

Distance Healing of Patients With Major Depression

BRUCE GREYSON¹

Dept. of Psychiatry, University of Connecticut Health Center, Farmington, CT, 06030

Abstract — The therapeutic effect of distance healing as an adjunct to standard antidepressant medication was examined in a study using a randomized, double-blind, longitudinal design. Adult patients (N=40) admitted to an inpatient psychiatric unit for major depression, aged 19–81 years, were randomly assigned to either an experimental or control group. All subjects received standard treatment for depression; in addition, experimental group subjects received distance healing daily for 6 weeks by volunteers trained in LeShan's meditation techniques. Outcome was measured weekly for 6 weeks and then biweekly for 6 more weeks, using the Hamilton Rating Scale for Depression, Brief Psychiatric Rating Scale, Global Assessment of Function, and visual analog scale for depression. Results indicated a nonsignificant trend for experimental subjects to show greater improvement than control subjects in depression, general psychopathology, and overall subjective distress. Among experimental subjects, favorable outcomes were significantly correlated with number of healing sessions received and with healers' ratings of the "strength" of the healing sessions.

Introduction

Conservative estimates of the number of Americans experiencing diagnosable depressive episodes in a given year range between 10 and 20 million, while the overall prevalence for major depressive episodes is between 3 and 5% of the population (Cancro, 1985). The American Psychiatric Association guidelines for treatment of major depression note that, although moderate to severe major depression generally requires treatment with medication or electroconvulsive therapy coupled with psychotherapy, those approaches do not guarantee successful outcomes, nor should they exclude other approaches (American Psychiatric Association, 1993). In fact, 10 to 15% of patients with major depression drop out of antidepressant medication trials in the first three weeks; of the remaining patients only 60 to 70% can be expected to show eventual therapeutic responses, and substantially fewer experience a complete remission (American Psychiatric Association, 1993). Researchers have studied the augmentation of antidepressant medication by a number of treatment modalities, including the addition of potentiating medications that are not antidepressants in themselves, electroconvulsive therapy, and a variety of individual and

¹Reprint requests should be addressed to Bruce Greyson, M.D., Division of Personality Studies, Box 152, Health Sciences Center, University of Virginia, Charlottesville, VA 22908.

group psychotherapies. Another therapeutic option yet unexplored is the augmentation of antidepressant medication by psychic healing techniques.

A variety of controlled and uncontrolled studies have suggested that some forms of psychic healing can augment the therapeutic effects of traditional medical treatments (Braud, 1990; Grad, 1967, 1971-72; Grad, Cadoret, and Paul, 1961; Goodrich, 1974; Winston, 1975); Benor (1990) has identified 140 controlled trials of healing, of which 61 (44%) documented therapeutic effects at a significance level less than $p = 0.01$. Studies have demonstrated the apparent ability of healers to alter the ultraviolet light absorption of water in sealed test tubes (Dean, 1983) and to alter *in vitro* enzyme activity (Smith, 1968).

Experiments have indicated that a healer's efforts result in faster recovery of rodents from wounds (Grad, Cadoret, and Paul, 1961) and from anesthesia (Watkins and Watkins, 1971). A double-blind study of the effect of intercessory prayer in a cardiac care unit showed patients randomly assigned to the experimental group required fewer traditional medical interventions and had a more benign course than those randomly assigned to the control group (Byrd, 1988). In a single-blind study, healers at a distance were able to reduce electrodermal activity of highly anxious subjects who did not know when the healing sessions were to occur (Braud and Schlitz, 1983, 1989).

Therapeutic touch, a purported healing technique that relies on the conscious intent of the healer but not on that of the patient, was derived from the ancient practice of laying on of hands (Krieger, 1979, 1981). That technique has been shown to increase the rate of wound healing in mice (Grad, 1965), to elevate *in vivo* serum hemoglobin in humans (Krieger, 1972, 1973, 1974, 1975), to increase *in vitro* trypsin activity (Smith, 1972), and to accelerate plant growth (Grad, 1963, 1964). Therapeutic touch has also been attempted on psychological and psychosomatic conditions: it has been shown to induce alterations in electroencephalogram, electrocardiogram, and galvanic skin response reflecting a state of deep relaxation (Krieger, Peper, and Ancoli, 1979), to diminish self-rated anxiety states (Heidt, 1981; Quinn, 1982, 1984), and to decrease tension headache pain (Keller, 1983).

Quinn (1982) demonstrated that physical touch between healer and patient was not essential for this kind of healing to be effective. "Noncontact therapeutic touch" has been shown to induce relaxation in neonates (Fedoruk, 1984) and to reduce post-operative pain (Connell-Meehan, 1985) and tension headache (Keller, 1986). A double-blind study of noncontact therapeutic touch documented the effectiveness of this technique in accelerating surgical wound healing (Wirth, 1990).

In the late 1960s LeShan developed a method for training individuals in a meditation technique that seemed to facilitate healing of medical conditions (Goodrich, 1974, 1975, 1976; LeShan, 1974, 1975, 1976). Since that time, over a thousand people have been trained in this method, originally by LeShan and since 1977 by Goodrich (Goodrich, 1978, 1993; Nester, 1980). This

method is used as an adjunct to ordinary medical procedures, and not as a substitute for them. This purported healing technique can be performed either at a distance or in the presence of the patient. It was developed as a teachable skill based on LeShan's scientific analysis and theoretical work, which suggested that this technique taps a normal human ability to stimulate a patient's natural capacity for self-healing to function more quickly and efficiently than usual.

This healing technique, rather than targeting a specific dysfunction, is hypothesized to help all of a patient's systems and bodily functions move toward greater balance and self-healing in a holistic and organismic manner, correcting imbalances caused by disease or trauma and supporting and enhancing the positive effects of traditional medical interventions. Unlike healing techniques that purport to transfer energy from the healer to the patient, in this method the healer accesses a state of consciousness that seems to facilitate an altered state for the patient, in which the patient's own self-healing abilities are stimulated and enhanced.

In addition to its physical effects, the LeShan healing process is said to evoke a milieu of humanism and care, a quality of spirit and of pure and deeply powerful compassion. Patients who are subjects of these healings report experiencing a sense of being unafraid and more fully at home in the universe, even when they may be extraordinarily stressed by threatening situations. Informal observations indicate that these effects appear to counteract shock and, among other things, to help the body ameliorate the negative side effects of general anesthesia.

Two unpublished doctoral dissertations have specifically addressed LeShan's technique for distance healing. Goodrich (1974) elicited subjective descriptions of this type of healing from both the healers and the patients under three conditions: (1) healing in the presence of the patient; (2) synchronous distance healing, in which the healer and patient knew when the healing was to occur; and (3) nonsynchronous distance healing, in which the patient expected the healing at a time other than when it occurred (both healer and patient were blind to the nonsynchronous condition). These data were then examined blindly by three independent judges, who were able to differentiate the three conditions significantly, based on the subjective descriptions of physical and emotional states of healers and patients.

A second dissertation, by Winston (1975), studied the effect of the relationship between healer and patient on this type of distance healing. Four healing conditions in this study varied in the kind of healer-patient interaction preceding the healing itself. In the first, healer and patient were able to talk with each other and get to know one another briefly. In the second, healer and patient met but did not talk. In the third, the healer was given only a photograph and a letter from the patient, but the two never met. And in the fourth, the healer was given only a lock of the patient's hair.

Independent blind judges rating the patients' daily records of physical and mental changes were able to differentiate some of these conditions to a statisti-

cally significant degree. The condition in which healer and patient met but did not talk reliably received the highest ratings from the judges; while that in which the healer was given only a photograph and a letter reliably received the lowest ratings. The intermediate rating of the condition in which healer and patient got to know each other was consistent with Goodrich's hypothesis (1974) that ego involvement on the part of the healer may distort and interfere with the healing process.

Uncontrolled observations of patients with whom this noninvasive form of healing was done have suggested accelerated recovery rates and fewer complications or side effects in patients undergoing a wide variety of surgeries and receiving medical treatment for leg ulcers and fractures. However, despite more than 25 years of such observations on anecdotal cases, there have been no double-blind controlled studies that might provide statistical evidence, if it exists, of the effectiveness of this nonintrusive type of adjunctive healing. The current study of the recovery of patients receiving antidepressant medication for major depression was a part of that effort to assess with appropriate controls the effectiveness of distance healing.

Rationale for this Study

This was the first double-blind prospective experimental study of the effect of distance healing on patients being treated for a psychiatric disorder. While anecdotal studies of this healing technique have been published, there have been no prior attempts to assign subjects randomly to experimental and control groups and to collect outcome data in a double-blind manner.

The LeShan healing technique was selected for study primarily because there is a pool, accessible through the Consciousness Research and Training Project, Inc., of individuals who have received extensive training in this technique, and because it has been demonstrated over a 20-year period to be a skill teachable to individuals with no prior experience or skill in healing or meditation. In contrast to purported psychic healing by individuals selected for their apparent spontaneous healing abilities, demonstration of the effectiveness of this type of healing would therefore have significant implications for widespread applications in healthcare.

In addition to a standard measurement of depression, we chose to monitor standardized measures of general mental health or psychopathology and of functional abilities, since the LeShan healing technique is purported to work not on specific target symptoms or disorders but rather on the patients' general health and self-healing capacities. We chose a treatment period of 6 weeks for each subject in keeping with the consensus view that adequacy of response to traditional medical treatment for major depression cannot be judged until after a 4- to 6-week period (American Psychiatric Association, 1993). We chose to continue monitoring subjects' clinical status and functional capacity for an additional 6 weeks beyond the experimental intervention period, to as-

sess relapse after the cessation of healing sessions, should there be a significant therapeutic effect in the 6-week treatment period.

Methods

This study used a double-blind prospective experimental protocol to investigate the effect of distance healing on patients with major depression receiving traditional treatment with antidepressant medication and psychotherapy. Subjects were recruited from patients admitted to the inpatient psychiatric unit at the University of Connecticut Health Center and diagnosed as having a major depressive disorder. They were randomly assigned either to an experimental group that received distance healing for 6 weeks in addition to the standard treatment, or to a control group that received only the standard treatment. The investigator and the subjects, both blind to group assignment, rated therapeutic progress periodically for 12 weeks.

Subjects

Prospective subjects for this study included all patients admitted to the inpatient psychiatric unit at the University of Connecticut Health Center who met criteria for major depression but not for organic mental disorders (American Psychiatric Association, 1994), and whose treatment plan included antidepressant medication and psychotherapy but not electroconvulsive therapy. The nature, potential benefits, and potential risks of participation in this study were explained to prospective subjects by the investigator, and were detailed on a written informed consent form; those patients who signed the informed consent form were included as subjects. Demographic and diagnostic information about these subjects is presented in the Results section below.

Initial Data Collection

Subjects were given a structured interview by the investigator, which provided data for completion of the Hamilton Rating Scale for Depression (HRSD) (Hamilton, 1960; Williams, 1988), which quantifies intensity and frequency of depressive symptoms and is the most widely used measure of severity of depression; the Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham, 1962), which quantifies severity of symptoms of psychopathology and is widely used for assessment of patient change; and the Global Assessment of Functioning (GAF) (American Psychiatric Association, 1994), which quantifies the clinician's overall judgment of a patient's psychological, social, and occupational functioning and is generally regarded as reflecting need for treatment.

At the time of this structured interview, the subject was asked to indicate his or her general level of distress by marking a 10-cm visual analog scale, the ends of which were labeled "the best I've ever felt" (0) and "the worst I've ever felt" (10). Some statisticians claim that visual analog scales provide more de-

tailed data than categorizing scales, which lose some information by limiting the response categories (McCormack, de Home, and Sheather, 1968).

HRSD scores were used as the criterion for presence and severity of depression. Since the distance healing technique employed was posited to enhance general health and self-healing rather than to target specific disorders or symptoms, the BPRS, GAF, and visual analog scale of distress were included as measures of general well-being or psychopathology.

Assignment to Experimental or Control Group

Following the initial data collection, the investigator prepared a one-paragraph narrative description of the subject, including first name or nickname and outstanding personal characteristics, current psychosocial situation, and most prominent symptoms. These brief descriptions were faxed to a research collaborator (G.S.) in another city, who assigned subjects either to the experimental group, who received distance healing, or to the control group, who did not. The first subject in each sequentially enrolled pair was assigned to one of the two groups by a random process, and the subsequently enrolled second subject in that pair was assigned to the opposite group. Subjects were paired sequentially rather than being matched on selected parameters (*e.g.*, initial HRSD scores) to minimize the influence of season on depression.

After group assignment, the brief narrative description for each subject in *the experimental group only* was then faxed by that research collaborator (G.S.) to a second collaborator (J.G.) in another city, who never learned of subjects assigned to the control group.

Healing

The second research collaborator (J.G.) maintained a roster of individuals who had been trained by the Consciousness Research and Training Project, Inc., who had extensive experience with LeShan's distance healing technique, and who had volunteered to participate in this study. None of the participants in this study was a "professional healer" (although many are employed as traditional healthcare professionals); a condition of receiving training from the Consciousness Research and Training Project, Inc., is that one not accept compensation for healing activities.

Upon receiving a subject's brief narrative description, this second collaborator (J.G.) forwarded the description to at least two healers selected from that roster, maintaining a record of such assignments. Three subjects were assigned to 2 healers, 15 subjects were assigned to 3 healers, and 2 subjects were assigned to 4 healers. Numbers of healers varied so that the assigning research collaborator (J.G.) could be reasonably assured that each subject would receive a healing session each day, despite healers' intervening illnesses or conflicting schedules, and would be assigned to at least one healer with whose current work the research collaborator was personally familiar.

The healers assigned to each subject in the experimental group coordinated their healing sessions, which involved meditating on the assigned subject daily for the subsequent 6 weeks. In these daily sessions, healers attempted to induce through meditation a particular altered state of consciousness for which they had been trained, described as "nonlocal mind". While in that state, they included the subject in their minds in a nondirective manner, excluding any other mental content or focus in a state of deep, intense compassion.

Following each daily healing, healers rated their satisfaction with that session on a 3-point scale (3 = "exceptionally strong", 2 = "moderate", and 1 = "one of my least strong") and sent the ratings to the second research collaborator (J.G.).

Healers and subjects never met, nor learned each other's names. Subjects in both experimental and control groups received standard interventions of antidepressant medication and psychotherapy as prescribed by their attending psychiatrists, for the entire 12 weeks of data collection. Group assignment did not influence clinical decisions about subjects' antidepressant medication or psychotherapy treatment, as neither the subjects nor their treating psychiatrists knew which subjects had been randomly selected to receive distance healing until the conclusion of the study.

Outcome Data Collection

The investigator, who remained blind to subjects' assignment to the experimental or control group, assessed their clinical condition and progress weekly for the first 6 weeks following enrollment in the study, and every other week for the next 6 weeks, using a structured interview and review of relevant medical records, including status as inpatient or outpatient and suicidal behavior. While subjects were hospitalized, these weekly assessments were conducted on the inpatient psychiatric unit. Weekly assessments following discharge were conducted in the investigator's office or at the office of the subject's outpatient therapist. In order to maximize subjects' availability for follow-up, each subject was asked prior to hospital discharge to provide an address and telephone number for himself or herself, for a family member who would know how to reach the subject, and for the subject's outpatient therapist.

A structured interview at these weekly assessments provided data for the completion of the HRSD, BPRS, and GAF. In addition, at the time of each interview the subject again was asked to indicate his or her general level of distress by marking a 10-cm visual analog scale.

Data Analysis

The weekly clinical ratings and treatment parameters were used to compare the recovery rate of experimental and control groups. For the 14-month duration of the study, the investigator accumulated data from weekly assessments, and the second research collaborator (J.G.) accumulated healers' ratings of

their satisfaction with their healing sessions. At the end of the 14 months of data collection, the first research collaborator (G.S.) identified group assignments for each subject and the second research collaborator (J.G.) identified healer-subject pairings.

At the conclusion of the study, scores on the HRSD, BPRS, GAF, and visual analog scale for weeks 1-12 were calculated and mean scores of experimental and control groups compared, using t tests and repeated measures analyses of variance. Incidence of rehospitalization and incidence of suicidal behavior during those 12 weeks were also compared between the two groups, using t-tests. All data collected, including those from subjects who subsequently dropped out of the study, were included in the statistical analyses.

In addition, healers' summed ratings of their satisfaction with their healing sessions were compared with HRSD, BPRS, GAF, and visual analog scale scores.

Data Interpretation

The primary hypothesis tested was that distance healing would enhance the antidepressant effect of standard treatment of patients with major depression. Data used to test this hypothesis were comparisons between the experimental and control groups in terms of weekly HRSD scores, and incidence of rehospitalization and suicidal behaviors.

A secondary hypothesis tested was that distance healing would enhance the general mental health and functional capacity of patients with major depression. Data used to test this hypothesis were comparisons between the experimental and control groups in terms of BPRS, GAF, and visual analog scale scores.

A tertiary hypothesis tested was that healers' ratings of satisfaction with their healing sessions would be positively correlated with beneficial outcomes. Data used to test this hypothesis were correlations between healers' satisfaction ratings and HRSD, BPRS, GAF, and visual analog scale scores.

Results

Subjects

Enrollment of subjects began March 15, 1994, and continued until 40 subjects had been recruited (February 2, 1995). Of the 40 subjects enrolled, 34 (85%) were non-Hispanic white, 3 (7.5%) were Hispanic, and 3 (7.5%) were African-American; these proportions are consistent with the ethnic composition of the general inpatient psychiatric population at this hospital.

Of the 40 subjects, 29 (72.5%) were female and 11 (27.5%) male; the general population on the inpatient psychiatric unit was 65% female and 35% male. Among subjects assigned to the experimental group, 15 (75%) were female and 5 (25%) male, while among subjects in the control group, 14 (70%) were

female and 6 (30%) male. The gender difference between the two groups was not significant ($\chi^2 = 0.13$, $df = 1$).

The mean age of the 40 subjects was 39.3 years (S.D. = 12.5 years), with a range of 19-81 years. The mean age of subjects assigned to the experimental group was 39.7 years (S.D. = 12.5 years), and of subjects in the control group, 38.9 years (S.D. = 12.7 years). The age difference between the two groups was not significant ($t = 0.21$, $df = 38$).

The 40 subjects' major depressive disorders fell into three diagnostic categories: 28 subjects (70%) received a diagnosis of Major Depressive Disorder, Recurrent, Severe, Without Psychotic Features; 8 (20%) received a diagnosis of Major Depressive Disorder, Recurrent, Severe, With Psychotic Features; and 4 (10%) received a diagnosis of Bipolar Disorder, Depressed. The distribution of depressive diagnoses was identical in the two study groups.

In addition to the primary diagnosis of major depression, 10 subjects (25%) also received a secondary diagnosis of an anxiety disorder: 6 were diagnosed as having Posttraumatic Stress Disorder, 2 as having Panic Disorder, 1 as having Generalized Anxiety Disorder, and 1 as having Social Phobia. Each of the two study groups included 5 subjects with a diagnosed anxiety disorder.

Furthermore, 10 subjects (25%) received a secondary diagnosis of a substance abuse disorder: 5 were diagnosed as having Alcohol Abuse or Dependence, 3 as having Polysubstance Dependence, and 2 as having Opioid Abuse or Dependence. Four subjects in the experimental group and 6 subjects in the control group received substance abuse disorder diagnoses; that difference was not significant ($\chi^2 = 0.67$, $df = 1$).

Finally, 13 subjects (32.5%) received a secondary diagnosis of a personality disorder: 9 subjects were diagnosed as having Borderline Personality Disorder, 2 as having Dependent Personality Disorder, 1 as having Antisocial Personality Disorder, and 1 as having Personality Disorder Not Otherwise Specified. Five subjects in the experimental group and 8 in the control group received personality disorder diagnoses; this difference was not significant ($\chi^2 = 2.44$, $df = 1$).

Despite the precautions instituted to maximize subjects' availability for follow-up, 8 of the 40 subjects (20%) were lost to follow-up before the end of the intervention period (week 6); no additional subjects were lost beyond that period. Two subjects were lost in the first week, 1 by week 2, 1 by week 3, 1 by week 4, 2 by week 5, and 1 by week 6. Each of the two study groups initially included 4 subjects who were subsequently lost.

Depression

The initial mean HRSD score for the 40 subjects was 25.25 (S.D. = 5.51), with a range from 15 to 37. The initial mean HRSD score for experimental group subjects was 24.70 (S.D. = 4.47) and for control group subjects, 25.80 (S.D. = 6.46). This initial difference in depression was not significant ($t = 0.63$, $df = 38$).

The primary hypothesis to be tested was that scores on the **HRSD** would be lower among the experimental group than among the control group, suggesting a correlation between distance healing and remission from depression. As shown in Figure 1, mean **HRSD** scores of the experimental group were lower than those of the control group for most of the 12 weeks; however, these differences never reached statistical significance.

At the end of the 6-week intervention period, the mean **HRSD** score of the experimental group was 12.81 (**S.D.** = 8.36), and that of the control group, 15.56 (**S.D.** = 9.46); that difference, however, was not significant ($t = 0.87$, $df = 30$). By the end of the 12-week monitoring period, the mean **HRSD** score of the experimental group was 13.63 (**S.D.** = 7.06), and that of the control group, 14.94 (**S.D.** = 11.93); that difference also was not significant ($t = 0.38$, $df = 30$). A repeated measures analysis of variance for **HRSD** scores over the 12-week study period did not suggest a significant difference between the two groups ($F = 0.61$, $df = 130$).

Ten of the 40 subjects in this study had been admitted to the hospital initially following a suicide attempt. Five of those suicide attempts were made by subjects later randomly assigned to the experimental group, and 5 by subjects assigned to the control group. Five subjects subsequently made one or more suicide attempts during the 12 weeks of monitoring. The mean number of weeks in which the average experimental group subject attempted suicide was 0.13 weeks (**S.D.** = 0.34), and for the average control group subject, 0.31 weeks (**S.D.** = 0.87); this difference was not significant ($t = 0.80$, $df = 30$).

The initial length of hospitalization beyond enrollment in the study averaged 6.43 days (**S.D.** = 4.61 days) for the 40 subjects. Among the experimental group, mean length of stay was 6.20 days (**S.D.** = 4.28), and among the con-

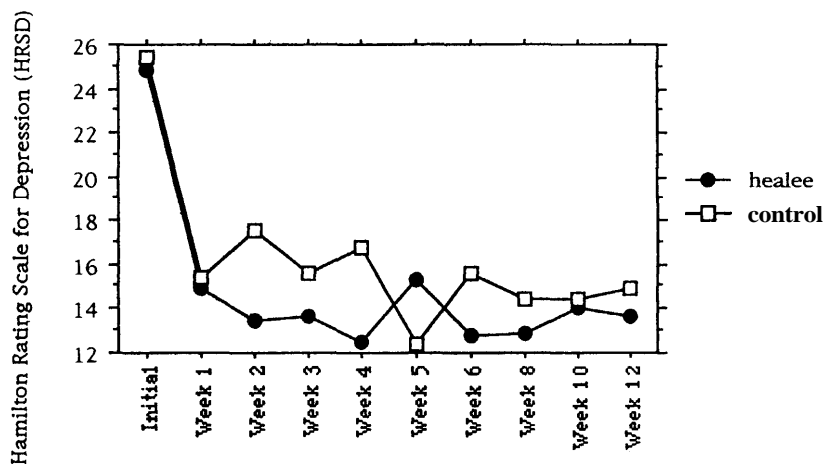


Fig. 1. Plot of Hamilton Rating Scale for Depression (HRSD) scores vs. week, by study group.

control group, 6.65 days (S.D. = 5.02). This difference in length of initial hospital stay was not significant ($t=0.31$, $df=38$).

Ten of the 40 subjects required readmissions to the hospital for depression during the 12 weeks of monitoring. The mean total number of weeks of hospitalization for subjects in the experimental group was 0.94 weeks (S.D.=1.00), and for the control group, 0.88 weeks (S.D.=1.15); this difference was not significant ($t=0.16$, $df=30$).

General Psychopathology

The initial mean BPRS score for the 40 subjects was 37.00 (S.D. = 7.11), with a range from 26 to 55. The initial mean BPRS score for experimental group subjects was 36.65 (S.D. = 5.71) and for control group subjects, 36.35 (S.D. = 8.43). This initial difference in general psychopathology was not significant ($t=0.31$, $df=38$).

The secondary hypothesis to be tested was that scores on the BPRS and visual analog scale would be lower among the experimental group than among the control group, and scores on the GAF higher among the experimental than the control group, suggesting a correlation between distance healing and enhanced well-being. As shown in Figure 2, mean BPRS scores of the experimental group were lower than those of the control group for most of the 12 weeks; however, these differences never reached statistical significance.

At the end of the 6-week intervention period, the mean BPRS score of the experimental group was 25.94 (S.D. = 5.42), and that of the control group, 30.19 (S.D. = 7.56); that difference was not significant ($t=1.83$, $df=30$). By the end of the 12-week monitoring period, the mean BPRS score of the experimental group was 26.31 (S.D. = 4.76), and that of the control group, 29.50

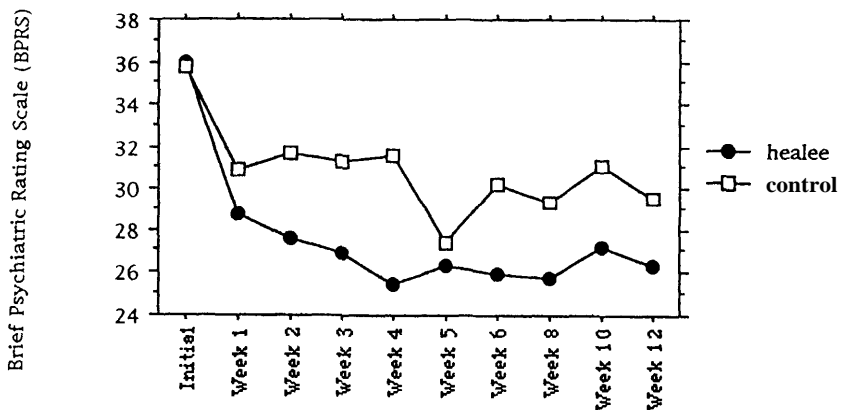


Fig. 2. Plot of Brief Psychiatric Rating Scale (BPRS) scores vs. week, by study group.

(*S.D.* = 9.58); that difference was also not significant ($t = 1.19$, $df = 30$). A repeated measures analysis of variance for **BPRS** scores over the 12-week period did not suggest a significant difference between the two groups ($t = 2.80$, $df = 130$).

Global Functioning

The GAF was unique among measures used in this study in that higher scores are desirable, reflecting a higher level of functioning. The initial mean GAF score for the 40 subjects was 24.38 (*S.D.* = 8.01), with a range from 10 to 41. The initial mean GAF score for the experimental group was 24.40 (*S.D.* = 8.07) and for the control group, 24.35 (*S.D.* = 8.17). This initial difference in global level of functioning was not significant ($t = 0.02$, $df = 38$).

As shown in Figure 3, mean GAF scores between the two groups were comparable throughout the study period. At the end of the 6-week intervention period, the mean GAF score of the experimental group was 56.44 (*S.D.* = 16.46), and that of the control group, 55.13 (*S.D.* = 17.52); this difference was not significant ($t = 0.22$, $df = 30$). By the end of the 12-week monitoring period, the mean GAF score of the experimental group was 54.25 (*S.D.* = 20.11), and that of the control group, 57.31 (*S.D.* = 23.68); this difference also was not significant ($t = 0.39$, $df = 30$). A repeated measures analysis of variance for GAF scores over the 12-week study period did not suggest a significant difference between the two groups ($F = 0.00$, $df = 130$).

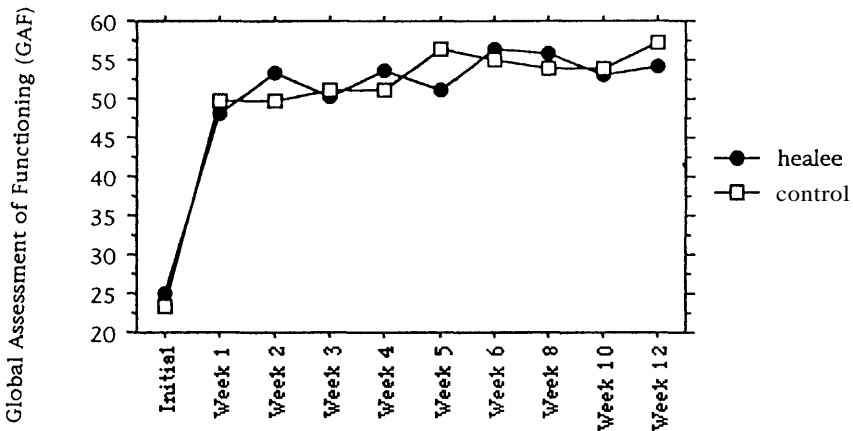


Fig. 3. Plot of Global Assessment of Functioning (GAF) scores vs. week, by study group.

General Level of Distress

The initial mean score on the visual analog scale, on which subjects rated their overall level of distress, was 8.75 (S.D. = 1.39), with a range from 5 to 10. The mean visual analog scale score of the experimental group was 8.58 (S.D. = 1.48), and that of the control group, 8.92 (S.D. = 1.30). This initial difference in level of distress was not significant ($t=0.77$, $df=38$).

As shown in Figure 4, mean visual analog scale scores of the experimental group were lower than those of the control group for most of the 12 weeks; however, these differences never reached statistical significance. At the end of the 6-week intervention period, the mean visual analog scale score of the experimental group was 4.75 (S.D. = 2.61), and that of the control group, 5.06 (S.D. = 1.83); this difference was not significant ($t=0.39$, $df=30$). By the end of the 12-week monitoring period, the mean visual analog scale score of the experimental group was 4.19 (S.D. = 3.13), and that of the control group, 4.94 (S.D. = 3.14); this difference also was not significant ($t=0.68$, $df=30$). A repeated measures analysis of variance for visual analog scale scores over the 12-week study period did not suggest a significant difference between the two groups ($F=0.59$, $df=130$).

Healers' Ratings of Healing Sessions

The third hypothesis to be tested in this study was that subjects' clinical improvement would be associated with healers' ratings of the "strength" of their healing sessions.

The healers who had volunteered to participate in this study were asked to hold healing sessions daily for 6 weeks for their assigned subjects. However, many of them skipped some sessions because of their own illnesses, schedul-

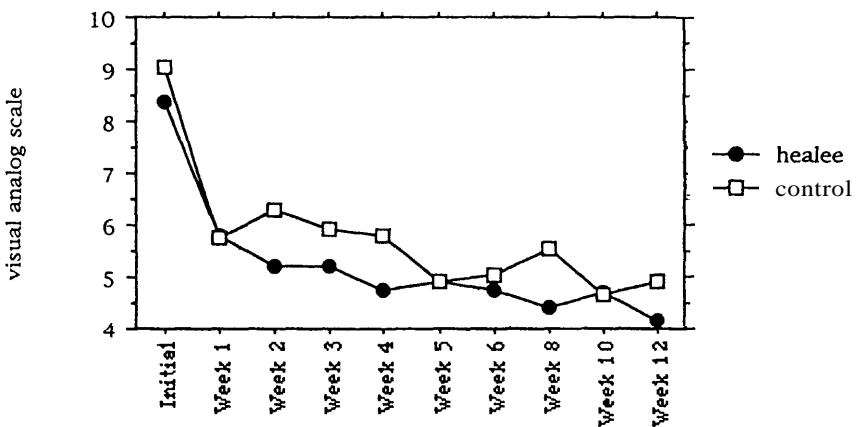


Fig. 4. visual analog scale for overall levels of distress vs. week, by study group.

ing conflicts that made intense meditation impractical on certain days, or simply forgetting or feeling unable to participate on certain days; and other healers exceeded the requested number of sessions, and extended them beyond the 6-week intervention period. As a result, the number of healing sessions actually conducted was not the same for each subject in the experimental group, nor was the number of healers participating in each session constant. The mean number of healing sessions received by each experimental group subject — counting those sessions in which only 1 healer meditated as a single session, those in which 2 healers meditated as 2 sessions, etc. — was 116.70 sessions ($S.D.=61.03$), with a range from 79 to 171.

The total number of healing sessions received by a subject showed a significant negative correlation with **HRSD** scores ($r=0.110$; $F=4.20$; $df=1,346$; $p<.05$), with **BPRS** scores ($r=0.244$; $F=21.89$; $df=1,346$; $p<0.0001$), and with visual analog scale scores ($r=0.130$; $F=5.95$; $df=1,346$; $p<0.02$). That is, the greater the number of healing sessions a subject received, the lower his or her ratings were of depression, general psychopathology, and overall level of distress. Number of healing sessions did not show a significant correlation with **GAF** scores ($r=0.028$; $F=0.26$; $df=1,346$); that is, number of sessions was not significantly associated with subjects' level of functioning.

As described above, healers rated their satisfaction with each healing session on a 3-point scale; the mean rating of all sessions was 2.16 ($S.D.=1.10$), with 3 indicating the "strongest" healing session and 1 indicating the "least strong." Adding the ratings of all the sessions received by any given subject yields an estimate of the cumulative "strength" of healing sessions that subject received. The total cumulative healing session ratings for experimental group subjects averaged 252.0 ($S.D.=132.3$), with a range from 142.5 to 348.0.

Total cumulative healing session ratings showed a significant negative correlation with **HRSD** scores ($r=0.113$; $F=4.51$; $df=1,346$; $p<0.04$), with **BPRS** scores ($r=0.244$; $F=21.92$; $df=1,346$; $p<0.0001$), and with visual analog scale scores ($r=0.118$; $F=4.88$; $df=1,346$; $p<0.03$). That is, the higher the cumulative rating of the "strength" of the healing sessions a subject received, the lower his or her ratings were of depression, general psychopathology, and overall distress. Cumulative healing session ratings did not show a significant correlation with **GAF** scores ($r=0.026$; $F=0.23$; $df=1,346$); that is, cumulative healing "strength" ratings were not significantly associated with subjects' level of functioning.

Discussion

The primary and secondary hypotheses tested in this study, that distance healing would enhance the therapeutic effect of antidepressant medication and that it would enhance the general mental health and functional capacity of patients with major depression, were not supported by the data. Patients who received distance healing were in fact rated as having less depression and less general psychopathology, and rated themselves as having less overall distress,

than matched patients who did not receive distance healing, both during the 6-week intervention period and during the subsequent 6-week monitoring period, but in no case was that difference statistically significant.

The failure to find a statistically significant effect of distance healing in this study may be attributed to one or more of five factors. First, it may be a function of the healing technique itself. Although the LeShan technique for distance healing has been shown to be effective for a variety of purely physiological medical conditions, it might not be effective for psychiatric disorders. However, given that the technique purports to help all of a patient's bodily functions move toward greater balance in a holistic manner and evoke a milieu of humanism and care, it would be surprising if it were found to work only on purely physiological disorders and not on ones with an emotional component.

Second, the failure to find significant results may be attributed to the healers themselves. It is plausible to assume that healers might differ in their effectiveness, despite having received the same standard training, as a result both of pre-training factors and of the frequency and recency of practice subsequent to training. Healers in this study were volunteers, and while the research collaborator who maintained the roster of healers attempted to assign each subject to at least one healer with whose recent work she was familiar, there was no rigorous measure of the healers' efficacy based on previous healings.

Third, the failure to find significant results may be attributed to the nature of depressive disorders. While the compassion and humanistic care evoked in the LeShan technique may facilitate healing in straightforward physiological disorders, it may be that the complex psychodynamic factors involved in depression are more responsive to some response other than unconditional positive regard. Furthermore, in monitoring recovery from a physiological disorder, it may be possible to ensure conditions conducive to healing, such as immobilization of a fractured bone or sterile dressings on a skin lesion. In the follow-up of depressed patients, however, it is impossible to measure, let alone ensure, conditions conducive to healing, such as experiences that promote self-esteem or protection from overwhelming stressors.

A related possibility is that it was not the depressive disorders that interfered with the putative therapeutic response to distance healing, but the additional mental disorders diagnosed in a substantial proportion of the subjects. Many of these patients were diagnosed as having comorbid psychotic features, borderline personality disorder, or substance abuse, all of which may complicate the therapeutic response to any antidepressant treatment.

Fourth, the failure to find significant results may be attributed to the nature of the bond between the healers and depressed patients. In the LeShan technique, the healer attempts to access a state of consciousness that facilitates an altered state for the patient; but that may require some degree of rapport between healer and patient and some openness on the part of the patient to the altered state. It may be that the healers find the emotional state of the depressed patient too toxic to deal with effectively; or that the pervasiveness of the de-

pressed emotional state prevents the patient from entering the altered state of consciousness necessary to benefit from the healing; or that the discrepancy between the emotional states of the healer and the patient is too great to be bridged by this technique. These speculations on potential problems within the healer-patient bond, it should be mentioned, are not ones with which most of the healers would concur.

Finally, the failure to find significant results may be attributed to the study methodology. The fact that nonsignificant trends were seen in three of the four outcome measures suggests that a larger sample size might have yielded a more robust difference between experimental and control groups. Both the experimental and control groups in fact showed dramatic improvement, presumably due to the standard antidepressant treatments administered; it is possible that the drug treatment effect swamped and concealed any significant effect of the distance healing. The brief narratives faxed to the healers may have been inadequate to convey a meaningful enough sense of the patient to permit the healing relationship to develop (although none of the healers offered that complaint). The weekly follow-up interviews (and biweekly interviews during weeks 7-12) may have provided too few data points to capture the full impact of the healing. And the specific measures used to monitor depression, psychopathology, global functioning, and overall distress may have been too superficial or inaccurate in their focus to pick up subtle effects of the healing on general well-being.

Despite the failure to confirm the primary and secondary hypotheses by demonstrating differences between the experimental and control groups, this study did confirm the tertiary hypothesis by finding statistically significant effects of healing within the experimental group. The positive correlation between beneficial outcomes and both number of healing sessions and cumulative "strength" of healing suggests that the distance healing did exert some therapeutic effect on these patients.

These mixed data provide the rationale for a more broadly-based study that would examine more effectively the effects of distance healing both on depression and on other psychiatric disorders. Outcome measures that permit more individualized responses, and a larger sample size, comprised of patients whose depression is not severe enough to require treatment with antidepressant medications and who do not have comorbid psychosis, personality disorders, or substance abuse, may lead to more robust findings. Assuming that the investigator's brief narratives describing the patients conveyed insufficient information to allow the healers to bond with their assigned patients, it may be advisable to ask the patients themselves to write brief narrative descriptions, in their own handwriting, of themselves, their symptoms, and their psychosocial situations. Participating healers might be recruited on the basis of prior demonstrated success, rather than relying on volunteers from among individuals who had completed the training. Greater control over the number of healing sessions would also be preferable, allowing predetermined numbers of ses-

sions and of healers in each session to be assured. Significant correlations should be sought between outcome measures and "strength" of healing, as rated by the healers, rather than simply between group means.

If these modifications yield evidence of significant therapeutic effect of healing upon patients with major depression, then similar studies might be undertaken with other psychiatric disorders, such as anxiety disorders or somatoform disorders, and/or other modes of psychiatric treatment, such as different types of psychotherapy or somatic treatments.

Acknowledgements

Financial support for this study was provided by a research grant from the Consciousness Research and Training Project, Inc. The author gratefully acknowledges the help of Joyce Goodrich, Ph.D., Project Director of the Consciousness Research and Training Project, Inc., and of Gertrude Schmeidler, Ph.D., Emeritus Professor of Psychology at the City University of New York, in the design and implementation of this study. Dr. Goodrich coordinated the efforts of the healers in this study, while Dr. Schmeidler assigned subjects to experimental and control groups, allowing the author and Dr. Goodrich to remain blind to group assignments. The author also gratefully acknowledges the pool of healers who volunteered their time and effort for this study, and the helpful comments on earlier drafts of this manuscript by Drs. Goodrich and Schmeidler and by Ian Stevenson, M.D.

References

- American Psychiatric Association (1993). Practice guidelines for major depressive disorder in adults. *American Journal of Psychiatry*, 150, 4, Suppl. 1-26.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders, 4th ed.* Washington: American Psychiatric Association.
- Benor, D. J. (1990). Survey of spiritual healing research. *Contemporary Medical Research*, 4, 9.
- Braud, W. G. (1990). Distant mental influence on rate of hemolysis of human red blood cells. *Journal of the American Society for Psychical Research*, 84, 1.
- Braud, W., and Schlitz, M. (1983). Psychokinetic influence on electrodermal activity. *Journal of Parapsychology*, 47, 95.
- Braud, W., and Schlitz, M. (1989). A methodology for the objective study of transpersonal imagery. *Journal of Scientific Exploration*, 3, 43.
- Byrd, R. C. (1988). Positive therapeutic effects of intercessory prayer in a coronary care unit population. *Southern Medical Journal*, 81, 826.
- Cancro, R. (1985). Overview of affective disorders. In H. Kaplan and B. J. Sadock (Eds.), *Comprehensive Textbook of Psychiatry, 4th Ed.* (pp. 760-763). Baltimore, Williams and Wilkins.
- Connell-Meehan, T. (1985). *The Effects of Therapeutic Touch on the Experience of Acute Pain in Post-Operative Patients*. Unpublished doctoral dissertation, New York University: New York.
- Dean, D. (1983). Infrared measurements of healer-treated water. In W. G. Roll, J. Beloff, and R. A. White (Eds.), *Research in Parapsychology, 1982* (pp. 100-101). Metuchen, NJ: Scarecrow Press.
- Fedoruk, R. B. (1984). *Transfer of the Relaxation Response: Therapeutic Touch as a Method for Reduction of Stress in Premature Neonates*. Unpublished doctoral dissertation, University of Maryland, College Park.
- Goodrich, J. (1974). *Psychic Healing: A Pilot Study*. Unpublished doctoral dissertation, Union Graduate School, Yellow Springs, OH.

- Goodrich, J. (1975). Healing through altered states of consciousness. *Proceedings of the Nature and Nurture of Life Conference*. Stony Brook, NY: SUNY Health Sciences Center.
- Goodrich, J. (1976). Studies in paranormal healing. *New Horizons*, 2, 2, 21.
- Goodrich, J. (1978). The psychic healing training and research project. In J. L. Fosshage and P. Olsen (Eds.), *Healing: Implications For Psychotherapy* (pp. 84-108). New York: Human Sciences Press.
- Goodrich, J. (1993). Healing and meditation: Healing as a unitive experience. The LeShan work. *American Society for Psychological Research Newsletter*, 18, 2, 5.
- Grad, B. (1963). Telekinetic effect on plant growth: I. *International Journal of Parapsychology*, 5, 117.
- Grad, B. (1964). Telekinetic effect on plant growth: II. Experiments involving treatment of saline in stoppered bottles. *International Journal of Parapsychology*, 6, 473.
- Grad, B. (1965). Some biological effects of the "laying on of hands": review of experiments with animals and plants. *Journal of the American Society for Psychological Research*, 59, 95.
- Grad, B. (1967). The "laying on of hands": implications for psychotherapy, gentling and the placebo effect. *Journal of the American Society for Psychological Research*, 61, 286.
- Grad, B. (1971-72). Some biological effects of "the laying on of hands": a review of an experiment with animals. *Journal of Pastoral Counseling*, 6, 38.
- Grad, B., Cadoret, R., and Paul, G. I. (1961). An unorthodox method of treatment of wound healing in mice. *International Journal of Parapsychology*, 3, 5.
- Hamilton, M. (1960). A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry*, 23, 56.
- Heidt, P. (1981). Effect of therapeutic touch on the anxiety level of hospitalized patients. *Nursing Research*, 30, 30.
- Keller, E. (1983). *The Effects of Therapeutic Touch on Tension Headache Pain*. Unpublished master's thesis, University of Missouri, Columbia.
- Keller, E. (1986). Effects of therapeutic touch on tension headache pain. *Nursing Research*, 35, 101.
- Krieger, D. (1972). The response of *in vivo* human hemoglobin to an active healing therapy by direct laying on of hands. *Human Dimensions*, 1, 12.
- Krieger, D. (1973). The relationship of touch with the intent to help or to heal, to subjects' *in vivo* hemoglobin values: a study in personalized interaction. In *Proceedings of the 9th Annual American Nurses Association Research Conference* (pp. 39-58). New York: American Nurses Association.
- Krieger, D. (1974). Healing by the laying on of hands as a facilitator of bio-energetic change: the response of *in vivo* human hemoglobin. *Psychoenergetic Systems*, 1, 121.
- Krieger, D. (1975). Therapeutic touch: the imprimatur of nursing. *American Journal of Nursing*, 75, 7784.
- Krieger, D. (1979). *Therapeutic Touch*. Englewood Cliffs, NJ: Prentice-Hall.
- Krieger, D. (1981). *Foundation of Holistic Health Nursing Practices*. Philadelphia: Lippincott.
- Krieger, D., Peper, E., and Ancoli, S. (1979). Therapeutic touch: searching for evidence of physiological changes. *American Journal of Nursing*, 79, 660.
- LeShan, L. (1974). *How to Meditate: A Guide to Self-Discovery*. Boston: Little, Brown.
- LeShan, L. (1975). *The Medium, the Mystic, and the Physicist: Toward a General Theory of the Paranormal*. New York: Ballantine.
- LeShan, L. (1976). *Alternate Realities: The Search For the Full Human Being*. New York: Evans.
- McCormack, H. M., de Horne, D. J., and Sheather, S. (1968). Clinical applications of visual analogue scales: a critical review. *Psychological Medicine*, 18, 1007.
- Nestor, M. (1980). A healing training and research project. *American Society for Psychological Research Newsletter*, 6, 3, 15.
- Overall, J. E., and Gorham, D. R. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports*, 10, 799.
- Quinn, J. F. (1982). *An Investigation of the Effects of Therapeutic Touch Done Without Physical Contact on State Anxiety of Hospitalized Cardiovascular Patients*. Unpublished doctoral dissertation, New York University, New York.
- Quinn, J. F. (1984). Therapeutic touch as energy exchange: testing the theory. *Advances in Nursing Science*, 6, 42.
- Smith, J. (1968). Paranormal effects on enzyme activity. *Journal of Parapsychology*, 32, 281.
- Smith, M. J. (1972). Paranormal effects on enzyme activity. *Human Dimensions*, 1, 15.

- Watkins, G. L., and Watkins, A. M. (1971). Possible PK influence on the resuscitation of anesthetized mice. *Journal of Parapsychology*, 35,257.
- Williams, J. B. W. (1988). A structured interview guide for the Hamilton Depression Rating Scale. *Archives of General Psychiatry*, 45,742.
- Winston, S. (1975). *Research on Psychic Healing: A Multivariate Experiment*. Unpublished doctoral dissertation, Union Graduate School, Yellow Springs, OH.
- Wirth, D. P. (1990). The effect of noncontact therapeutic touch on the healing rate of full thickness dermal wounds. *Subtle Energies*, 1, 1.