One Cognitive Training Approach

An Interview with LearningRx

IN THE LAST DECADE, a variety of cognitive training programs have become available for treatment of ADHD symptoms. These programs are completed with a trainer and sometimes supplemented via online platforms. Their focus is often on improving executive functioning and information processing, such as working memory, visual and auditory processing speed, and attention.

Cognitive training programs continue to be controversial because of mixed research results regarding their effectiveness and questions about whether they improve real-life functioning over time. While cognitive training does appear to help some individuals in some ways, it is not yet possible to predict who the programs will help and to what extent.

Still, the idea of cognitive training is a tantalizing one, and enough data is emerging to consider the interventions promising. The following interview with the CEO and the research director at LearningRx profiles one approach to cognitive training.

LearningRx is a franchised program available in dozens of around the United States. It is targeted for children and adults with learning, memory, attention, or reading problems. There is a free online test which is designed to help potential clients identify their needs and connect them with a nearby center where they can find help for their needs. There are a variety of different programs for different needs, but the ThinkRx® program, delivered one-on-one by a cognitive trainer, is their core program. The sessions are ninety minutes long and are typically conducted three to four days per week. The average course lasts twelve to twenty-four weeks.

Meghan Miller, PhD, former contributing editor of *Attention*'s Research Briefs column, interviewed Kim Hanson, CEO of LearningRx, and Amy Moore, PhD, director of the Gibson Institute of Cognitive Research, about their program.

Attention: Tell me about your cognitive training program for ADHD. What cognitive domains does it target?
LearningRx: We do a comprehensive one-on-one training program targeting cognitive skills which is based on the Cattell-Horn-Carroll theory of cognition, and is delivered by a cognitive trainer across the table from the client. The procedures target working memory, long-term memory, visual and auditory processing, processing speed, fluid reasoning, and attention. The tasks are sequenced in order of difficulty and intensity. We use a metronome on almost every task, to increase intensity and to keep clients from taking what we call mental breaks. We also use timers. The tasks themselves are leveled from easiest to hardest, so clients have to complete tasks faster and faster, whether a timer or metronome becomes faster. There's also a very strong social interaction component. Cognitive trainers give dynamic feedback throughout the session—lots of "high fives," lots of encouragement—so that when clients with ADHD get frustrated, a caring trainer can push them through that frustration and keep the intensity of the training program going.

How have you established your program's effectiveness?
The program was created by Dr. Ken Gibson in the 1980s. He did clinical testing comparing this program to others, but since 2015 there have been twelve formal studies conducted, including four randomized controlled trials, with one specifically on ADHD. This study shows increases in confidence, cooperative behaviors, and self-discipline as measured by parents, in addition to increases in cognitive skills. They claim that the convergence of evidence has shown the efficacy of the program.

One of the challenges that has come from the cognitive training literature in ADHD is that it is difficult to effect generalizable change—that is, improvements in specific cognitive domains don't necessarily translate into changes in core ADHD symptoms. How do you tackle this problem?
At LearningRx, we have the clients work in one room, twelve to fifteen at a time, experiencing the distractions of different metronomes and noisy feedback from the trainers walking around the room. The trainers will, at times, provide intentional, deliberate distractions, singing and talking over the voices of the students engaged in the computer tasks. This approach is unique to us and helps to address distraction and cognitive improvement at the same time.

How long do the positive effects last?
We have tested over 500 clients fifteen months after finishing the program, and found 96 to 99 percent retention. We believe that cognitive gains made in the training center are sustained simply by the act of using those gains in the classroom and in life every day.

CHADD's resident expert weighs in
L. Eugene Arnold, MD, MEd, resident expert for CHADD's National Resource Center on ADHD, reviewed the research cited by Hanson and Moore. His conclusions? More research is needed to determine the effectiveness of the program. "Overall, I'd say the treatment looks promising but not proven until there is a randomized trial with a control condition of equal intensity, frequency, and duration involving one-to-one adult supervision and encouragement." ⊘