THE JOURNAL OF ALTERNATIVE AND COMPLEMENTARY MEDICINE
Volume 11, Number 1, 2005, pp. 93–101

Human Biofield and Intention Detection: Individual Differences

LONNIE A. NELSON, Ph.D.,[1] and GARY E. SCHWARTZ, Ph.D.[1–5]

ABSTRACT

Objective: To evaluate a battery of biofield awareness tasks that address bioelectromagnetic and consciousness related mechanisms of action, and examine individual differences in integrative biofield awareness (IBA).

Methods: Six (6) biofield awareness tasks were designed: 2 involved the experimenter placing his or her hands near the subject, 2 involved intense staring with associated eye movements approximately 3′ from the subject, and 2 involved gentle intention with virtually no movement. Each task required a binary response from the subject. There were 10 trials per task for a total of 60 trials; blocks of 6 trials contained one of each task. Subjects were 165 undergraduate psychology students at the University of Arizona Tucson, AZ. Subjects were also assessed on their awareness of their own biofields, and they filled out various questionnaires, including estimates of how well they thought they would do and their openness to spiritual beliefs and experiences.

Results: Percent IBA accuracy for the entire sample ($n = 165$) was $57.7 \pm 10.3\%$ and was significantly above chance (50%) performance ($t = 9.58$, $p < 0.0000001$). Each of the 6 tasks was individually significant. Subjects significantly ($t = -2.72$; $p < 0.007$) underestimated their IBA performance below chance (mean, $46.1 \pm 18.4\%$). However, higher estimates predicted higher IBA ($r = 0.26$, $n = 164$, $p < 0.0008$). Measures of subjects' self-awareness of their own biofields, as well as belief in, and experience of, extrasensory perception (ESP) also predicted higher IBA.

Conclusions: The findings support claims of energy healers that biofield awareness can be modulated both bioelectromagnetically (locally) and via conscious intent (distally), and that individual differences in biofield awareness are related to self-awareness and sensitivity to others.

INTRODUCTION

A fundamental claim of energy healers (also termed bioenergy healers and biofield healers) is that they can sense the biofields of their patients with their hands. However, there has been little systematic basic science research investigating this claim.

Part of the reason for the paucity of research was the publication in the *Journal of the American Medical Association* of a highly visible negative set of findings (Rosa et al., 1998). The experimenter was a female child; the study was her science fair project. Her coauthors were senior members of an organization extremely critical of complementary and alternative medicine (CAM). The authors reported that 21 practitioners of Therapeutic Touch (TT) could not identify above chance which of their hands was closest to the child's hand (44% of 280 trials); Actually, performance was statistically below chance.

Rosa et al. (1998) concluded from their findings that experienced TT practitioners were unable to detect the child's energy field and that their failure to substantiate TT's "most fundamental claim" is "unrefuted evidence that the claims of TT are groundless and that further professional use is unjustified." The findings were interpreted by the media, including *The New York Times*, as unrefuted evidence that biofield therapies were groundless and unjustified.

However, Rosa et al. (1998) failed to cite 2 previously published studies that predated their research (Schwartz et

[1]Department of Psychology, [2]Psychiatry, [3]Medicine, [4]Surgery and [5]Neurology, University of Arizona, Tucson, AZ.

al., 1995, 1999), using completely counterbalanced designs, with 300% more subjects, 240% more trials per subject, 523% more trials total, and 22 different experimenters (who were unbiased with regard to CAM). Schwartz et al., 1995 reported that blindfolded college students could, significantly identify above chance which of their hands was closest to the experimenters hand (66% of 1464 trials, $p <$ 0.00001, compared to Rosa et al's 44% of only 280 trials).

Schwartz et al. (1995) concluded that these 2 studies provided empirical evidence for "implicit performance and perception" of "interpersonal hand-energy registration" as well as "an empirical and conceptual foundation" for viewing some of the claims of TT and related biofield therapies.

Evidence for significant implicit performance and perception using 3 different biofield detection tasks was subsequently replicated in 3 additional rigorously controlled, within-subject, counterbalanced experiments using a total of 102 subjects and 102 different experimenters (Schwartz and Russek, 1999). In one task, the experimenters placed their hands a few inches behind the occipital region of the head versus the small of the back, and subjects guessed head or back. In two comparison tasks, the experimenters simply stared at the subject's head or back, or closed their eyes and imagined seeing the subject's head or back. The average percent accuracies for the 3 tasks, across the 3 experiments, were 58.6%, 55%, and 56.9% respectively.

Schwartz and colleagues (1995) have observed substantial individual differences in biofield awareness performance. A minority of subjects score below chance (40–45% biofield awareness accuracy), the majority score above chance (55–60% biofield awareness accuracy), and approximately 15% perform well above chance (70–80% biofield awareness accuracy). Schwartz and Russek (1999) found that a number of items on the Openness to Spiritual Beliefs and Experiences Scale (OSBES) correlated significantly with biofield awareness accuracy.

To explore basic mechanisms of biofield awareness and relate it to individual differences in biotherapy effectiveness, it is necessary to create a protocol for measuring biofield awareness accuracy. The purpose of the present research was to (1) develop and evaluate an integrative battery of biofield awareness tasks; (2) examine individual differences in integrative biofield awareness performance, including gender; (3) compare expectations of IBA performance with actual IBA performance; (4) determine if IBA performance is related to awareness of one's own biofields; and (5) explore correlations of the OSBES with IBA.

MATERIALS AND METHODS

Study 1: exploratory

Study 1 involved 43 undergraduates from the University of Arizona who were enrolled in the course Psychology of Religion and Spirituality (Psych 357) in the Fall semester of 2002. These students each recruited a friend to participate in the study, for a total of 86 subjects. Each of the students served the role of both experimenter and respondent. There were a total of 52 females and 34 males, ranging in age from 18 to 70 years.

Study 2: confirmatory

Study 2 was essentially a confirmatory replication of study 1. It involved 27 undergraduates from the University of Arizona who were enrolled in the course Advanced Health Psychology (Psych 456) in the spring semester of 2003. These students each recruited 1 or 2 friends to participate in the study, for a total of 80 subjects. Each of the students served the role of both experimenter and respondent. There were a total of 51 females and 29 males, ranging in age from 16 to 55 years.

Integrative biofield awareness battery

The Integrative Biofield Awareness Battery (IBAB) consists of 2 sections. In the first section, subjects are asked to estimate what they think their performance will be on each of 6 energy detection tasks described below (from 0% to 100% accuracy), plus a general question inquiring, on a scale of 0–10, how "energy sensitive" the respondents consider themselves to be.

The second section of the IBAB is a set of behavioral tasks in which the blindfolded respondent undergoes 10 trials of energy detection in each of the 6 modalities inquired about in the self-report section. The term "integrative" is used because the battery combines tasks that presumably involve local bioelectromagnetics (i.e., primarily tasks 1 and 3, where the experimenter's hands are only a few inches from the subject's body), with tasks that are more distal and "intentional" in emphasis (i.e., tasks 2, 4, 5, and especially 6). The six tasks were:

1. Hand Detection, in which the respondent must indicate whether the experimenter is holding her or his hand over the respondent's left or right hand (distance of 6–8 inches).
2. Face/Stomach Discrimination, in which the respondent is asked to detect whether the experimenter is *focusing* on the respondent's face or abdomen (from a distance of 3 feet).
3. Ear Detection, in which the respondent is asked to detect which ear the experimenter is holding his or her hand near (distance of 6–8 inches).
4. Staring Sensing, in which the respondent is asked to discriminate whether the experimenter is staring at the respondent's back or not (from a distance of 3′).
5. Head/Back Discrimination, in which the respondent is asked to discriminate whether the experimenter is *focusing* on the back of the respondent's head, or the small of the respondent's back (from a distance of 3 feet).

6. Movement Anticipation Sensing, in which the respondent (with blindfold removed) is asked to look at the experimenter, who is *focusing* on one of her or his own hands with her or his eyes closed, and determine which hand the experimenter is *focusing* on (from a distance of 3 feet).

The instructions are provided in Appendix A.

As stated previously, the respondent is administered 10 trials of each of the 6 tasks. Only at the end of the administration is any information on accuracy given to the respondent (i.e., there is no feedback on accuracy given on each trial). The ordering of the "correct" answer for each block of 6 trials (1 trial per type of task) was generated via the randomization website www.randomizer.org to ensure the absence of any pattern to the "correct" responses that could potentially explain any eventual findings. The resulting randomized order was used by all experimenters.

Biofield self-awareness test

Each subject completed 2 energy self-awareness exercises to assess the degree to which they were sensitive to their own biofields. The first exercise had subjects point the index finger of their dominant hand toward the palm of their nondominant hand at a distance of approximately 3 inches. They slowly moved the index finger of their dominant hand in a circle in the air in front of their nondominant palm for 30 seconds. The second exercise had subjects place their hands palms facing each other in front of them and slowly move their dominant hand above and around the top and bottom of their nondominant hand, finally replacing it directly in front of the nondominant hand. Following each exercise, subjects made ratings of the intensity with which they felt each of 4 sensations during the exercises. The sensations were tingling, heat, resistance, and pressure. Ratings were made on a scale of 0 (no sensation) to 10 (very intense sensation).

Openness to Spiritual Beliefs and Experiences Scale (OSBES)

The OSBES consists of 12 items inquiring about various religious and spiritual beliefs and experiences (Schwartz and Russek, 1999). The average Cronbach α is 0.85. Its split half reliability is 0.80. Items on the OSBES were found to correlate with biofield awareness tasks that involved biofield and intention properties. The scale is available from the authors.

Statistical analyses

All statistics were performed using Statistica for Windows Statsoft, Tulsa, OK). Depending upon the specific questions addressed, means, standard deviations, single sample *t* tests, correlations, factor analysis, Chronbach αs, and mixed between and within group analyses of variance were performed. Values are presented to 2 decimal places.

RESULTS

IBAB—study 1

Table 1 displays the means ± standard deviations (SD) for the subjective estimates ($n = 85$) and behavioral performance ($n = 86$) on the 6 tasks, plus the general rating of energy sensitivity, for Study 1, the exploratory experiment.

Subjective estimates means ranged from ~42–61%, whereas behavioral performance means ranged ~54–63%. Standard deviations were substantial, reflecting large individual differences in both subjective estimates and behavioral performances. Percent minimums and maximums ranged from 0 to 100%. Perceived energy sensitivity averaged approximately 5.5 (from 0 to 10). Again, the standard deviation was substantial.

An analysis of variance (ANOVA) was performed with measure type (2; subjective estimates versus behavioral performance) and task (6; listed in column 1 of Table 1) as repeated factors, and sex (2; female versus male) as a between group factor.

The main effect for measure type was significant ($F(1,83) = 12.666$, $p = 0.001$). The average subjective estimate (51.1%) was lower than the actual behavioral performance (57.8%). The main effect for task ($F(5,415) = 15.10$, $p < 0.0000$), the measure type by task interaction ($F(5,415) =$

Table 1. Means ± Standard Deviation for Subjective Estimates of Performance and Actual Behavioral Performance for Study 1

Measures	*Subjective estimate*	*Behavioral performance*
Hand to hand % detection	55.17 ± 22.17	59.18 ± 17.57
Face or stomach staring % detection	48.47 ± 20.38	58.13 ± 17.11
Hand to ear % detection	60.82 ± 22.84	63.48 ± 21.18
Yes or no back staring % detection	54.70 ± 20.15	54.06 ± 16.33
Head or back staring % detection	42.94 ± 20.34	56.86 ± 16.53
Anticipated hand movement % detection	45.05 ± 20.85	56.27 ± 17.15
Perceived energy sensitivity (0–10)	5.50 ± 2.33	

Table 2. Means ± Standard Deviation for Subjective Estimates of Performance and Actual Behavioral Performance for Study 2

Measures	*Subjective estimate*	*Behavioral performance*
Hand to hand % detection	42.75 ± 22.66	60.88 ± 16.18
Face or stomach staring % detection	36.00 ± 19.91	54.17 ± 17.06
Hand to ear % detection	48.12 ± 22.22	63.03 ± 17.85
Yes or no back staring % detection	47.25 ± 24.59	55.31 ± 18.31
Head or back staring % detection	34.25 ± 21.09	56.45 ± 19.67
Anticipated hand movement % detection	35.80 ± 22.97	53.79 ± 17.19
Perceived energy sensitivity (0–10)	4.43 ± 2.43	

5.24, $p < 0.0001$), and the measure type by task by sex interaction ($F(5,415) = 2.32$, $p < 0.04$), were significant.

IBAB—study 2

Table 2 displays subjective estimate's and behavorial performance's for study 2, the confirmatory experiment. The structure of the statistical analyses was replicated.

Subjective estimates means ranged from ~36–48% (lower than study 1), whereas the behavioral performance means ranged from 54% to 63% (replicating study 1). Standard deviations were again substantial. Percent minimums and maximums ranged from 0% to 100%. Perceived energy sensitivity averaged approximately 4.4 (from 0 to 10) with substantial standard deviation.

The ANOVA was repeated for study 2.

The main effect for measure type was again significant ($F(1,77) = 59.65, p < 0.0000$). The average subjective estimate (40.1%) was much lower than the actual behavioral performance (57.5%). The main effect for task ($F(5,385) = 12.61$, $p < 0.00001$), the measure type by task interaction ($F(5,385) = 2.21$, $p < 0.05$), and measure type by task by sex interaction ($F(5,385) = 2.74$, $p < 0.02$), were again significant.

Table 3 presents the results for single sample *t* scores; the purpose was to determine if the individual tests in the IBAB were significantly greater than chance. It can be seen that in both study 1 and study 2, all 6 of the biofield awareness tasks were performed above chance.

IBAB—combined sample statistics, including analyses of gender differences and individual differences in performance

Figure 1 displays the means for the entire sample ($n = 164$) for the 6 tasks, separately for subjective estimates versus behavioral performance on the IBAB. Only ear detection was estimated above chance, and face/stomach, head/back, and movement anticipation were estimated below chance. Hand and ear detection averaged ≥60%, whereas the other 4 tasks averaged >55% accuracy.

Figure 2 displays the means for the entire sample for the 6 tasks, for subjective estimates versus behavioral performance, separately for females ($n = 103$) and males ($n = 61$). The primary difference here was that females estimated that their staring detection would be above chance (their subjective estimates values matched their actual behavioral per-

Table 3. Results for Single Sample *t* Scores for Studies 1 and 2

	Mean	t *value*	df	p
Study 1				
Hand detection	59.18	4.84	85	0.00001
Face/stomach	58.13	4.41	85	0.00001
Ear detection	63.48	5.90	85	0.00001
Stare sensing	54.06	2.31	85	0.02
Head/back	56.86	3.84	85	0.0002
Movement sensing	56.27	3.39	85	0.001
Study 2				
Hand detection	60.88	5.97	78	0.00001
Face/stomach	54.17	2.17	78	0.03
Ear detection	63.03	6.48	78	0.00001
Stare sensing	55.31	2.57	78	0.01
Head/back	56.45	2.91	78	0.005
Movement sensing	53.79	1.96	78	0.05

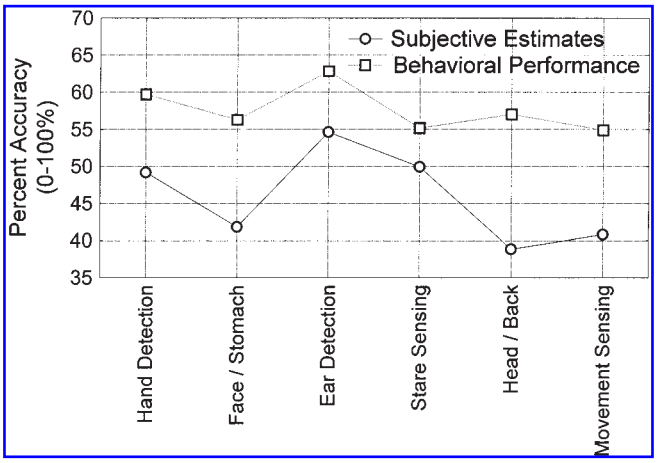

FIG. 1. Percent accuracy scores for subjective estimates and behavioral performances for the six biofield awareness tasks.

formance). Females performed better on the ear detection task than males.

To explore consistency across the 6 tasks in individual differences in IBA, the sample was split into 4 groups based upon average IBAB performance: poor (<51; $n = 42$), average (51–60; $n = 62$), good (61–70; $n = 42$), and excellent (>71; $n = 19$). Figure 3 displays the 4 subgroups separately for the 6 biofield awareness tasks. The 4 groups maintained their approximate 1.6 ratio of females to males.

Factor analysis of the IBAB reveals a dual factor structure that accounts for 31.4% and 18.2% of the variance (total, 49.6%). The first factor involves all 6 tasks, the second has positive loadings on the first 3 tasks, and negative loadings on the second 3 tasks.

Cronbach's α is 56% and increases to 77% if the number of trials is doubled.

Correlations with subjective estimates, BSA, and OSBES

Subjects' subjective estimates scores, averaged over the 6 tasks, correlated significantly with their perception of "energy sensitivity" ($r = 0.80$; $n = 165$, $p < 0.00001$). Moreover their averaged subjective estimates scores correlated with their averaged behavioral performance scores ($r = 0.26$; $n = 165$; $p < 0.001$. Subjects' perceptions of energy sensitivity also correlated with averaged behavioral performance scores ($r = 0.22$, $n = 163$, $p < 0.004$).

Figure 4 displays the total sample ratings of tingling, heat, resistance, and pressure for the 2 biofield self-awareness tasks (index finger moving and palm moving) for both males and females. The pattern of higher tingling for finger movement versus high heat and resistance for palm movement is replicated in both groups, indicating that subjects can discriminate different patterns of biofield-associated sensations. Females showed greater effects, especially for sensations of pressure.

The 4 sensations in the 2 tasks each correlated significantly with average subjective estimates scores (r from 0.26, $p < 0.001$ to 0.46, $p < 0.00001$) and energy sensitivity scores (r from 0.27, $p < 0.001$ to 0.45, $p < 0.00001$). Save for palm tingling ($r = 0.10$, $p < 0.22$), the 4 sensations in the 2 tasks each correlated significantly with overall behavioral performance scores (r from 0.15, $p < 0.06$ to 0.33, $p <$ 0.00001).

Concerning the OSBES, of the 5 categories (belief in versus experience of God, ghosts, angels, prayer, and extrasensory perception (ESP) between people), only the *ex-*

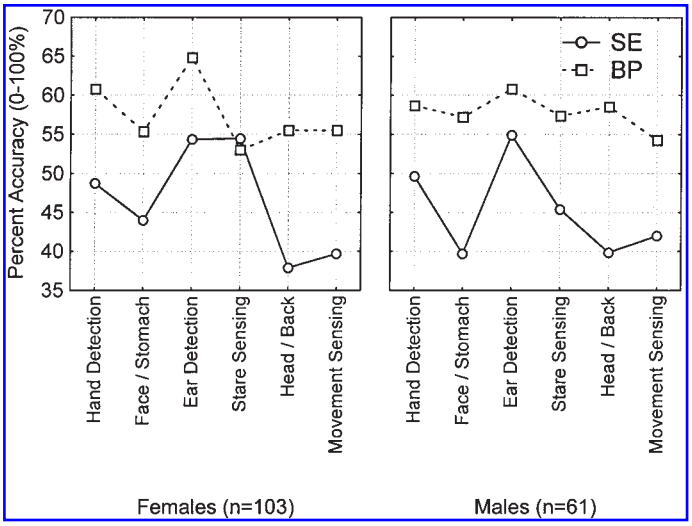

FIG. 2. Percent accuracy scores for subjective estimates (SE) and behavioral performances (BP) for the six biofield awareness tasks, separately for females and males.

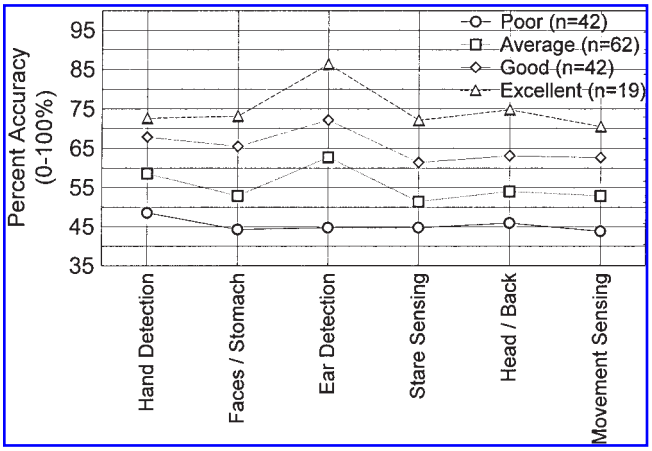

FIG. 3. Percent accuracy scores for behavioral performances for the six biofield awareness tasks, separately for poor, average, good, and excellent subjects.

perience of ESP consistently correlated with subjective estimates scores ($r = 0.30$, $p < 0.0001$), energy sensitivity ($r = 0.30$, $p < 0.0001$), and overall behavioral performance scores ($r = 0.22$, $p < 0.004$).

DISCUSSION

The present findings provide compelling basic science support for the hypothesis that humans have varying capacities for biofield awareness and that this capacity is associated with meaningful individual differences.

In a university student population, individuals range from below chance biofield awareness detection, to substantial biofield awareness detection. Although the average undergraduate student underestimates his or her ability, individual differences in subjective estimates of performance predict perceptions of energy sensitivity as well as actual biofield awareness detection.

A basic test of BSA reveals that students can discriminate patterns of sensations between two BSA tasks, and individual differences in awareness of sensations predict subjective estimates of biofield awareness performance, perceptions of energy sensitivity, as well as actual biofield awareness detection.

Finally, ratings of experience with ESP between people, and not belief *per se* in ESP between people, predict subjective estimates of biofield awareness performance, perceptions of energy sensitivity, and actual biofield awareness detection.

There appear to be individual differences in IBA. Close examination of the different biofield awareness tasks suggests that local bioelectromagnetic fields are insufficient to account for the totality of the findings. Two of the tasks (hand detection and ear detection) involve the experimenters hands being close ("local") to the subjects, which allows for the transmission of infrared heat, electrostatic hand motion effects, and other bioelectromagnetic signals including electromyographic and electrocardiographic signals (Schwartz et al., 1996). However, the other 4 tasks are more "distal." The findings displayed in Figure 3 indicate that if subjects are good at the "local" tasks, they are equally good at the "distal" tasks. Since 2 of the tasks are quite "passive" and primarily involve the conscious intention of the experimenters, it appears that biofield detection involves more than local bioelectromagnetic detection.

The similarity in performance between the more local versus distal tasks (some of which involve the experimenter in front of the subject and others in back of the subject), suggest that the findings cannot be explained in terms of possible subtle visual or auditory cueing.

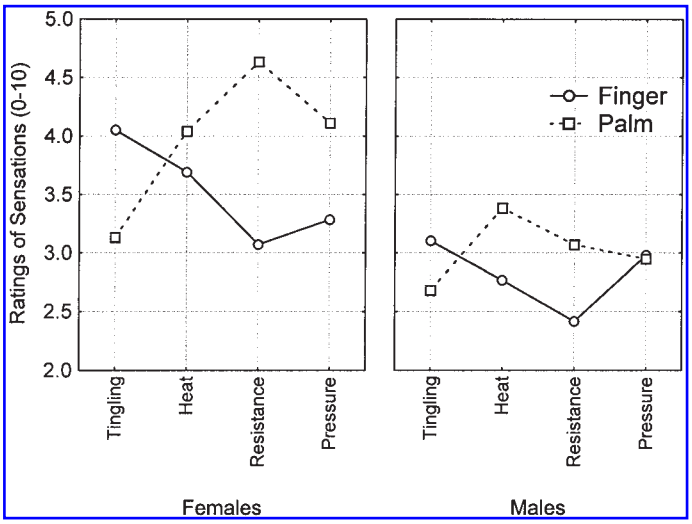

FIG. 4. Ratings of four sensations for finger movement and palm movement biofield self-awareness tasks, separately for females and males.

These basic science findings are consistent with the claims of healers. Although most healers prefer local biofield treatments, many report being successful using "distant" or "nonlocal" healing techniques.

Future research with IBAB promises to make it possible to explore brain mechanisms of biofield awareness and detection; individual differences in IBAB as a predictor, if not screening tool, for biofield healers; and capacity for biofield awareness to be learned via training, both in basic science and energy healing. Also, experiments are required to examine test-retest reliabilities, possible order of task testing effects, and factors such as environmental conditions (e.g., possible room temperature effects).

ACKNOWLEDGMENTS

This study was supported in part by the National Institutes of Health (NIH) grant P20 AT00774 (GES) from the National Center for Complementary and Alternative Medicine (NCCAM). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NCCAM or NIH. The helpful comments of 3 anonymous reviewers are gratefully acknowledged.

REFERENCES

Rosa L, Rosa E, Sarner L, Barrett S. A close look at therapeutic touch. JAMA 1998;279:1005–1010.

Schwartz GE, Russek LG, Beltran J. Interpersonal hand-energy registration: Evidence for implicit performance and perception. Subtle Energies Energy Med 1995;6:183–200.

Schwartz GER, Nelson L, Russek LGS, et al. Electrostatic body-motion registration and the human antenna–receiver effect: A new method for investigating interpersonal dynamical energy systems interactions. Subtle Energies Energy Med 1996;7: 149–184.

Schwartz GER, Russek LGS. Registration of actual and intended eye gaze: Correlation with spiritual beliefs and experiences. J Sci Explor 1999;13:213–230.

Address reprint requests to:
Gary E. Schwartz, Ph.D.
Department of Psychology
Center for Frontier Medicine in Biofield Science
University of Arizona
P.O. Box 210068
Tucson, AZ 85721-0068

E-mail: gschwart@u.arizona.edu

APPENDIX A

Instructions for Integrative Biofield Awareness Battery (IBAB)

HAND DETECTION

Instruct the subject to sit with hands "palm up" resting to the outside of each knee with eyes closed (this is extremely important, a blindfold with cotton balls is actually preferable). When the subject has done this, you (the experimenter) will say:

"I am going to place my hand over one of your hands, When I ask you to, I would like you to tell me which of your hands my hand is over."

According to the randomization scheme, you will place your dominant hand ("handedness" hand) approximately 6–8 inches above the hand of your subject. Facing directly, you will look at his or her nose and say: "Which of your hands do you feel my hand over?" Keep your hand in place until a response is given.

Record the "actual" scores and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

FACE/STOMACH DISCRIMINATION

Have the subject stand up with eyes remaining closed (or blindfolded) with hands at his or her sides, and say: "Now I am going to focus on either your face or your stomach, When I ask you, I would like you to tell me which area I am focusing on."

Standing approximately 3 feet in front of the subject, you should *focus* on either his or her face or stomach (as determined by a coin flip for randomization). While maintaining *focus* on the face or stomach you ask: "Am I focusing on your face or your stomach?" Hold your focus until a response is given.

Record the "actual" scores and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

EAR DETECTION

Have the subject sit back down (eyes remaining closed or blindfolded) and say: "Now I am going to *stand behind you and hold my hand near one of your ears, when I ask you, I would like you to tell me which of your ears my hand is near."*

Move behind the subject and place your dominant hand approximately 6–8 inches from the subject's left or right ear (as determined by coin flip and the randomization scheme). While looking directly at the center of the back of the subject's head, say: "Which of your ears am I holding my hand near?" Keep your hand in place until a response is given.

Record the "actual" and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

STARING SENSING

Have the subject remain seated and say: "When I ask you, I would like you to tell me whether I am staring at you or not."

After checking the randomization scheme, you either stare at the subject or close your eyes (as determined by the randomization scheme). After fixing your gaze or closing your eyes, ask: "Am I staring at you?" Continue to stare or keep your eyes closed until a response is given.

Record the "actual" scores and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

HEAD/BACK DISCRIMINATION

Have the subject stand up again and say: "Now I am going to stand behind you and focus on either the back of your head or the small of your back, when I ask you, I would like you to tell me which of these areas I am focusing on."

Move behind the subject, approximately 3 feet away. As determined by the randomization scheme, *focus* on either the center of the back of the subject's head, or the small of the subject's back (the area just above where the middle belt loop would be on a pair of jeans). Then say: "Am I focusing on your head or back?" Hold your focus until a response is given.

Record the "actual" and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

MOVEMENT ANTICIPATION SENSING

The subject may open his or her eyes (or remove the blindfold) for this task. Say: "I am going to stand here (a place about 3 feet away) *close my eyes and begin to move one of my hands* (prior to this, your hands should be hanging at your sides). When I ask you, I would like you to tell me which hand I am going to move."

Now, according to the randomization scheme, you should "move" (but take "a week" to (i.e., DO NOT ACTUALLY MOVE YOUR HAND!) "move" either your left or right hand and say: "Which of my hands will move?" Continue to "take a week to do it" until a response is given.

Record the "actual" scores and the "response" on the data sheet provided. DO NOT PROVIDE FEEDBACK UNTIL THE END OF ALL TRIALS.

After each trial of this task, proceed to the next task until you have completed 10 trials of each task.

This article has been cited by:

1. DARCY A. UMPHRED, MARCIA HALL THOMPSON, THERESE MARIE WESTThe limbic system: influence over motor control and learning 99-140. [CrossRef]
2. Carmel Mothersill, Richard W. Smith, Jennifer Fazzari, Fiona McNeill, William Prestwich, Colin B. Seymour. 2012. Evidence for a physical component to the radiation-induced bystander effect?. *International Journal of Radiation Biology* **88**:8, 583-591. [CrossRef]
3. Adam J. Rock, Fiona E. Permezel, Lance Storm. 2012. Randomized Expectancy-Enhanced Placebo-Controlled Trial of the Impact of Quantum BioEnergetic Distant Healing and Paranormal Belief on Mood Disturbance: A Pilot Study. *EXPLORE: The Journal of Science and Healing* **8**:2, 107-117. [CrossRef]
4. References and further reading 339-382. [CrossRef]
5. J. Adam Rindfleisch. 2010. Biofield Therapies: Energy Medicine and Primary Care. *Primary Care: Clinics in Office Practice* **37**:1, 165-179. [CrossRef]
6. Simon A. Senzon. 2008. Chiropractic and Energy Medicine: A Shared History. *Journal of Chiropractic Humanities* **15**, 27-54. [CrossRef]
7. 2005. Literature Watch. *Alternative and Complementary Therapies* **11**:2, 103-104. [Citation] [Full Text PDF] [Full Text PDF with Links]