demonstrates that mental events that arise without any external precedent (known as stimulus independent thoughts) often interfere with the online processing of sensory information…"

Pathological Mind Wandering (Continued)

"…Findings regarding meta-awareness reveal that the mind is only intermittently aware of engaging in mind wandering. These basic aspects of mind wandering are considered with respect to the activity of the default network, the role of executive processes, the contributions of meta-awareness and the functionality of mind wandering" (p. 319).

Schooler, J.W., Smallwood, J., Christoff, K., Handy, T.C., Reichle, E.D., and Sayette, M.A. (June, 2011). Meta-Awareness, Perceptual Decoupling and The Wandering Mind. Trends In Cognitive Science, 15(7), 319-326. From website: http://www.cell.com/trends/cognitive-sciences//retrieve/pii/S1364661311000878?_returnURL=http://linkinghub.elsevier.com/retrieve/pii/S1364661311000878?showall=true.

Experienced Meditators, Mind Wandering and Neurophysiology

"Many philosophical and contemplative traditions teach that "living in the moment" increases happiness. However, the default mode of humans appears to be that of mind-wandering, which correlates with unhappiness, and with activation in a network of brain areas associated with self-referential processing. We investigated brain activity in experienced meditators and matched meditation-naive controls as they performed several different meditations (Concentration, Loving-Kindness, Choiceless Awareness). We found that the main nodes of the default-mode network (medial prefrontal and posterior cingulate cortices) were relatively deactivated in experienced meditators across all meditation types…"

Experienced Meditators, Mind Wandering and Neurophysiology (Continued)

"…Furthermore, functional connectivity analysis revealed stronger coupling in experienced meditators between the posterior cingulate, dorsal anterior cingulate, and dorsolateral prefrontal cortices (regions previously implicated in self-monitoring and cognitive control), both at baseline and during meditation. Our findings demonstrate differences in the default-mode network that are consistent with decreased mind-wandering. As such, these provide a unique understanding of possible neural mechanisms of meditation" (p. 20254).

Brewer, J.A., Worhunsky, P.D., Gray, J.R., Yi-Yuan, T., Weber, J, and Kober, H. (October, 2011). Meditation Experience is Associated with Differences in Default Mode Network Activity and Connectivity. Precedings of the National Academies of Sciences of the United States of America, 108(50), 20254-20259. From website: http://www.pnas.org/content/108/50/20254.full.

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-Polloock, C., Easterlin, B., Zalecki, C., and MCBurnett, K. (August, 2007). A Randomized Controlled trail 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.

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 "Crichton Syndrome". The name does not suggest the cause, because we currently do not know it, it gives Andrew Crichton credit for first observing it, it demonstrates how long we have known about it, 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".

New Articles on *"Crichton Syndrome"*

Bauermeister, J.J., Barkley, R.A., Bauermeister, J.A., Martinez, J.V., and McBurnett (December 17, 2011-Published online). Validity of the Sluggish Cognitive Tempo, Inattention, and Hyperactivity Symptom Dimensions: Neuropsychological and Psychosocial Correlates. Journal of Abnormal Child Psychology, DOI 10.1007/s10802-011-9602-7.

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.

Russell A. Barkley (October 24, 2012): Distinguishing Sluggish Cognitive Tempo From ADHD in Children and Adolescents: Executive Functioning, Impairment, and Comorbidity, Journal of Clinical Child & Adolescent Psychology, DOI:10.1080/15374416.2012.734259.