

Impact of HeartMath® Research, Techniques and Technology

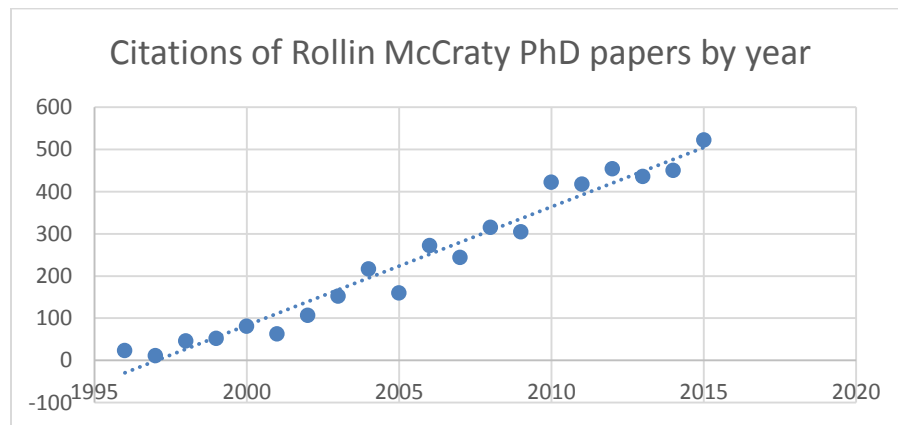
HeartMath techniques and technology are based on a significant body of research and empirical evidence developed over the last 25 years.

HeartMath Institute Research Quality Metrics

The [h-index](#) is a measurement created to describe the scientific productivity and impact of a researcher and their department or organization. Jorge Hirsch, creator of the h-index, states in his [paper on the h-index](#) that an h-index of 20 after 20 years of scientific activity characterizes a successful scientist. An index of 40 is outstanding. The HeartMath Institute's principal investigator is Rollin McCraty, PhD, HMI's director of research. [Dr. McCraty's Google Scholar profile](#) lists 166 publications and patents published over the last 20 years with almost 5100 citations, and an h-index score of 34.

[Scholarmeter](#), a Google Chrome Web browser add-on developed at Indiana University to calculate h-index scores using Google Scholar citations, produces an [hs-index](#) score, which is the h-index normalized by discipline. Dr. McCraty's hs-index scores vary from 1.49 to 1.88 when calculated for several relevant fields of research and his hs-index scores rank at the top 14% to 21% of researchers in those fields. View the Scholarmeter results [here](#).

These h- and hs-index scores and an increasing trend of citations per year are objective testaments to the quality and originality of research from the HeartMath Institute, using standard research analytic measures. A graph from Google Scholar shows the number of citations per year of Dr. McCraty's papers shows a positive trend line over the last 19 years:



Publications by other HeartMath authors have been cited over 800 times [according to Google Scholar](#).

Independent Research

The HeartMath Institute's research is confirmed by many independent research studies. Papers published by independent researchers, most of whom obtained their own funding, are listed on the [clinical and health section of the HeartMath Institute research library](#). Other studies and dissertations done by independent researchers are listed on different sections of the same Web page. [See this Google Scholar Web page](#) that lists over 260 HeartMath-related research papers and dissertations by independent researchers.

Clinical Applications - Empirical Evidence

Research is the foundation for any intervention, but the application in day-to-day practice is the most significant form of validation. Ultimately, it is health professionals who determine whether a particular intervention is successful or not, and tell their colleagues about the outcomes they're seeing. This is how

HeartMath has come to be used by many tens of thousands of doctor-and masters-level health professionals around the world over the past twenty years in a wide variety of physical and mental health modalities.

SAMHSA, the Substance Abuse and Mental Health Services Administration, lists three HeartMath interventions [1](#) [2](#) [3](#) as evidence-based in the National Registry of Evidence-based Programs and Practices (NREPP).

Couples therapy is a significant application for HeartMath, as it's one of the most challenging practice areas due to the powerful emotions that therapists have to address. John and Julia Gottman, renowned couple therapy researchers, developed the Couples Together Against Violence program that uses emWave2® handhelds as an integral part of the intervention. See the [The Empirical Basis of Gottman Couples Therapy](#) document for details and published paper [here](#). More details of the Gottman's use of emWave2 handhelds and HeartMath-focused couples therapy guides are available as a [couples](#) and [therapist](#) guide and in a Gottman webinar [here](#).

Trauma is another very challenging area of practice that requires dedicated health professional specialists to help trauma sufferers clear intense emotional histories. Many trauma therapists incorporate HeartMath techniques and technology in their practice. See the [therapist guide](#) written by Sara Gilman MFT, past president of EMDRIA. Her informative webinar can be found [here](#).

- Steve Sawyer LCSW CSAC talks about how he incorporates HeartMath techniques into his wilderness therapy work with tough client populations that include treatment resistant teens, severe addiction and traumatic stress in his webinar available [here](#).
- Two papers on HeartMath-based trauma interventions are available [here](#) and [here](#).
- Bessel van der Kolk MD has started a formal research study utilizing HeartMath techniques and technology with traumatized children. Watch his webinar [here](#).
- Andrew Leeds, a senior trauma therapist and consultant, discusses his application [here](#).
- Other HeartMath application-focused webinars by clinicians are available [here](#).

Military and veteran applications of HeartMath techniques and technology have increased significantly in recent years. See [HeartMath Institute resources](#) for veterans, service members and their families.

- The [Navy's Family Readiness Toolbox](#) includes HeartMath resources.
- The Washington DC Veterans Administration Medical Center, a trend setter for VA facilities across the country, lists HeartMath/emWave as an approved modality in their [Wellness Provider Validation Master Policy Toolkit](#). [emWave Pro](#) is an [approved technology VA-wide](#).
- Over 75 VA and military medical facilities incorporate HeartMath techniques /emWave technology for emotional self-regulation and resilience building as adjuncts to PTSD, anxiety, depression, anger, and chronic pain treatment. Many VA's distribute emWave2 handhelds to veterans.
- The Red Cross provides significant numbers of emWave2's to patients at Washington DC military medical facilities.
- The [Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury](#) list HeartMath/emWave as intervention in the [Mind-Body Skills for Regulating the Autonomic Nervous System](#) publication.
- [The National Intrepid Center for Excellence](#) incorporates HeartMath/emWave for autonomic control as described in their [patient welcome guide](#).
- Army Wellness Centers have HeartMath® Certified Coach/Mentors in twenty facilities worldwide
- HeartMath Institute provided pre-deployment resilience training and emWave2 handhelds to approximately 5,000 sailors deploying on the highest-risk mission for stress injuries – detainee operations.
- The [Semper Fi Fund](#) will provide any OEF/OIF Marine or Navy veteran a free emWave2 handheld upon request.

We look forward to the publication of more research studies by HeartMath and independent researchers in the future, and to supporting those who have dedicated their lives to helping others.

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