

The Clinical Effectiveness of Healing Touch

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ABSTRACT

Objectives: (1) to determine the clinical effectiveness of Healing Touch (HT) on variables assumed to be related to health enhancement; (2) to determine whether practitioner training level moderates treatment effectiveness.

Design: Mixed-method repeated measures design with quasi-experimental and naturalistic approaches, paired with nomothetic and idiographic analyses.

Setting/Location: Practitioner's offices or client's home.

Subjects: Twenty-two (22) clients who had never experienced HT.

Interventions: Three treatment conditions: no treatment (NT), HT only (standard HT care), and HT+ (Standard HT care plus music plus guided imagery).

Outcome measures: Secretory immunoglobulin A (sIgA) concentrations in saliva, self-reports of stress levels, client perceptions of health enhancement, and qualitative questionnaires about individual effects.

Results: Clients of practitioners with more training experienced statistically significant positive sIgA change over the HT treatment series, while clients of practitioners with less experience did not. Clients reported a statistically significant reduction of stress level after both HT conditions. Perceived enhancement of health was reported by 13 of 22 clients (59%). Themes of relaxation, connection, and enhanced awareness were identified in the qualitative analysis of the HT experience. Pain relief was reported by 6 of 11 clients (55%) experiencing pain.

Conclusions: The data support the clinical effectiveness of HT in health enhancement, specifically for raising sIgA concentrations, lowering stress perceptions and relieving pain. The evidence indicates that positive responses were not exclusively as a result of placebo, that is, client beliefs, expectations, and behaviors regarding HT.

INTRODUCTION

Over the centuries healing has been conceptualized as a process attributable to variables ranging from the natural to the supernatural. A scientific understanding of healing is now proposed from a model of humans as bioelectromagnetic energy fields (Oschman,

2000) and as information fields/systems (Rubik, 1997), which may actually have measurable electromagnetic correlates (Green, 1998). Healing Touch (HT) is a holistic therapy that purports to work within the human energy system to clear blockages and restore balance in the body. From the viewpoint of a HT practitioner, healing is the process of altering men-

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tal, physical, emotional, and spiritual health positively. Practitioners are taught that the quality of the healing is affected by the quality of the intent of the healer, the information obtained during assessment, the ability of the healer to influence the energy system of another person, and the openness of the client (Mentgen and Bulbrook, 1994). As a complementary therapy, HT is readily integrated with other types of health care, including conventional medicine and psychotherapy.

The HT program includes Therapeutic Touch (TT) (Krieger, 1979) in addition to a number of other techniques (i.e., Brennan, 1989; Hover-Kramer et al., 1996; Joy, 1979; Mentgen and Bulbrook, 1994). Both HT and TT are considered to be energy healing. HT and TT also have in common the intent of positive change for the client and assessment of the human energy system. The main differences between HT and TT are that HT practitioners utilize a wide range of energy healing techniques (instead of or in addition to TT) and a practitioner can achieve certification through HT's training program. Healing Touch International (HTI) provides international standards of practice grounded in a code of ethics for practitioners (Healing Touch International, 1997a, 1997b). Mentgen founded the systematic practitioner certification program for developing HT skills. The training program consists of five clinical levels of practitioner training (levels I, IIA, IIB, IIIA, and IIIB) and one instructor level (IV) (Mentgen and Bulbrook, 1994).

In standard HT practice, the HT practitioner serves as a facilitator of the client's own self-healing process. Healing occurs through the interaction, the connection between practitioner and client, with both persons committed to the client's healing (Mentgen and Bulbrook, 1994). The practitioner and client talk briefly about the client's health concerns. The client then removes only his or her shoes and lies on a massage table covered with a sheet or blanket, if desired. The practitioner centers herself/himself by "being fully present, connected to the self and open" (Mentgen and Bulbrook, 1994). Next, the practitioner attunes to the client, which Mentgen and Bulbrook (1994) define as entering "into relationship with another through physical touch, such as placing the

hands on the shoulders." The practitioner assesses the client's energy field by passing the hands inches above the body for the entire length of the body. Based on the practitioner's assessment and information provided by the client, the practitioner selects specific techniques. Techniques may involve a gentle but firm nonsexual physical touch by the practitioner's hands. Some of the sites touched may be the feet, ankles, knees, abdomen, head, etc. The physical touch may continue for a period of time, gauged by the practitioner's sensation of energy flow from his/her hands. In lieu of physical contact, the practitioner may work in the energy field surrounding the client's body without physically touching the client. Whether in physical contact or not, the practitioner continually reassesses the client's physical indicators, such as rate of breathing, depth of breathing, appearance of the client's eyes or movement of the eyes, and the client's pallor. Clients are advised that they may provide feedback to the practitioner, stay quiet, or discontinue treatment at their discretion during the typical 30- to 45-minute treatment. The client and practitioner begin to debrief when the practitioner "senses" resolution in the energy field of the client thus ending the treatment.

The boom in usage of forms of complementary alternative medicine and health care in recent years has drawn researchers to explore the efficacy of TT. In a meta-analysis, Winstead-Fry and Kijek (1999) reviewed 29 TT studies of pain relief, anxiety relief, and stress reduction, finding 19 studies that demonstrated benefits for clients. Lafreneire et al. (1999) examined the effect of TT on physiologic measures of cortisol, dopamine, nitric oxide in urine, as well as mood disturbance and anxiety. After three consecutive monthly sessions, significant positive post-treatment change was found in the experimental group on nitric oxide, mood disturbance, and stress reduction when compared to a control group.

Quinn and Strelkauskas (1993) conducted a TT pilot study of bereaved participants. The participants experienced positive mood changes on psychologic parameters and reductions in suppressor T-lymphocytes, implying the immune system activity was indirectly enhanced. In another study by Olson et al.

(1997), the effect of TT on immunologic outcomes of stress was assessed with pre-post measurement of blood levels of immunoglobulins A, G, and M (i.e., IgA, IgG, and IgM). Significant differences between groups were found in that the experimental group was positively affected, but the study lacked statistical power.

In keeping with Abbot (2000), the primary aim of this exploratory study was to determine the overall clinical effectiveness of HT without differentiating diagnostic condition. We reasoned that even a small effect across diagnostic categories would be especially strong evidence of the power of HT to produce an effect. The effect of HT on three quantitative variables assumed to be related to client's health was measured. Specifically, secretory immunoglobulin A (sIgA) in saliva was selected as a non-invasive physiologic measure. Higher concentrations of sIgA in saliva have been correlated with increased resistance to upper respiratory infections, or enhanced immunocompetency (Jemmott and McClelland, 1989). Self-reported stress ratings and perceptions of health enhancement were also completed. Qualitative data on the individual effects of the HT experience as reported in open-ended questionnaires were also collected.

In terms of the physiologic measure, we hypothesized increased sIgA concentrations over the treatment series and greater positive sIgA changes in treatment conditions than in the no-treatment condition. Because music and guided imagery, which are sometimes part of HT treatment, have been associated with positive sIgA changes in previous studies (McCraty et al., 1996; Rider et al., 1990), separate treatment conditions of HT with and without music and guided imagery were incorporated. Practitioner training levels were anticipated to impact treatment positively. Clients of practitioners with more training were hypothesized to have greater sIgA change between the first and final treatment than clients of practitioners with less training. Of the remaining quantitative measures, self-reported stress ratings were hypothesized to be lower after HT conditions. Hands-on healing research is complicated by the difficulty of ruling out a "placebo" response as a competing explanation for the results. Par-

ticipants obviously know if they have been touched. As in the field of psychology, the use of deception for research purposes in the form of untrained persons or trained practitioners "faking" treatment is problematic*. In light of these considerations, we hypothesized that the potential for a placebo response would be greater for overall responders than nonresponders based on previously held beliefs, expectations, and behaviors, independent of treatment conditions.

MATERIALS AND METHODS

Participants

Nineteen (19) women (86%) and 3 men (14%) participated as clients, a convenience sample of 22. The racial representation of the sample was predominately Caucasian (82%) with 14% African American and 4% Latino-American. The clients ranged in age from 13 to 73, with an average age of 38 years. Three (3) clients were teenagers (14%), 2 in their twenties (9%), 10 in their thirties (45%), 2 in their forties (9%), 4 in their fifties (18%), and 1 in his seventies (5%). No specific diagnostic group was selected for this study. A portion of this study served as a master's thesis for the first author; the sampling approach was determined by financial feasibility. A power analysis was performed, based on a medium effect size and the target sample size was 25 participants.

Nine women, all Caucasian, served as practitioner participants. The practitioners were grouped according to their level of training. Four practitioners comprised the "more training" group, with an experience range of 3–11 years. Of these four, one had completed Level 3A, and three were Certified Healing Touch Practitioners. Additionally, two of these three were also Certified Healing Touch Instructors. The remaining five practitioners comprised the "less training" group. Of the five, three had completed Level IIB, one Level IIA, and one

*Slater V. Safety, Elements and Effects of Healing Touch on Chronic Non-Malignant Abdominal Pain [unpublished doctoral dissertation]. University of Tennessee, Knoxville, 1996.

Level I, with years of experience ranging from 1–3 years. The investigators' intention was to incorporate a wide range of practitioner experience, as is the case in standard clinical practice. Because of the limited research on the effectiveness and efficacy specific to HT, practitioner training level was not conceptualized as a "dosage" in that the concept of "dosage" bears an underlying assumption of efficacy.

Research design

For an exploratory study, Creswell (1994) asserts that it is advantageous to combine methods to understand better a phenomenon being tested, defining mixed methods as the collection of both quantitative and qualitative data with results presented in both statistical analysis and themes. For this study, we used a mixed-method repeated measures design that incorporated both naturalistic and quasi-experimental approaches. Mixed-methods requires the clarification of assumptions behind the methodology (Creswell, 1994). The choice of mixed methods utilizes triangulation and initiation, advantages that Greene et al. (1989) identifies for combining methods in a single study. The assumption of triangulation is that the weakness of a single method will be neutralized by the strengths of another, with convergence of results as the goal (Jick, 1979). Initiation assumes the emergence of contradiction and new perspectives with increased methods (Green et al., 1989). We combined a variety of methods in order to evaluate the multidimensional phenomena of HT.

In the research design, we focused on balancing the external, internal, and model-fit validity concerns inherent in clinical effectiveness research. Model fit validity or credibility is a holistic approach to validity that requires the research design and methods fit the explanatory model of the modality being studied (Cassidy, 1995; Lincoln and Guba, 1985). According to Cassidy (1995), the criteria for model-fit validity are met in the clinical research of a healing intervention if the intervention is comparative standard care. With healing modalities such as HT, the intention of the healer is central to the process. Which techniques the practitioner utilizes are not considered to be as central (Brown, 2000). To regulate techniques would diverge

from standard care in the clinical practice of HT and no longer be congruent with the values of HT practitioners and clients. As an outcome study, no attempt was made to dismantle treatment for the purpose of isolating active ingredients. In the typical HT practice setting, clients bring a wide range of health concerns often presenting more than one concern per session. Practitioners chose appropriate techniques for each client, as is normal and customary for standard care in HT. In keeping with the recommendations of Mitchell (2000), the intrusiveness of the experimental method was minimized for the protocol to remain congruent with the values of the practitioners and clients.

The repeated measures design used in this study is a time series design in which the same client-practitioner dyads participated in all conditions, assuring equivalent treatment groups of 22. Because each client served as his or her own control, as well as in two treatment conditions, the need for matching groups was alleviated. Error variance is reduced and the statistical power is increased, which make smaller sample sizes appropriate (Ellis, 1999). Three conditions, presented respectively over a 2-week period, included no treatment (NT), healing touch (HT), and healing touch plus music plus guided imagery (HT+). Because prior research has demonstrated that music and guided imagery affect sIgA concentrations (McCarty et al., 1996; Rider et al., 1990), these elements, which are sometimes included in HT treatment, were restricted to the third condition only. The order of treatment condition was not counterbalanced because of the possibility of carry-over effects. Thus, the treatment utilized in this study approximated what typical HT treatment sessions would be with minimal experimenter contamination. However, the experimental protocol limited the practitioner in three ways. First, treatment length was restricted to at least 30 but not more than 45 minutes. Second, music and/or guided imagery were not permitted in any but the final condition in which both were required. Finally, all treatments were conducted in the same physical location for each client.

The repeated measures design allowed for nomothetic and idiographic data analyses. In the nomothetic approach, data were statistically analyzed with descriptive statistics, *t*

tests, and repeated measures analyses of variance. In the idiographic approach, the data were treated as 22 individual case studies. We considered this combining of quasi-experimental and naturalistic methods, paired with nomothetic and idiographic data analyses the most appropriate to determine the clinical effectiveness of HT.

Measures

A total of 12 saliva samples were collected from each participant pretreatment and post-treatment as a noninvasive physiologic measure of immune change. Psychological measures were assessed through pretreatment and post-treatment questionnaires in which clients were asked to complete self-report global ratings of their stress levels using the following format:

On a scale of 1 to 10, with 10 meaning "very stressed" and 1 meaning "not stressed" At All, I would rate my current stress level as ____.

Clients were asked to rate their global perceptions of health enhancement after each HT condition on the following items:

Do you feel that HT enhances your physical health?

Do you feel that HT enhances your emotional health?

Do you feel that HT enhances your mental health?

Do you feel that HT enhances your spiritual health?

Clients were also asked to rate their perceptions of their experiences immediately after each HT session on the following item:

Please circle the response that best describes your experience today.

1 = no difference; 2 = slightly different; 3 = some difference; 4 = makes an important difference; 5 = makes a very important difference; 6 = don't know

Placebo for the purpose of this study is defined as beliefs, expectations, or behaviors prior to treatment that contribute to positive health consequences. To assess placebo response, 11 items (Table 1) were drawn from the HEALTH Tool, a holistic assessment measure of each client (Philpy and Poznanski-Hutchinson, 1997). The authors added items 1 and 2 because

TABLE 1. PLACEBO RESPONSE PREDICTORS^a

Questions 3–13 taken from HEALTH TOOL, (Philpy & Poznanski-Hutchison, 1997). Maximum score of 13 possible.

1. "What other forms of alternative/complementary health care have you used in the year preceding today?" If client checked or listed any other forms of alternative/complementary health care, the answer was scored as yes, 1 point.
2. "Is there anything about your spiritual relationship that you think affects your health?" A yes answer was scored as 1 point.
3. If client checked "Meditation" as a current practice, the answer was scored 1 point.
4. If client checked "Imagery" as a current practice, the answer was scored 1 point.
5. If client checked prayer as Daily Use or Frequent Use, the answer was scored 1 point.
6. If client checked music as Daily Use or Frequent Use, the answer was scored 1 point.
7. If client checked that he/she has had or currently have a spiritual director, the answer was scored 1 point.

Questions 8–10 were answered with a Likert scale choice. 1 = definitely no; 5 = definitely yes; 2–4 were in between no and yes; 6 = don't know. If client checked 4 or 5 as the answer, the answer was scored 1 point.

8. "Is healing touch in alignment with religious upbringing?"
9. "Is healing touch in alignment with current spiritual beliefs?"
10. "Is healing touch in alignment with current beliefs regarding health care?"

Questions 11 and 12 were answered with a Likert scale choice. 1 = low priority; 2 = about average; 3 = average; 4 = priority; 5 = high priority; 6 = don't know or not applicable. If client checked 4 or 5 as the answer, the answer was scored 1 point.

11. "Importance of spiritual life"
12. "Importance of spiritual development"
13. "Have you ever experienced what you would consider a miraculous experience?" This question was answered with a Likert scale choice. 1 = no; 2 = unlikely; 3 = possible; 4 = probable; 5 = definitely yes; 6 = don't know or not applicable. If client checked 4 or 5 as the answer, the answer was scored 1 point.

they were not included in the HEALTH Tool. For item 1, 14 of the 22 clients recruited (64%) reported that they had not used any complementary/alternative therapies in the past year. Of the remaining 8 (36%), 3 reported having used massage therapy and 3 reported visiting a chiropractor. Four of these clients reported having used at least two complementary/alternative therapies. Reflexology, hypnotherapy, t'ai chi, reiki, cranial sacral, yoga, and rolfing were reported once each.

PROCEDURES

Practitioners were recruited by snowball sampling directly from the network of practicing HT professionals in the Middle Tennessee area by the first author, an HT practitioner apprentice who did not participate as a practitioner in this study. Each practitioner was asked to recruit one to four client volunteers who had never experienced HT. This convenience sample was drawn from practitioners' new cases and through contacts of the first author with a local outpatient addiction recovery treatment program. Family members of the practitioners were excluded from participation. Some practitioners invited skeptics of their work to participate. Others invited those who would otherwise not have been able to financially afford their services. If a practitioner was unable to recruit sufficient clients, a list of volunteers affiliated with an outpatient addiction recovery program was supplied. Five client participants (23% of the total sample) were volunteers from the addiction recovery program. Because we were not specifying diagnostic condition, we assumed no differences between these five and the remainder of our convenience sample. Practitioners with more training treated 10 clients and practitioners with less training treated 12 clients. Two female clients withdrew, without replacement, after completing the NT condition. Client volunteers were paid an honorarium of \$30 for the 6-hour time commitment of the treatment series. Practitioner volunteers were paid an honorarium of \$35 for their participation with the first client, and \$30 for each client thereafter, averaging approximately \$5 per hour for their time.

Practitioners collected four saliva samples. Two pretreatment samples in each treatment condition were collected, 30 and 60 minutes after the client arrived at the treatment site. In the 60 minutes prior to beginning the NT condition, the client completed the consent form, HEALTH Tool, and provided basic demographic information. In the NT condition, the client laid on a table for 30 minutes with the HT practitioner seated in the room. At the end of the 30-minute period, the client provided a third saliva sample. Client and practitioner participants completed post-treatment questionnaires and a final saliva sample was collected 30 minutes post-treatment. The same procedure was followed in both the HT and HT+ conditions with the additions of HT and qualitative questionnaires about the HT experience. Practitioners were instructed to provide standard care in HT for the two treatment conditions. At least 1 day was allowed between each treatment condition and the three conditions on each client were completed within a 2-week time frame.

Saliva samples were frozen within the first minutes after collection to avoid decomposition. The concentration of sIgA in the samples was determined using the radial immunodiffusion assay (RID), Mancini method (Mancini et al., 1965). Immunodiffusion is a method for carrying out a precipitin reaction in an agar gel that is based on the diffusion of antibody and/or antigen molecules through the gel (Kuby, 1997). The RID process was conducted by pouring equal amounts of Noble agar containing mouse monoclonal anti-human IgA into plates, allowing them to solidify at room temperature. After wells were cut into the agar, the frozen saliva samples were thawed and equal quantities were transferred by pipette into the precut wells. Wells were identified by number only, not treatment condition, with each sample done in triplicate on three separate plates.

Plates were incubated at 4°C for 48 hours. As the saliva diffused into the agar, a precipitate ring proportional to the concentration of sIgA in the sample formed around the well. After incubation, the plates were stained with Coomassie blue and ring diameters were measured to the nearest 0.5 mm under a magnify-

ing glass. Three measures were taken of each ring and averaged to accommodate rings that were more oval than circular.

Because no scoring format for assessing placebo potential was available from the HEALTH Tool (Philpy and Poznanski-Hutchinson, 1997), scoring was conducted as follows: one point was scored for each "yes" response or Likert scale response of 4 or 5, for a maximum possible score of 13. Clients with higher scores were assumed to be more likely to manifest a placebo response to the four criteria of health enhancement (i.e., sIgA, perceived enhancement of health, content analysis, stress ratings). In other words, if placebo alone was responsible for the treatment effect, we would expect the following trend: high scorers would be more likely to be positive responders to treatment, while low scorers would be less likely to respond.

The rules for classifying a client as a positive responder were established as follows:

1. The pre-post sIgA difference score in either the HT or HT+ condition must be one unit of measure greater than the NT condition, or the final sIgA measure (i.e., 12th measure) must be one unit of measure greater than initial sIgA measure (i.e., 1st measure).
2. There must be a positive difference of at least two units between the pre-post stress ratings in both HT and HT+ conditions.
3. There must be an overall averaged rating on the four perceptions of health enhancement (physical, emotional, mental, spiritual) items of "4" or higher. Responses of "6 = don't know" were omitted from the analyses.
4. There must be a specific positive effect reported in the qualitative data beyond relaxation, such as pain relief, for the client to be considered a positive responder. Relaxation effects reported were considered to be redundant with the stress ratings.

Questionnaires contained open-ended questions about the experience and perceived effects of HT. The clients' responses were transcribed verbatim for content analysis. Two independent teams of coders consisting of three persons each were established. Of the six

coders, three were HT practitioners and three were counselors or psychotherapists. The first coder team consisted of two HT practitioners and one psychotherapist. The second team consisted of one HT practitioner and two counselors. Because of the quantity of data, half was given to one team of coders and half given to a second team of coders, based on order of receipt.

During the initial or open coding procedure, coders worked independently to identify themes in the transcripts. Axial coding was done by group consensus of the coders after the individual coding was completed. Only themes identified by all members of the coding team were retained in the final analysis. On completion of all coding, the first author validated the remaining themes with the participants.

RESULTS

Physiologic measure

A 6×2 repeated measures analysis of variance (treatment stage \times practitioner training level) was conducted to test our hypotheses that HT treatments increased sIgA concentrations over the treatment series, that greater positive sIgA changes would be found in the treatment conditions than with no treatment, and that practitioners with more training would be more effective (Fig. 1). The within-subject variable consisted of treatment stages chronologically as follows: stage 1 = Pre NT; stage 2 = Post NT; stage 3 = Pre HT; stage 4 = Post HT; stage 5 = Pre HT+; and stage 6 = Post HT+. The

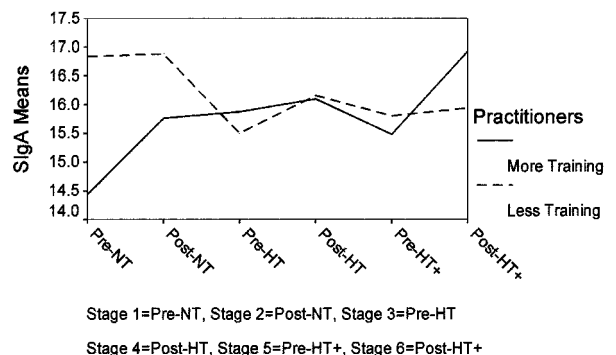


FIG. 1. Client secretory immunoglobulin A (N = 22) by chronologic stages of treatment series.

between-subject variable of practitioner training level was more versus less training. For each condition, the two pretreatment sIgA measures were collapsed into one measure. Likewise, the two post-treatment sIgA measures were collapsed into one measure for each condition, resulting in six measures for analysis per participant. The transformation was conducted to correct for the potential volatility of the sIgA measure in order to provide the best approximation of the true sIgA concentration.

The analysis revealed a significant interaction effect of the treatment stage and the practitioner training level, $F_{(5)} = 2.42$, $p \leq 0.021$ (one-tailed), with observed power = 0.746. Simple and repeated contrast tests were run to identify which pairs of means differed. We were interested in comparing the following: stages 1 and 2, stages 3 and 4, stages 5 and 6, and stages 1 and 6. The difference between stage 1 and 6 was significant, $F_{(1)} = 5.63$, $p \leq 0.014$ (one-tailed), observed power = 0.617. The effect size was 0.32. This analysis supported the hypothesis that overall sIgA changes for clients of practitioners with more training would be greater than for clients of practitioners with less training over the treatment series. The average positive change for clients of practitioners with more training was nearly four times that of the average change for clients of practitioners with less training over the treatment series.

Stress ratings

A paired sample t test was conducted to test the hypothesis that self-reported stress would be less after both HT conditions. Analyses revealed that post-treatment stress ratings were

significantly lower than pretest ratings for both HT conditions, i.e., clients experienced significant stress reduction or a relaxation response after treatment, $t_{(20)} = 6.086$, $p \leq 0.0003$ (one-tailed) for the HT condition and $t_{(21)} = 4.879$, $p \leq 0.0003$ (one-tailed), for the HT+ condition.

Perceived health enhancement

On average, clients reported emotional and mental health more improved than physical and spiritual health after two HT treatments. Table 2 illustrates the percentages of clients after each HT treatment that responded "Don't know" to the question "Do you feel that HT enhances your physical/emotional/mental/spiritual health?" The percentage of clients responding "Don't know" decreased dramatically after receiving the second HT treatment. The number of clients reporting perceptions of health enhancement increased substantially between the first and the second HT treatments. Table 2 also represents clients who rated the question "Do you feel that HT enhances your physical/emotional/mental/spiritual health?" as a "4 = makes an important difference" or "5 = makes a very important difference."

Content analysis of qualitative data

The most prevalent theme of the HT experience identified by coders was relaxation. The strength of this finding is supported by the significant self-reported reduction in clients' stress level. Other themes identified by coders were enhanced awareness and connection with the practitioner and within self. Clients reported an awareness of the process during treatment as demonstrated by Client 9's statement, "I felt as if a core of light or energy ran like a pole

TABLE 2. "DO YOU FEEL THAT HT ENHANCES YOUR HEALTH?"

Health	Clients reporting "Don't know" after 1st HT treatment	Clients reporting "Don't know" after 2nd HT treatment	Clients reporting "Important" or "Very Important" difference after 1st HT treatment	Clients reporting "Important" or "Very Important" difference after 2nd HT treatment
Physical	7 (32%)	2 (9%)	10 (45%)	17 (77%)
Emotional	4 (18%)	2 (9%)	13 (59%)	17 (77%)
Mental	5 (23%)	3 (14%)	15 (68%)	17 (77%)
Spiritual	3 (14%)	2 (9%)	11 (50%)	14 (64%)

Number in parentheses is percentage of 22 clients.
HT, Healing Touch.

through me—head to foot and beyond. Practitioner was not touching me but it was as if I had been straightened or brought into alignment along this column of energy.” Clients 1, 5, 6, 12, and 13 considered the unconditional positive regard and openness of the practitioner as important in their experiences. These identified factors contributed to the therapeutic alliance of client and practitioner.

In 1 of the 44 treatment experiences, a client described feeling uncomfortable. Client 8 reported: “Today’s experience felt negative . . . my awareness seemed to keep moving in and out of my body . . . kept feeling I was just about to touch a real spiritual point, but never quite made it.” Client 8’s practitioner said, “I knew she was not ‘finished’—that I needed to work longer but our time was up.” The practitioner was referring to the time constraint of the experimental protocol. In this case, the experimental protocol interfered with model fit validity. In light of such data, there may be implications against a rigid adherence to the time constraints of an experimental protocol for future research. However, 98% of the reports did not indicate discomfort, suggesting that Client 8’s reaction could be considered an outlier.

Six of 11 clients (55%) who reported pain experienced relief after HT. Client 11 experienced

such dramatic pain relief when she was treated that she requested to participate in future HT research on chronic illness. All clients reported changes during and after treatment. Some clients attributed these changes to HT. Many reported mood changes, with negative or neutral mood changing to positive. Physical changes, mainly the experience of heat from the practitioners’ hands and tingling sensations as practitioners worked, were a subtheme for clients.

Single case analysis

The present study consists, in essence, of 22 single case studies. Tables 3 and 4 present single case responses together with client’s general health complaints. The row in the table with “yes” marks the individual client responses that met the preestablished criteria for a positive response to treatment. For an individual case to be considered an overall positive responder to treatment, the client must have met the criteria for at least two of the four forms of data collected.

Seven of 22 clients (32%), all female, met the criterion for an individual sIgA response. Thirteen of the 14 clients who met the criterion for an individual drop in stress level were female. Twelve of the 13 clients who met the criterion

TABLE 3. SINGLE CASE ANALYSIS: PRACTITIONERS WITH MORE TRAINING

Client	Client’s health complaints	IgA Increased	Stress level dropped	Perceived health enhancement	Content analysis	Placebo predictor score
1	Stress, breast and shoulder pain, menopause-related depression			Yes		11
3	Fertility concerns			Yes		9
<u>4</u> ^a	Stress, ankle pain, vertigo		Yes			8
6	Depression, pain		Yes		Pain relief	6
8	Arthritis, allergies, thyroid					9
9	Cardiac reflux, TMJ, migraine headaches, acne		Yes	Yes	Pain relief	9
10	Spondilolythesis, frequent sinus infections		Yes	Yes		10
13 ^b	Recovering addict, depression, anemia, high blood pressure, arthritis, hiatal hernia	Yes	Yes	Yes		11
14	HIV-positive, genital warts, herpes	Yes	Yes			5
16	Recovering addict, depression	Yes		Yes		9

^aUnderlined client number is male.

^bReported skepticism toward treatment in the qualitative data.

All treatment locations in practitioners’ offices.

IgA, immunoglobulin A; TMJ, temporomandibular joint; HIV, human immunodeficiency virus.

TABLE 4. SINGLE CASE ANALYSIS: PRACTITIONERS WITH LESS TRAINING

<i>Client</i>	<i>Client's health complaints</i>	<i>IgA increased</i>	<i>Stress level dropped</i>	<i>Perceived health enhancement</i>	<i>Content analysis</i>	<i>Placebo predictor score</i>
2	Stress, PMS related headaches		Yes	Yes		3
5 ^a	Recovering addict, depression		Yes	Yes		9
7 ^a	Borderline diabetic, stress, depression		Yes	Yes		7
11	Chronic stomach pain, acid reflux, racing heart, allergies, depression, headaches		Yes	Yes	Pain relief	7
<u>12</u> ^{b,c}	60% blockage in one artery of heart, cataract in left eye					1
15	Migraine headaches, allergies, asthma	Yes			Easier breathing	3
17 ^{a,b}	Recovering addict, poor vision in left, chronic nasal congestion, interrupted sleep	Yes				3
18	Asthma					6
19 ^b	Earache	Yes	Yes		Pain relief	7
<u>20</u> ^{a,b,c}	Cancer survivor, diabetes, depression, irregular heart beat, high blood pressure		Yes	Yes		5
21 ^a	Stress, sciatica, migraines, mitro valve replacement last year	Yes	Yes	Yes	Pain relief	4
22 ^{a,b}	Recovering addict, bulging disc (back), allergies, arthritis		Yes	Yes	Pain relief	10

^aTreatment location in client's home (all other treatment locations in practitioners' offices).

^bReported skepticism toward treatment in the qualitative data.

^cUnderlined client numbers are male.

IgA, immunoglobulin A; PMS, premenstrual syndrome.

for individual perceived health enhancement were female. Seven clients of 22 (32%), all female, reported pain relief or asthma relief (easier breathing) in the qualitative responses. One client (5%) was a responder on all four measures, five clients (23%) were responders on three measures, and nine clients (41%) were responders on two measures. Four clients (18%) were responders on only one measure and three (14%) were nonresponders.

It is difficult to interpret whether there were gender differences in treatment response, due to the small number of male participants. Only one of three male clients (33%) was a positive responder in contrast to 14 of 19 female clients (74%). Conditions in which health enhancement was reported included acute and chronic pain, asthma (easier breathing), depression, anxiety, and recovery from drug addiction. One of the positive responders on the sIgA measure was human immunodeficiency virus (HIV) positive.

The possibility that menstrual cycle fluctuations in sIgA were responsible for positive sIgA change was examined on a case by case basis and ruled out. Six of the seven sIgA responders were at a time in their cycle when their sIgA con-

centrations would be expected to be highest, yet they experienced positive sIgA change beyond this high level in the HT conditions, high enough to qualify them as sIgA responders. The remaining sIgA responder was postmenopausal.

The use of music and guided imagery in the HT+ condition was also examined as a competing explanation for sIgA change. Clients rated how well they liked the music during treatment, assuming if they rated the music highly, there was potential for music related change. Two clients (15 and 17) demonstrated change in the HT only condition, so music and imagery were obviously not factors. Two clients (14 and 21) experienced equivalent sIgA change in both HT conditions, so again, music and imagery eliminated as factors. Three clients (13, 16, and 19) experienced their sIgA change only in the HT+ condition. Clients 13 and 16 failed to rate how well they liked the music, while Client 19 gave the music a rating of 10, the highest possible rating. Thus, while these three clients were in the minority of sIgA responders, the possibility exists that music and guided imagery were factors in their individual sIgA change during the HT+ condition.

Placebo score analyses

As measured by the placebo predictor questions, the evidence demonstrates that positive responses were not exclusively because of placebo, that is, client beliefs, expectations, and behaviors regarding HT. The overall treatment responders did not differ from the nonresponders on placebo scores ($t_{(20)} = 2.1$, $p \leq 0.417$, one-tailed). Table 5 contains a secondary analysis summarizing mean placebo scores of responders and nonresponders, those with higher placebo scores assumed to be more likely to manifest a placebo response. Perceived health enhancement was the only criterion for which there was a significant difference between responders and nonresponders on placebo scores.

Practitioner training level

In summary, practitioners with higher levels averaged 1.7 positive responses per client while practitioners with lower training levels averaged 2.0 positive responses per client out of a maximum of 4. However, practitioners with more training performed significantly better on the average than practitioners with less training in eliciting positive sIgA change. A comparison of mean placebo scores between clients of practitioners with more training and clients of practitioners with less training was signifi-

cant, $t_{(20)} = 3.20$, $p \leq 0.005$, two-tailed. Caution should be used when interpreting these results, because clients of practitioners with more training had a higher average placebo score. This result raises the question of to what degree placebo contributed to the treatment effects on the sIgA and stress measures. The mean placebo scores for both groups are summarized in Table 6 by criterion. As in Table 5, the only significant difference was on the perception of health enhancement measure. In Tables 3 and 4, the majority of sIgA responders (clients 14, 15, 17, and 21) had low placebo scores (i.e., scores of 5 or less). If placebo alone was responsible for the sIgA change among responders, this would not be the case. Table 7 presents the responses to all measures based on practitioner level of training.

DISCUSSION

The aim of this study was to determine the overall outcome of HT in clinical practice, regardless of diagnostic category. The data of this study support findings of relaxation and pain relief as reported in Winstead and Kijek (1999). The themes of connectedness, enhanced awareness, and relaxation with the HT experience may be important to the practice of HT combined with psychotherapy. Geddes (2001) de-

TABLE 5. PLACEBO SCORES OF RESPONDERS VERSUS NONRESPONDERS

Type of response	Mean placebo score of responders	Mean placebo score of nonresponders	Actual number of responders (percentage of 22)	t	p < one-tailed	Degrees of freedom
SigA increase	6.0	7.3	7 (32%)	-1.01	0.16	20
Stress level drop	7.2	6.3	14 (64%)	0.65	0.26	20
Perceived health enhancement	8.0	5.3	13 (59%)	2.36	0.02 ^a	20
Qualitative report of treatment effect	6.6	7.1	7 (32%)	-0.37	0.36	20
Overall (client must have responded to 2, 3, or 4 criteria)	7.0	6.7	15 (68%)	0.21	0.42	20

^aSignificant difference between responders and nonresponders.

TABLE 6. PLACEBO SCORES OF RESPONDERS GROUPED BY TRAINING LEVEL OF PRACTITIONER

	<i>sIgA increase</i>	<i>Stress level dropped</i>	<i>Perception of health enhancement</i>	<i>Qualitative report of treatment effect</i>	<i>Overall</i>
Mean placebo score for client responders of practitioners with more training	8.3	8.2	9.8	7.5	8.3
Mean placebo score for client responders of practitioners with less training	4.3	6.5	6.4	6.2	6.1
<i>t</i> Test comparing placebo scores of responders by practitioners training level	<i>t</i> = 2.20 <i>p</i> ≤ 0.079 Two-tailed <i>df</i> = 5	<i>t</i> = 1.30 <i>p</i> ≤ 0.215 Two-tailed <i>df</i> = 12	<i>t</i> = 3.24 ^a <i>p</i> < .012 ^b Two-tailed <i>df</i> = 7.942 ^a	<i>t</i> = .59 <i>p</i> < .584 Two-tailed <i>df</i> = 5	<i>t</i> = 1.72 <i>p</i> < .109 Two-tailed <i>df</i> = 1

^aLevene's test revealed that variances were not homogeneous. Statistics reported do not assume equal variances.

^bSignificant difference between clients of practitioners with more training and clients of practitioners with less training.

sIgA, secretory immunoglobulin A; *df*, degrees of freedom.

scribed the essence of HT as the experience of relationship between practitioner and client. The use of HT at the beginning of the psychotherapeutic relationship may establish the therapeutic alliance more quickly, an important consideration when brief therapies are the norm. In Figure 1, the *sIgA* change for clients of practitioners with more training during stages 1 and 2 of the NT condition may reflect the ability to rapidly establish a therapeutic alliance or relationship. The differences found between more and less trained therapists on treatment efficacy in this study are prevalent in the psychotherapy research literature as noted in Bergin and Garfield (1994). Analyses of *sIgA*, stress, perceptions of health enhancement, qualitative themes, and placebo prediction suggest that HT is clinically effective. Given

Quinn's (1989) findings of positive effects based on mock treatment, these results should be interpreted cautiously. The inability of practitioners with less training to suppress or "turn off" the energy flow when initially meeting with the client may have contaminated the no treatment/control condition, another interpretation of stages 1 and 2 in Figure 1.

Our findings speak to the value of the triangulation of methods and approaches to data analyses utilized. Given the threat to internal validity and probability of Type II error inherent in the use of a heterogeneous convenience sample, our findings are remarkable. However, it is possible that because some practitioners recruited client participants, the practitioner's initial contact alone prior to the non-HT stage may have influenced the results. Practitioner

TABLE 7. CLIENT RESPONSE BY PRACTITIONER TRAINING LEVEL

<i>Training level of practitioner</i>	<i>sIgA increase</i>	<i>Stress level dropped</i>	<i>Perception of health enhancement</i>	<i>Qualitative report of treatment effect</i>	<i>Overall</i>
More training <i>n</i> = 10	3 (30%)	6 (60%)	6 (60%)	2 (20%)	6 (60%)
Less training <i>n</i> = 12	4 (33%)	8 (67%)	7 (58%)	5 (42%)	9 (75%)

sIgA, secretory immunoglobulin A.

bias may have been present in those cases where skeptics were recruited in that the practitioners "tried harder." In cases where participants who would have been financially unable to obtain HT treatment were utilized, client response bias may have been present.

With respect to the questionnaire data, no validity or reliability information is available for placebo predictor questions, stress ratings, perceptions of health enhancement or for the HEALTH Tool (Philpy and Pozanski-Hutchinson, 1997). These self-report measures may have been susceptible to a response set bias, especially in light of the differing perceptions of health enhancement for the responder and nonresponder groups. Treatment location may also have played a role in differing sIgA concentrations as is demonstrated for clients of practitioners with less training who received treatment in their own homes (Fig. 1, stages 1 and 2). By stages 3, 4 and 5, there is little difference between groups. The slight decrease between stage 4 and 5 may be evidence of change caused by placebo, assuming that change caused by placebo may not be lasting change. The increases in stages 5 and 6 may be the actual treatment change. The finding that the majority of sIgA responders had low placebo scores while the clients of practitioners with more training had higher placebo scores on average than did the clients of practitioners with less training supports this interpretation. Greene et al. (1989) identified "initiation," the emergence of contradiction as an advantage of mixed methods in a single study. Taking all analyses into consideration, Figure 1 may be interpreted best as an interaction of treatment, placebo, and training level.

For the sIgA measure, the probability that the results were due to chance (Type I error) is only approximately 2%. The statistical power of the sIgA measure (0.746) can be interpreted as a 75% probability that a Type II error did not occur, in other words, not finding an effect when there really was one. Regardless of the degree to which the beliefs, expectations and behaviors of clients (placebo) contributed to their improved sIgA, the results could be also interpreted as evidence of the degree to which HT practitioners were able to activate and enhance their clients' capacity to self-heal (placebo re-

sponse). The results have relevance for the treatment of those to whom increased resistance to upper respiratory infection would be beneficial.

A potential confound to the purity of the HT treatment delivered in this study is that some of the practitioners had training in other energy healing modalities such as reiki. Reiki teachings maintain that a practitioner who has a Reiki attunement will henceforth deliver quantitatively and qualitatively "different" energy during healing. Such training may have influenced the quality of the treatment delivered. However, training in multiple energy healing modalities is common among HT practitioners. Had we controlled for such an "other training" variable, the external validity of the results in our clinical effectiveness study would have been compromised.

An area for future research may be the teasing apart of variables such as "other training" and "practitioner training level" or "dosage" of HT. Among HT practitioners who participated in this study, the number of years of experience of each practitioner coincided with level of HT training. However, this is not always the case. The first author has completed training Level 3A in the HT program, but has 8 years of experience in different forms of energy healing in contrast to the 3A practitioner in this study with 3 years of experience. Future investigators who aim to isolate "other training" and "training level" variables should be cognizant of the heterogeneity of healer training and experience.

The findings suggest preliminary potential for placebo prediction and location bias. If validity and reliability are demonstrated in the future, these may be useful for any conventional medicine, psychotherapy, or complementary/alternative treatment research. The responses of recovering addicts in the study met the criteria for clinical significance of effectiveness. An HIV-positive individual responded with increases in sIgA concentrations in both HT treatments, but not for the NT condition. The effectiveness of HT on both addiction and HIV-positive populations are two directions for further research.

Overall, the results strongly support the clin-

ical effectiveness of HT across a wide range of health conditions with clients who have multiple simultaneous health concerns. Triangulation and the mixing of methods proved to be fruitful in addressing the aims of this study. The data suggest that treatment efficacy differs with respect to practitioner training level, but not to the degree suggested solely by the repeated measures analysis of variance. Replication with a larger sample is needed to further explore these issues and the role of placebo prediction in clinical effectiveness.

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