



COGMED

Working Memory Training

University of Notre Dame Professor and Research Team are First in U.S. to Validate Breakthrough Study on the Effectiveness of Working Memory Training in Improving Attention Deficits in Children

Results to be presented at the Society for Research in Child Development conference

Boston, Mass., March 30, 2007—Dr. Bradley Gibson, associate professor of psychology at the University of Notre Dame, and his colleagues (Gibson, Seroczynski, Gondoli, Braungart-Rieker, & Grundy, 2007) will share new findings from the first U.S. study on the effectiveness of Cogmed Working Memory Training for improving attention abilities in children with ADHD. The study validates previous research from Sweden's Karolinska Institute which revealed a fundamental breakthrough in the way attention problems are proactively treated. Gibson will unveil the results of the U.S. study during the Society for Research in Child Development (SRCD) bi-annual conference in Boston. Cogmed is a pioneer in neurotechnology and a developer of software-based working memory training products.

In 2006, Gibson and colleagues studied 12 students diagnosed with ADHD who completed the Cogmed Working Memory Training program at the Discovery Middle School in Granger, Indiana. The students used video-game software developed by Cogmed to perform verbal and spatial working memory tasks for approximately 30 minutes every weekday for five weeks. After completing the training program, 75 percent of the students experienced positive improvements in ADHD symptoms.

Gibson's team found significant improvements in both working memory and other executive functions, and significant decreases in inattention. The effects were as large, or larger, than those previously published by Dr. Torkel Klingberg, professor of neuroscience at Sweden's Karolinska Institute, who conducted the original research validating the effectiveness of Cogmed Working Memory Training.

Gibson's new research analysis seeks to explain why symptoms of inattention decrease when working memory is improved. Gibson and his colleagues propose that improvements in attention deficits are mediated by changes in fluid intelligence. Fluid intelligence is the ability to solve problems or adapt to novel situations in real time. According to Gibson and his colleagues, working memory improves fluid intelligence, which then reduces ADHD symptoms.

“The earlier research by Klingberg and his colleagues was important and exciting because it demonstrated that working memory abilities could be enhanced by experience,” said Gibson. “Our present findings extend this earlier work by showing that working memory training can enhance some individuals more than others, and more importantly, by showing that individual differences in working memory enhancement are critical for predicting how much the symptoms of ADHD can be improved. From a theoretical standpoint, the present findings are interesting because they provide an explicit model of how working memory, fluid IQ, and ADHD are dynamically inter-related over time. From a more practical standpoint, these findings are important because they reveal that training affects some individuals more than others. If we can understand why some individuals are better able to maximize the training benefits on working memory, then we can have a better understanding of how to maximize the clinical effectiveness of this intervention for ADHD and potentially other disabilities that arise from weaknesses in executive functioning. The present research is an important step in this direction.”

Gibson is currently rolling out a new study of Cogmed Working Memory Training comprised of 16 children in a treatment group and 16 in a control group. These children have severe attention deficit impairments as well as other psychological complications.

About Cogmed

Cogmed has made a breakthrough discovery that individuals can train and improve their working memory, a key function of the brain that allows individuals to store information for brief periods of time. Cogmed Working Memory Training helps people with attention deficits improve focus, impulse control and complex problem solving. Through a combination of software-based memory exercises and personal coaching, participants engage in a challenging five-week program using an Internet-connected computer at home. More than 80 percent of those who have completed Cogmed’s rigorous and rewarding training have demonstrated dramatic and lasting improvements. Cogmed’s program has been validated by high-impact research in controlled scientific studies at the Karolinska Institute, a world-renowned medical university based in Stockholm, Sweden. A leader in the emerging field of neurotechnology, Cogmed was founded in 2001 and is headquartered in Naperville, Ill. Cogmed’s services are provided by a growing network of more than 20 specialist clinics around the US.

#

Media contact:

John Severance
Sheffield Marketing Partners
630-281-4097
jseverance@sheffieldcompany.com