

Education Research Studies

The HeartMath Institute has dedicated 24 years of scientific research into the study of the physiology of emotions, learning, and performance. This research has identified a specific, scientifically measurable physiological state that underlies resilience, optimal learning and performance. In this state, our emotions are calm and the brain, nervous system, and other bodily systems function with increased synchronization and harmony. In simple terms, we're highly "in sync"—physically, mentally, and emotionally. This in turn, facilitates the higher cognitive processes critical for focused attention, reasoning, and creativity—all essential for effective learning, academic achievement and social success.

All three of the studies (and the programs used in these studies) below have been independently validated by [National Registry of Evidence-Based Programs \(NREPP\)](#).

Coherence Training In Children With Attention-Deficit Hyperactivity Disorder: Cognitive Functions and Behavioural Changes

This randomized controlled clinical trial evaluated the impact of the HeartMath self-regulation skills and coherence training program (Institute of HeartMath, Boulder Creek, California) on a population of 38 children with ADHD in academic year groups 6, 7, and 8. Learning of the skills was supported with heart rhythm coherence monitoring and feedback technology designed to facilitate self-induced shifts in cardiac coherence. The cognitive drug research system was used to assess cognitive functioning as the primary outcome measure. [For a PDF version of the complete paper, click here.](#)

Facilitating Emotional Self-Regulation in Preschool Children: Efficacy of the Early HeartSmarts Program in Promoting Social, Emotional and Cognitive Development

This work reports the results of an evaluation study conducted to assess the efficacy of the EHS program in a pilot implementation of the program carried out during the 2006–2007 academic year in schools of the Salt Lake City School District. The study was conducted using a quasi-experimental longitudinal field research design with three measurement moments (baseline and pre- and post-intervention panels) using *The Creative Curriculum Assessment* (TCCA) instrument, a teacher-scored, 50-item instrument measuring student growth in four areas of development – social/emotional, physical, cognitive and language development. [For a PDF version of the complete paper, click here.](#)

Emotion Self-Regulation, Psychophysiological Coherence, and Test Anxiety: Results from an Experiment Using Electrophysiological Measures

This study investigated the effects of a novel, classroom-based emotion self-regulation program (TestEdge) on measures of test anxiety, socioemotional function, test performance, and heart rate variability (HRV) in high school students. There is suggestive evidence from a matched-pairs analysis that reduced test anxiety and increased psychophysiological coherence appear to be directly associated with improved test performance—a finding consistent with evidence from the larger study. [For a PDF version of the complete paper, click here.](#)