Extended Abstract

THE EFFECT OF HEARTMATH TECHNIQUES ON EMOTIONAL INTELLIGENCE

Sara Ruth Hake & Ann Nunley, Ph.D.

This study examines the effects of HeartMath techniques on emotional intelligence. The HeartMath techniques implemented are Heart Lock-In®, Neutral® and Freeze-Frame®. The dependent measurement is the BarOn Emotional Quotient Inventory, which contains a total EQ scale along with fifteen sub scales. The independent variable is a one day seven hour workshop, titled The Power to Change Performance. The experimental design with control is a pre-test/post-test administered within a six week interval. A 2x2 mixed factorial statistical design yielded statistical significant differences for Total EQ (p = .001), Stress Tolerance (p = .01), Happiness (p = .03). Marginal statistical significance was found for Interpersonal Relationship (p = .08) and Reality Testing (p = .07). In total, ten of the fifteen sub scales showed an increase in measurement. This data strongly indicates that the practice of HeartMath techniques for six weeks increases emotional intelligence.

Background. HeartMath is a concept, a process, and a training modality, which is based upon a technique that accesses your heart's intelligence. This step-by-step technique is also scientifically based as it has foundations of research from the fields of biomedical, psychological and social sciences. It is a process involving emotional wisdom and science. It uses conscious awareness of positive emotions and intuition to create change not only in one's body physiologically, but also emotionally.

The substructure of change experienced after using HeartMath techniques appears to parallel the five composite areas of emotional intelligence found in Reuven Bar-On's, EQ-i, emotional quotient inventory. The five composite areas of emotional intelligence are intrapersonal, interpersonal, adaptability, stress management and general mood. HeartMath is a scientifically based methodology that produces positive change through accessing the heart's intelligence. Part of this change could affect emotional intelligence.

Doc Childre founded the Institute of HeartMath, a nonprofit educational and research organization in 1991. His work is based upon the concept of Heart Intelligence, which he defines as follows: Heart Intelligence is the intelligent flow of awareness and insight that we experience once the mind and emotions are brought into balance

and coherence through a self-initiated, heart-focused process. It underlies cellular organization and guides and evolves organisms toward increased order, awareness and systems coherence.

Design. A quasi, nonequivalent control group experimental design was used to test the hypothesis. The purpose of the design was to examine the relationship HeartMath techniques had on emotional intelligence. The three HeartMath techniques used in this study are called: Heart Lock-In®, Neutral® and Freeze-Frame®.

Participants. A convenience sample of subjects was recruited to participate in this study from Memorial Hospital of South Bend, twenty Churches of various religious affiliations, Notre Dame University and Indiana University. Subjects were required to be a minimum age of twenty and have had no previous training in HeartMath techniques.

Control Group. All classes took place at Memorial Hospital's conference rooms or an office setting. The BarOn EQ-i was then administered in the office or conference room. Six weeks post the originally assigned testing date; participants were directed to an office or a conference room in the Hospital to complete the posttest of the BarOn EQ-i.

Intervention Group. Due to the large number of participants in the intervention group, the training sessions were divided up into 8 sessions. All classes took place at Memorial Hospital's conference rooms or at local Church classrooms. Following completion of the BarOn EQ-i, there was a fifteen-minute break. Upon completion of the break, a five hour training session learning and practicing HeartMath techniques was conducted. The intervention group participants were involved in a seven hour day, including lunch and breaks. The intervention training piece of this study involves teaching a HeartMath copyright and trademark protected program called, The Power to Change Performance: An Inner Quality Management® Program.

In order to test the hypothesis that HeartMath Techniques will increase emotional intelligence scores after a six-week period of time, two statistical measurements are used. A 2 x 2 mixed factorial design was used to measure the within subjects and between subjects variables. All subjects were given the BarOn Emotional Quotient Inventory pre-test and post-test, and these two together serve as a within-subjects factor (test). The participants were also divided into two groups, the experimental group, receiving the HeartMath training and the baseline, control group. After a six-week period of time, both groups received the posttest, which provides analysis for the between-subjects variables. Using the 2 x 2 mixed factorial design, it consists of one within subject

Table I

T-test: Intervention vs. Non-Engaged Intervention

Group	N	Mean	Std. Deviation	Std. Error Mean
EQ Pre intervention	63	97.9683	14.93423	1.88154
intervention non engaged	20	99.6000	14.63377	3.27221
SR Pre intervention	63	95.3016	13.75199	1.73259
intervention non engaged	20	94.4000	22.68410	5.07232
ES Pre intervention	63	100.0952	16.58285	2.08924
intervention non engaged	20	102.9500	16.99683	3.80061
AS Pre intervention	63	95.4444	15.45418	1.94704
intervention non engaged	20	94.4500	15.50713	3.46750
IN Pre intervention	63	98.3810	14.80456	1.86520
intervention non engaged	20	97.4500	15.73623	3.51873
SA Pre intervention	63	99.9683	16.87427	2.12596
intervention non engaged	20	95.5000	20.67162	4.62231
EM Pre intervention	63	104.3810	15.67660	1.97507
intervention non engaged	20	105.4500	10.09677	2.25771
RE Pre intervention	63	103.0000	12.42137	1.56494
intervention non engaged	20	109.4000	8.53106	1.90760
IR Pre intervention	63	99.0952	16.59354	2.09059
intervention non engaged	20	97.0000	14.31231	3.20033
ST Pre intervention	63	96.6984	12.69574	1.59951
intervention non engaged	20	97.5000	11.94064	2.67001
IC Pre intervention	63	102.6032	12.95842	1.63261
intervention non engaged	20	104.7500	10.17673	2.27559
RT Pre intervention	63	100.7619	12.26418	1.54514
intervention non engaged	20	102.3000	11.70290	2.61685
FL Pre intervention	63	93.7619	16.75027	2.11034
intervention non engaged	20	105.2000	14.15924	3.16610
PS Pre intervention	63	100.3651	14.51840	1.82915
intervention non engaged	20	102.9500	13.34748	2.98459
OP Pre intervention	63	99.3492	14.44362	1.81972
intervention non engaged	20	98.8500	16.10909	3.60210
HA Pre intervention	63	95.7937	18.33484	2.30997
intervention non engaged	20	97.7500	15.75428	3.52276

Calculations. Table I represents the intervention group only. It shows t-tests evaluating the differences on the pre-test between those participants that practiced HeartMath techniques and those who did not practice any HeartMath technique during the six week study. Thirteen of the fifteen scales there exists no statistical significance. However, two scales of Social Responsibility and Flexibility do show significantly higher scores on the pre-test for those who did not practice HeartMath techniques.

variable (test), with two levels (pre and post), and one between subjects variable (HeartMath techniques). This design compares the post-test mean for the experimental group with the post-test mean for the control group. This design also compares the pre to post changes in the experimental group with the pre to post changes in the control group to provide the statistical significance for within subjects.

A second statistical design, the t-test was used to evaluate the differences between the segregated intervention group. The intervention group provided further analysis after completion of the study when data compilation revealed that twenty of the eighty-three participants did not practice any HeartMath techniques during the six-week study. A t-test was used to note a statistical difference on the average scores of one or more variables between the two groups. With both statistical tests used, an alpha value of $p \leq .05$ was used to determine if the test results were significant.

Results. The results of this study supports the hypothesis that using the HeartMath Techniques of Heart Lock-In®, Neutral® and Freeze-Frame® does increase emotional intelligence scores. Total emotional intelligence scores had a statistical correlation of $p = .001$. The fifteen subscales to the BarOn Emotional Quotient Inventory Scale showed that in the intervention group, ten out of fifteen subscales increased in their mean values from pre to posttest. Two of these scales showed statistical significance while two more showed marginal statistical significance.

Secondary Analysis. Four EQ subscales and the total EQ scores, all demonstrated a statistical correlation. As noted above, some of the test subjects in the intervention group did not perform all of the intervention techniques. Because of this, the 2 x 2 Mixed Factorial Design calculations were only performed using data from those subjects that actually participated in that method of intervention.

• • •

CORRESPONDENCE: Sara Hake • sarahake@comcast.net

∞ ∞ ∞