

ORIGINAL PAPER

# LONG-TERM EFFECTS OF ENERGETIC HEALING ON SYMPTOMS OF PSYCHOLOGICAL DEPRESSION AND SELF-PERCEIVED STRESS

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*The long-term effects of energetic healing were examined in an experimental design employing a 3 x 3 factorial MANOVA on symptoms of psychological depression and self-perceived stress as measured by the Beck Depression Inventory, Beck Hopelessness, and Perceived Stress scales. Forty-six participants were randomly assigned to 1 of 3 groups: hands-on Reiki, distance Reiki, or distance Reiki placebo, and remained blind to treatment condition. Each participant received a 1 to 1.5-hour treatment each week for 6 weeks. Pretest data collected prior to treatment demonstrated no preexisting significant differences among groups. Upon completion of treatment, there was a significant reduction in symptoms of psychological distress in treatment groups as compared with controls ( $P < .05$ ; Eta square ranging from .09-.18), and these differences continued to be present 1 year later ( $P < .05$ ; Eta square ranging from .12-.44). (Altern Ther Health Med, 2004;10(3):42-48.)*

**E**nergetic or spiritual healing has been documented and practiced in nearly every civilization throughout the span of human existence.<sup>1</sup> From the healing through *Mana* by the Kahunas of Hawaii, *Chi* in China, *Qi* in Japan, *Prana* in the Hindu tradition, and the presence of the Holy Spirit in Christian lore, to name a few, healing methods based on the belief in the transference of a universal, all-pervading life energy have always existed.<sup>2</sup> The energetic healing modality utilized in the present investigation is Reiki, which is a name for both a tradition of spiritual or energetic healing and for the healing energy itself, which is described as the universal life energy.

Although the mechanisms of healing involved in Reiki remain a mystery to Western science, in a review of more than 150 controlled empirical studies of energetic or spiritual healing, more than half demonstrated significant results.<sup>3</sup> By commonly accepted standards for establishing treatment efficacy, "if healing were a drug, it would be accepted as effective on the basis of this evidence."<sup>4(p71)</sup> Based on these findings, many assert that healing can produce benefits warranting further clinical study.<sup>5</sup>

In contemporary Western civilization, patients are consult-

ing alternative healers in increasing numbers, and this increased attention is due, in part, to increasing dissatisfaction with modern medical and psychiatric care.<sup>6</sup> A frontier topic now coming of age in our culture,<sup>3</sup> energetic healing is beginning to be used by doctors, nurses, psychotherapists, and a number of other health professionals as complements to traditional interventions.<sup>7,8</sup>

Research suggests that in 1996, Americans made more visits to providers of unconventional therapy than to primary care physicians.<sup>9,10</sup> Leskowitz<sup>11</sup> asserts that this development is due to the failure of the biomedical model to account for the inner life of human beings, in both the psychological and spiritual realms. Proponents of energetic healing claim that it addresses this very issue by improving both mental and physical health, and by facilitating personal growth through a deeper connection to the spiritual aspects of life, thereby reducing stress and curing disease.<sup>8,12</sup>

According to research, conventional treatment of clinical depression remains less than optimal.<sup>13</sup> According to the American Psychiatric Association,<sup>14</sup> depression is associated with high mortality, chronic general medical conditions, decreased physical, social, and role functioning, and an increase in pain and physical illness. Psychological depression is reported in up to 25% of women and 12% of men regardless of ethnicity, education, income, or marital status. There is an emerging consensus in contemporary research that depression results from the interaction of causal factors with multiple etiological pathways falling into 4 categories: biological and genetic factors, interpersonal and environmental factors, developmental history, and social-cognitive variables,<sup>15(p91)</sup> yet factors addressing spirituality are not widely discussed.

Research demonstrates that spiritual or religious experiences are positively related to physical health<sup>16-17</sup> and that an awareness of spirituality is a source of well-being.<sup>18-19</sup> According to Hiatt,<sup>20</sup> spirituality is as important as medication, hospitalization, or surgery, because the spiritual elements of experience help us to rise above the matters at hand such that in the face of suffering we can find purpose, meaning, and hope. Despite numerous attempts to understand the phenomenon of energetic healing as a form of spiritual healing and despite the number of significant findings in energetic healing research, it remains overlooked as a viable therapy by the mainstream medical community.

Research has provided evidence of the effectiveness of ener-

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getic healing in the relief of pain, depression, self-reported anxiety, blood pressure, and the reduction of discomfort and stress associated with illness, all of which are important for patient recovery.<sup>5, 21-29</sup> Both hands-on and distance energetic healing treatments have been demonstrated to be effective,<sup>30,31</sup> and studies of energetic healing are helpful in demonstrating effects where no suggestion is possible, thereby countering the claim that healing is merely a placebo reaction.<sup>5</sup> For example, Grad<sup>30</sup> "demonstrated that whatever the underlying mechanism was whereby energetic healing was producing significant stimulation of cell growth, it was not by the process of suggestion. Moreover, it was not due to some chemical substance, but was due to some physical agent, an energy."<sup>30(p.293)</sup>

Furthermore, studies report that human concerns such as worry and doubt may regress under energetic healing treatments.<sup>5</sup> Therefore, energetic healing is recommended as a form of "complementary healing in the treatment of infectious disease, allergic responses, cardiovascular and psychiatric symptoms, and a number of other serious stress-related disorders."<sup>32(p.73)</sup> Proponents such as Van Sell<sup>33</sup> assert that energetic healing may be useful in the treatment of AIDS, lupus erythematosus, and chronic pain. It is also purportedly useful in accelerating the healing of traumatic injuries, managing suicidality, easing chemotherapy-induced nausea and vomiting, alleviating emotional and spiritual distress, and in facilitating recovery from incest and abuse.<sup>34</sup>

The focus of the present investigation is the energetic healing technique known as *Reiki*. A combination of the Japanese words *Rei* (meaning spirit, air, essence of creation) and *ki* (meaning power, energy, qi, or the vital life force that flows through all living beings), *Reiki* translates as "Universal Life Force" or "God-power."<sup>35,36</sup> According to *Reiki* proponents, it is a holistic, sacred method of bringing balance and harmony to all 3 aspects of being (physical, mental, and spiritual). According to Rand,<sup>37</sup> *Reiki* brings a closer connection to spirituality and positive attitudes, and may be defined as a "Japanese form of stress reduction and relaxation."<sup>37(p.101)</sup> Proponents claim that throughout the course of treatment, emotional blocks are often released, purportedly allowing the recipient to come in contact with feelings that may have been previously repressed.<sup>38</sup> Energetic healing focuses on the "importance of helping the unconscious to emerge"<sup>34(p.78)</sup> in a gentle, supportive manner, assisting the client in dealing with uncovered material while in a state of relaxation. Healing techniques are, therefore, potentially useful as complements to the psychotherapeutic process.

Based on the findings and recommendations of prior research, the present investigation aimed to test the hypothesis that the *Reiki* energy rather than touch is the causal factor related to significant findings in energetic healing research. Furthermore, the long-term effects of energetic healing on symptoms of psychological distress were investigated using well-established and validated measures to compare treatment groups with placebo conditions, thus testing prior claims of significant findings relating to placebo effects alone.

*Reiki* was hypothesized to significantly reduce negative symptoms on the aforementioned psychological measures of distress in treated participants. It was furthermore hypothesized to demonstrate greater sustained long-term reduction of depressive symptoms and self-perceived stress in treated participants, as compared with controls. Additional hypotheses included a replication of initial findings upon completion of posttreatment data collection, when control subjects received their *Reiki* treatments.

## METHOD

### Participants

Forty-five adult participants, ranging in age from 19 to 78 and in need of treatment for symptoms of depression and stress, were randomly selected from a pool of prescreened respondents to advertisements for the inquiry. Advertisements were placed in various locations including healthcare offices, grocery stores, community billboards, and local universities. Prescreening eliminated all potential participants who did not express self-perceived symptoms of depression or anxiety and excluded respondents suffering from self-reported severe mental illness (psychotic disorders), severe physical illness (eg, stage IV terminal cancer), and individuals taking medication that could influence physical reactions (eg, tranquilizers, histamines, amphetamines, or psychotropic medications). Medical conditions permitted above and beyond depression included multiple sclerosis (MS), borderline personality disorder, mood disorders, anxiety disorders, chronic fatigue syndrome, fibromyalgia, and nonterminal cancer. Persons included in the pool were willing to commit to the full 6 weeks of treatment and were highly motivated to participate in their own healing process.

Following random selection, participants were randomly assigned to 1 of 3 groups: Hands-on *Reiki* ( $n = 13$ ), Distance [nontouch] *Reiki* ( $n = 16$ ), and distance *Reiki* placebo ( $n = 16$ ). Pretest data analyses demonstrated that the participants in this investigation exhibited a mean depression score on the Beck Depression Inventory (BDI) of 13.12, and a range of scores on the BDI from 0–45, reflecting a range of normal (asymptomatic) to extremely severe depression, and a mean score reflecting a mild-moderate classification of depression based upon clinical ratings.<sup>39</sup> The BDI recommends that cut-off scores be based on clinical decisions.

Upon recruitment, all participants were informed that they would be randomly assigned to an appropriate condition. By informing them at the outset of the investigation that they may or may not receive hands-on *Reiki*, distance *Reiki* (not involving touch, with the practitioner sending *Reiki* from another location), or mock-*Reiki*, participants could remain blind to their condition. Furthermore, deception was implemented to reduce Hawthorne and expectancy confounds. This was accomplished by leading the participants to believe that the placebo condition would be performed as a mock hands-on *Reiki* treatment. Therefore, participants in the hands-on *Reiki* condition believed they were receiving mock-*Reiki*, and participants in the placebo distance *Reiki* condition believed they were receiving distance

Reiki, thereby reducing the potential for expectancy and placebo effects. Participants were notified that those not receiving Reiki during the investigation would be offered free treatments upon completion of the study. Performed as doctoral research, the investigation was approved by the Human Ethics Committee of the Institute of Transpersonal Psychology.

Twelve Reiki Masters (attuned to the highest level of Reiki) and 3 Level 2 Reiki practitioners (attuned to perform distance and hands-on Reiki proficiently) working in consistent Reiki healing practices were chosen on the basis of experience and effectiveness in energetic healing. The primary researcher tested each volunteer practitioner by personally experiencing a Reiki treatment from each to ensure for quality treatments and the practitioner's ability to effectively channel Reiki energy. The primary researcher thereby determined effectiveness on the basis of tangibly receiving Reiki energy (by feeling the energy through particular sensations in the body) and by experiencing deep relaxation and healing from the treatment. In addition, a minimum of 1 year as a practicing healer in the traditional method of Reiki healing, previous healing experience at a distance with a minimum of 10 patients (for distance Reiki conditions), and experience in self-healings (ie, giving oneself Reiki on a regular basis), served as criteria for experience. Each of the selected Reiki practitioners participated in 6 treatment sessions of 1 to 1.5 hours with up to 8 clients over a period of 6 weeks (1 treatment per client per week), and all participating practitioners were instructed to perform similar treatments (see Design and Procedure, below). Data collection was performed during mass administration when the participants were identified by their subject numbers, allowing the data collector to remain blind to treatment condition.

### Materials

Three measures were used in this investigation: the Beck Depression Inventory (BDI), the Beck Hopelessness Scale (HS), and the Perceived Stress Scale (PSS). Completion of all paper-and-pencil tests took less than 30 minutes. Each of these measures had been assessed for reliability, internal validity, and test-retest validity, and is well established and researched as a psychometrically sound tool for assessing symptoms of depression, hopelessness, and stress, respectively.

The BDI is a 21-item, self-report scale of self-perceived symptoms of depression. Each item contains 4 choice alternatives of increasing self-perceived depression. The BDI can be administered individually or in a group format, requires only a grade 5 education to self-administer, and can be completed in less than 10 minutes. Construct validity had been determined through comparison of the BDI and the HS, and concurrent validity had been determined through comparison of the BDI with the MMPI-D Scale and the Zung Self-rating Depression Scale.<sup>40</sup>

Similarly, the HS had been tested for internal consistency and demonstrated a relatively high correlation with the clinical ratings of hopelessness and other self-administered measures of hopelessness.<sup>41</sup> The HS consists of a 20-item, true-false, self-report

test designed to quantify hopelessness as one characteristic of depression.<sup>41</sup> The internal consistency of the scale was analyzed by means of a coefficient  $\alpha$ , which yielded a reliability coefficient of .93. The concurrent validity was determined by comparing HS scores with clinical ratings of hopelessness (.74,  $P < .001$ ) and with other tests designed to measure negative attitudes regarding future (.60,  $P < .001$ ). Beck and Weissman confirmed the construct validity of HS in 1974 through the computation of a product-moment correlation from data obtained by 294 suicide attempters. Furthermore, scores on the HS correspond highly with those of the BDI. Finally, the PSS is a 10-item, 5-point Likert scale, designed to measure the degree to which situations in life are appraised as stressful. The PSS had been correlated with life-event scores, depressive ( $r = .65 - .76$ ) and physical symptoms, utilization of health services, social anxiety, and smoking-reduction maintenance, and showed adequate reliability.<sup>42</sup>

### Design and Procedure

A 3 x 3 repeated measures MANOVA served as the analysis method of choice for the present investigation. In addition, after completion of follow-up data collection, control subjects received treatment, and a paired samples *t* test was performed for placebo participants to compare pretest and posttreatment scores on each of the 3 measures. After random assignment to a group, all participants were gathered for a battery of the aforementioned assessments (BDI, HS, PSS). To maintain a double-blind condition, all participants received a coded number under which their pretreatment scores were immediately entered into a SPSS database. Random selection and assignment ensued, and pretest data analysis was performed to ensure that no significant pretest difference between groups existed on assessments relevant to the study.

As recommended by Smith,<sup>12</sup> Reiki treatments lasted between 1 and 1.5 hours per session and occurred once a week for the entire 6 weeks of treatment. Once participants were assigned to a condition, they were paired with appropriate practitioners and scheduled for sessions. Healing sessions took place in a prescreened, quiet, comfortable, healing setting.<sup>43</sup> All rooms were similar in size, color, and noise level. Similarly, control group participants received their mock-treatment in a room nearly identical (in size, location, color, lighting, noise level, temperature, and comfort level) to the treatment offices, in a nearby area. All subjects remained blind to treatment condition, and therefore did not know whether or not they were receiving Reiki treatments during the course of the investigation. In accordance with traditional Reiki treatments, all participants in the Reiki groups (hands-on and distance Reiki) and the placebo group (to ensure identical protocol for all research participants, regardless of treatment group) were instructed to lie fully clothed on a massage table for treatments, and were instructed to cover themselves with a provided thin sheet and blanket to keep comfortable and warm.

Participants in the touch Reiki treatment condition received a full 1 to 1.5-hour hands-on Reiki session, whereas the partici-

pants randomly assigned to the distance (non-touch) Reiki group received a 1 to 1.5-hour distance Reiki (non-touch) session. The Reiki practitioners performing the distance Reiki treatments were not physically present at the healing session, and therefore administered a 1 to 1.5-hour healing session from another location (as far as hundreds of miles away).

All Reiki practitioners were instructed to perform similar Reiki treatments, and strict treatment protocol was established prior to the onset of the investigation. Treatments began with the front of the body at the top of the head and moved down the body covering specific points including the eyes, temples, throat, heart, upper and mid belly, and then proceeded with the back of the head, shoulders and neck, back of heart, and lower back. All sessions ended by sealing in the energy and smoothing the outer energetic bodies of the participants. Furthermore, they were told to treat clients only when their own health and mood permitted them to maintain the focus of a true healer, a positive attitude in which helping the patient remains the priority.<sup>13</sup> All healers were instructed to focus on healing the participants,<sup>5</sup> rather than obtaining any specific outcomes related to the investigation.

Distance healings followed an identical treatment protocol addressing the same points and following the same procedures as the hands-on practitioners. The distance practitioners worked on the energetic bodies (rather than the physical bodies) of the participants, and were not physically present at the healing location. Placebo distance group participants also remained fully dressed and covered on a massage table for the duration of treatment. All other aspects of the control group mock healing sessions were identical to distance healing sessions; however, they did not receive a distance Reiki treatment. It was important that the control group massage table was new and unused because tables used in Reiki treatments have been described as "charged" with "Shakti," or energy absorbed during healing sessions.<sup>3</sup> All participants were under the impression that the placebo condition was a hands-on treatment. The control group participants were thereby led to believe that they were receiving treatment when, in fact, no Reiki was being transmitted or received.

To prevent diffusion of treatment, the control group experienced mock treatments in a location similar to, yet apart from, the Reiki treatments per recommendations by Lucia Thornton.<sup>36</sup> After completion of the follow-up data collection (1 year after pretest data collection), every participant in the Reiki control group was invited to receive 6 free Reiki treatments. As suggested by Thornton<sup>36</sup> and as demonstrated by Nash,<sup>44</sup> any caring individual is capable of passing on energetic healing regardless of training in a healing modality. According to previous studies,<sup>36,44</sup> mimic-Reiki or Therapeutic Touch practitioners have failed to provide true control conditions. In most attempts to date, it appears that healing may be accomplished regardless of whether or not the individual is trained in a specific modality or holds the conscious intention to heal. Therefore, the mock treatments incorporated the expectancy of treatment alone (to control for expectancy). It is important that control group participants had minimal contact with the healers because one

model for healing supported by anecdotal reports<sup>45</sup> consists of participants drawing energies (distant) from the healer.

Pretest and posttest data were gathered by mass administration of all pencil-and-paper questionnaires. All measures were administered at the onset of treatment and upon completion of treatment 6 weeks later. One year after completion of posttest data collection, the BDI, IIS, and PSS were again mailed to each participant to reduce the possibility of experimenter effects. To further control for threats to internal validity, each participant was requested to complete the questionnaires and return them to the primary researcher no later than 2 weeks after receiving the material. Immediately upon completion of the follow-up data collection, all control group participants received their 6 weeks of Reiki treatments. After each control participant received the final treatment, he or she again filled out the PSS, BDI, and IIS measures (posttreatment data collection), and data analyses ensued.

## RESULTS

A 3 x 3 repeated measures MANOVA served as the analysis method of choice for the present investigation, with significance levels set at an  $\alpha$  of .05 (2-tailed). The repeated measures MANOVA demonstrated no significant group difference at the pretest data collection interval. Posttest results, however, indicated a significant difference on the PSS between hands-on and placebo groups ( $P < .01$ ; Eta square = .18) and between distance Reiki and placebo groups ( $P < .01$ ; Eta square = .17), but no significant difference was obtained between treatment groups (hands-on and distance Reiki). Similar results were obtained on the BDI and HS with significant difference between treatment and control groups, with no significant difference between types of treatment. See Tables 1–3 for means, standard deviations, and significant findings on the BDI, IIS, and PSS at pretest, posttest, and 1-year follow-up data collection intervals.

One year after completion of treatment, the significant difference obtained between treatment and control groups was maintained on all 3 measures. Despite expectation for regression to the mean, treatment group scores on the BDI and PSS continued to decrease 1 year after posttest data collection. Scores on the HS increased slightly from posttest to follow-up data collection, but remained significantly lower than pretest scores. MANOVA results indicated a significant effect for time,  $F(2, 41) = 27.23$ ,  $P < .0001$ ; Eta square = .57, and measure,  $F(2, 41) = 35.16$ ,  $P < .0001$ ; Eta square = .63. In addition, significant interactions included time by group,  $F(4, 82) = 5.07$ ,  $P = .001$ ; Eta square = .20, time by measure,  $F(4, 39) = 12.23$ ,  $P = .004$ ; Eta square = .56, and time by measure by group,  $F(8, 78) = 3.12$ ,  $P = .004$ ; Eta square = .24. No significant interaction was found between measure by group ( $P = .139$ ).

Tests of between-subjects effects indicated no significant group difference on PSS, BDI, or HS at pretest interval. At both the posttest and follow-up intervals, the placebo group differed significantly on all measures from treatment groups ( $P < .05$ ), exhibiting higher scores on all measures of depressive and stress symptoms.

TABLE 1 Group Means for Repeated Measures MANOVA  
Performed on Pretest Data

Measure	Group	Mean	SD	N	Significant difference
<b>PSS</b> pretest	Group 1	1.8923	0.6383	13	No significant group difference Group 1 & 3 ( $t = .07$ ; $P = .94$ ; Eta square = .000)
	Group 2	1.8563	0.6066	16	
	Group 3	1.8750	0.7289	16	
<b>BDI</b> pretest	Group 1	11.8462	8.7925	13	No significant group difference Group 1 & 3 ( $t = .48$ ; $p = .63$ ; Eta square = .005)
	Group 2	11.3750	7.1262	16	
	Group 3	10.435	7.7543	16	
<b>HS</b> pretest	Group 1	5.3846	3.5949	13	No significant group difference Group 1 & 3 ( $t = 1.31$ ; $p = .20$ ; Eta square = .039)
	Group 2	5.1875	3.0380	16	
	Group 3	3.6250	4.0967	16	

Group 1 = hands-on Reiki; Group 2 = distance Reiki;  
and Group 3 = placebo group.

The placebo group participants were offered treatment upon completion of follow-up data collection. For reasons of simplicity, paired-samples  $t$  tests were computed for the placebo group to compare pretest and posttreatment scores on each measure used in the present investigation. The following means were obtained for the placebo condition on the aforementioned measures: BDI pretest ( $M = 10.44$ ), BDI posttreatment ( $M = 3.75$ ), HS pretest ( $M = 3.63$ ), HS posttreatment ( $M = 1.81$ ), PSS pretest ( $M = 1.88$ ), PSS posttreatment ( $M = 1.26$ ). Results demonstrated significant difference between pretest and posttreatment scores for the placebo group on the BDI ( $P < .0001$ ), HS ( $P = .010$ ), and PSS ( $P = .002$ ).

To ensure the equivalency of the groups prior to the onset of treatment (again for reasons of simplicity), a 1-way MANOVA was computed among the 3 treatment groups upon completion of randomization procedures. Prior to treatment, no significant group differences existed on any of the 3 measures. Pretest results for the Beck Depression Inventory (BDI),  $F(2, 69) = .592$ ,  $P = .56$ , demonstrated no pretest significant group difference. Similar results were obtained on the Beck Hopelessness Scale (HS),  $F(2, 55) = 1.4$ ,  $P = .26$ , and the Perceived Stress Scale (PSS),  $F(2, 56) = .159$ ,  $P = .85$ .

## Discussion

Before treatment, all groups demonstrated similar scores on each of the 3 measures. All participants were asked to refrain from any changes in normal routine or practices during the 6 weeks of treatment. This was implemented to increase the likeli-

TABLE 2 Group Means for Repeated Measures MANOVA  
Performed on Posttest Data

Measure	Group	Mean	SD	N	Significant difference
<b>PSS</b> posttest	Group 1	1.1769	0.6207	13	Significant difference between: Group 1 & 3 ( $t = -3.03$ ; $P = .004$ ; Eta square = .18) Group 2 & 3 ( $t = -2.93$ ; $P = .005$ ; Eta square = .17) No significant difference between treatment groups 1 and 2.
	Group 2	1.2375	0.4193	16	
	Group 3	1.9000	0.8124	16	
<b>BDI</b> posttest	Group 1	4.6923	4.1710	13	Significant difference between: Group 1 & 3 ( $t = -2.0$ ; $P = .05$ ; Eta square = .09) Group 2 & 3 ( $t = -3.01$ ; $P = .004$ ; Eta square = .18) No significant difference between treatment groups 1 and 2.
	Group 2	3.0625	2.5421	16	
	Group 3	8.5000	7.2664	16	
<b>HS</b> posttest	Group 1	1.6154	1.2609	13	Significant difference between: Group 1 & 3 ( $t = -2.40$ ; $P = .02$ ; Eta square = .12) Group 2 & 3 ( $t = -2.65$ ; $P = .01$ ; Eta square = .14) No significant difference between treatment groups 1 and 2.
	Group 2	1.5000	1.5492	16	
	Group 3	4.1250	4.2876	16	

Group 1 = hands-on Reiki; Group 2 = distance Reiki;  
and Group 3 = placebo group.

hood that significant differences found after treatment could be attributed to the treatment condition.

Upon completion of the 6 weeks of treatment, repeated-measures analysis (MANOVA) demonstrated significant group differences on the 3 standard measures of depressive symptoms and stress. These significant differences were found between treatment and control groups, whereas no significant difference was found between hands-on or distance Reiki at any time throughout the investigation.

The findings illustrated that for treatment groups, BDI and PSS scores appeared to continue to decrease throughout the course of a year, despite no further treatments and despite the belief of the participants receiving hands-on treatment that they were in the placebo condition. Distance Reiki, however, appeared to have produced the greatest reduction in depressive and stress symptoms from pretest to posttest data collection; whereas there was no significant difference in scores between treatment groups at any time during the investigation, the results demonstrated that both hands-on and distance Reiki were effective. These findings may be due in part to the deception implanted into the study's procedures. Participants in the hands-on group were under the impression that they were in the placebo group, and perhaps this expectation, conflicting with treatment influence, may have resulted in the conservative nature of the findings.

Follow-up scores for hands-on Reiki participants were slight-

**TABLE 3** Group Means for Repeated Measures MANOVA Performed on 1-year Follow-up Data Collection Interval

Measure	Group	Mean	SD	N	Significant difference
<b>PSS follow-up</b>	Group 1	0.7410	0.5664	13	Significant difference between: Group 1 & 3 ( $t = -5.78$ ; $P = .0001$ ; Eta square = .44) Group 2 & 3 ( $t = -5.78$ ; $P = .0001$ ; Eta square = .44)
	Group 2	0.8125	0.4787	16	
	Group 3	2.0688	0.7578	16	
					No significant difference between treatment groups 1 and 2.
<b>BDI follow-up</b>	Group 1	3.6154	3.4770	13	Significant difference between: Group 1 & 3 ( $t = -3.67$ ; $P = .001$ ; Eta square = .24) Group 2 & 3 ( $t = -3.90$ ; $p = .0001$ ; Eta square = .27)
	Group 2	3.5625	4.1468	16	
	Group 3	13.3125	10.663	16	
					No significant difference between treatment groups 1 and 2.
<b>HS follow-up</b>	Group 1	2.6923	2.9548	13	Significant difference between: Group 1 & 3 ( $t = -2.38$ ; $P = .02$ ; Eta square = .12) Group 2 & 3 ( $t = -2.47$ ; $P = .02$ ; Eta square = .13)
	Group 2	2.7500	2.7689	16	
	Group 3	6.0625	5.0526	16	
					No significant difference between treatment groups 1 and 2.
Group 1 = hands-on Reiki; Group 2 = distance Reiki; and Group 3 = placebo group.					

ly lower than those in the distance Reiki condition on the IIS and PSS. However, the results did not demonstrate a significant difference between hands-on and distance Reiki. With respect to depressive symptoms, as measured by the BDI and HS, the mean for the hands-on condition was slightly lower than for distance Reiki participants at the follow-up data collection, and results demonstrated that any changes in depression scores that were due to treatment persisted at the 1-year follow-up data collection interval.

Furthermore, no significant reduction in BDI, PSS, and HS scores was found for the placebo group (until they received treatment), despite their belief that they were receiving distance Reiki. After the 1-year follow-up data collection was complete, the control group received 6 hours of Reiki. Nearly half of the control group participants received hands-on Reiki, and the remainder chose to receive distance treatments. Posttreatment data collection demonstrated a significant reduction of stress, hopelessness, and depressive symptoms similar to that exhibited by treatment groups after they received treatment.

Despite the expectation for regression to the mean and the influence of such a small sample size, these remarkable findings suggest that the effects of Reiki persist at least 1 year after only 6-9 hours of treatment. Because each participant in the study sought treatment for a different reason, these findings illustrate the effectiveness and persistence of Reiki in depressive and stress symptoms, whatever the cause of these symptoms (eg, medical diagnosis, life transitions, or diagnosable mental illnesses such

as depression). The results of this study demonstrate that Reiki can be a useful and cost-effective treatment to alleviate suffering. These findings also suggest that whatever the result of the Reiki treatments, the change or transformation experienced by the recipients appears to be persistent, if not permanent.

Overall, the results of the present investigation demonstrate the validity of the following hypotheses: (a) Reiki can effect a significant reduction of depressive symptoms (BDI), hopelessness (HS), and stress (PSS) for individuals receiving treatment, and these results are maintained up to 1 year after completion of treatment, and (b) Reiki can effect a long-term reduction in depressive symptoms, hopelessness, and stress scores in treated participants when compared with control groups. Furthermore, it was hypothesized that the control group participants would also exhibit a significant reduction in depressive symptoms and stress upon completion of 6 weekly Reiki treatments. Again, all of these hypotheses were supported by the results of the present investigation.

Recent movements within the biomedical and behavioral research communities emphasize effect sizes as more closely reflective of the actual sizes of changes found in data analyses than  $P$  values alone.<sup>46(p12)</sup> Regarding the present investigation, the majority of effect sizes are at the border between small and medium. The greatest effect sizes were demonstrated on the significant effect for measure (0.63), time (0.57), and time by measure (.56).

According to Braud,<sup>46(p12)</sup> the effect sizes obtained in some representative medical study outcomes that have been heralded as medical breakthroughs obtained effect sizes of 0.04 and 0.03 (regarding the effectiveness of propranolol and aspirin, respectively, in reducing heart attacks). Braud continues to discuss a special binomial effect size display created by Rosenthal that allows us to represent a common effect size measure in terms of the corresponding proportion of subjects that may be improved by an intervention or treatment with the specific effect size demonstrated.<sup>46(p12)</sup> "According to this binomial effect size display conversion, an effect size ( $r$ ) of 0.03 would be the equivalent of 3 additional persons surviving in a sample of 100 persons."<sup>46(p14)</sup> With this in mind, the small-to-medium effect sizes (ranging from .09-.63) found in the present investigation reflect a compelling demonstration of the effects of energetic healing on treated populations.

In conclusion, the results of the present investigation demonstrated that both hands-on and distance Reiki were effective in reducing symptoms of depression, hopelessness, and stress in treated participants as compared with controls, and that the results were not due to placebo effects. This not only supported the hypothesis that Reiki is an effective energetic healing modality, it further pointed to the Reiki treatment, rather than touch, as the causative factor. Findings supported the hypothesis that the energy effectively reduces negative symptomatology regardless of expectation and, as demonstrated by the placebo group, expectation alone does not produce such changes in symptomatology. Most important, the effects of Reiki were demonstrated to last at least 1 year after the completion of merely 6 hours of treatment. Although this study does not aim to

compare Reiki with standard treatments for psychological depression, it is interesting to note that comparative efficacy studies continue to debate standard forms of treatment. Furthermore, while a traditional course of pharmacological or psychological treatment may cost more than Reiki, either form of treatment may benefit from including Reiki as an adjunct to traditional therapeutic interventions to potentially increase effectiveness and decrease the length of treatment.

Recommendations for future research include an investigation of the effects of energetic healing on specific diagnosable psychological and physiological disorders, such as generalized anxiety disorder, clinically diagnosed depression, institutionalized suicidal patients, cancer, AIDS, and chronic fatigue syndrome. Future research is also recommended on hands-on versus distance Reiki to further explore the present investigation's findings that Reiki treatment, rather than touch, was the influential factor producing the reported changes. Most important, it is recommended that the present investigation be replicated with a much larger group of participants to strengthen the influence of the present findings, to increase the reliability of the estimate of the effect size, to further reduce threats to validity, and to broaden the generalizability of findings. Therefore, the present investigation recommends further research, not only for new areas of exploration on the effects of energetic healing, but also on the integration of energetic healing into mainstream healthcare.

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## Correction

There was a discrepancy in the author listings of Feasibility of Conducting a Clinical Trial on Hatha Yoga for Chronic Low Back Pain: Methodological Lesson (*Altern Ther Health Med*. 2004;10(2):80-83). The authors are: Bradley P. Jacobs, MD, MPH, Wolf Mehling, MD, Andrew L. Avins MD, MPH, Harley A. Goldberg, DO, Michael Acree, PhD, Judith Hanson Lasater, PhD, PT, Roger J. Cole, PhD, David S. Riley, MD, and Stephanie Maurer, MA.

Several answers provided for the continuing medical education lesson, An Overview of Osteoporosis (*Altern Ther Health Med*. 2004;10(2):26-34) were incorrect. The answer for question 5 is (B) is inadequate in US girls and women. Question 7 should read: Interventions with potential benefit for bones include the following except: (D) Flaxseed. Question 8 should read: Select the following incorrect statement. Genetic components of osteoporosis are: (B) attributed to a single gene.