

Biofield Therapies and Cancer-Related Symptoms: A Review

Silvia Gonella, MSc, RN, Lorenza Garrino, MSc, RN, and Valerio Dimonte, MSc, RN



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Patients with cancer can experience several treatment-related symptoms, and conventional care focuses primarily on cure and survival without a holistic approach to disease. Subsequently, an increasing number of patients are accustomed to complementary modalities to improve well-being. Biofield therapies (BTs) are complementary and alternative medicine (CAM) modalities based on the philosophy that humans have an energetic dimension. Physical and psychological symptoms may cause imbalance, and BTs are believed to balance disturbance in the energy field. This article provides a study review of the main BTs (i.e., therapeutic touch, healing touch, and Reiki) in the treatment of cancer-related symptoms. Although BTs are among the most ancient healing practices, data on their effectiveness are poor and additional multicenter research with larger samples are necessary. BTs may eventually become an autonomous field of nursing activity and allow professionals to build a relationship with the patient, thereby improving motivation. The idea that this method can be self-managed and may effectively reduce pain for patients with cancer can improve satisfaction challenges experienced by the current healthcare system.

Silvia Gonella, MSc, RN, is a researcher in nursing sciences at Università degli Studi di Verona in Verona; and Lorenza Garrino, MSc, RN, is a researcher in nursing sciences and Valerio Dimonte, MSc, RN, is an associate professor of nursing, both at Università degli Studi di Torino, all in Italy. The authors take full responsibility for the content of the article. The authors did not receive honoraria for this work. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the authors, planners, independent peer reviewers, or editorial staff. Gonella can be reached at silviago87@libero.it, with copy to editor at CJONEditor@ons.org. (Submitted October 2013. Revision submitted December 2013. Accepted for publication January 19, 2014.)

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Patients with cancer can experience several treatment-related symptoms, such as fatigue, nausea, vomiting, pain, insomnia, anxiety, and depression, which can negatively influence their health-related quality of life (QOL) (Jackson et al., 2008). Conventional care focuses primarily on cure and survival without a holistic approach to the patient (Anderson & Taylor, 2012). Therefore, particularly in the palliative phase, patients are accustomed to complementary modalities to improve well-being and increase their own self-control (Henderson & Donatelle, 2004; Lengacher et al., 2002; Molassiotis et al., 2005; Pud, Kaner, Morag, Ben-Ami, & Yaffe, 2005). Predictors of complementary and alternative medicine (CAM) use among patients with cancer include female gender, stage of disease at diagnosis, age, higher education, higher income, race, geographic location, and living farther from healthcare providers (Anderson & Taylor, 2012). However, in a five-year report period, Barnes, Bloom, and Nahin (2008) found that CAM use is increasing among all patients, with about 4 of 10 adults using CAM.

Biofield therapies (BTs), one of the most renowned CAM modalities, are based on the philosophy that humans have an energetic dimension (Anderson & Taylor, 2011). BTs are believed to balance out disturbance in the energy field caused by physical and psychological symptoms (Anderson & Taylor, 2011, 2012). BTs include therapeutic touch (TT), healing touch (HT), Reiki, Qigong, and polarity therapy (Jain & Millis, 2011; National Center for Complementary and Alternative Medicine, 2006; Vitale, 2007).

Although the use of CAM is increasing, patients often do not inform their doctors about their use of CAM (Barnes, Powell-Griner, McFann, & Nahin, 2004; Barnes et al., 2008; Ott & Lynch, 2002), showing inadequate communication between patients and providers. In the early 1990s, 34% of Americans used CAM; however, 60% of their doctors were not informed (Barnes et al., 2004). Other Canadian, British, and Australian studies showed similar data (MacLennan, Wilson, & Taylor, 1996; Millar, 1997; Thomas, Carr, Westlake, & Williams, 1991).

The current authors agree with a holistic healthcare paradigm where the individual and environment relationship is an

- ▶ **Healing Touch:** The main principle of healing touch (HT) is that the body is a complex energy system. HT includes the use of intention and the placement of hands in specific sequences above or on the body to assess areas of energy imbalance. The practitioner unblocks energy through the body, promoting physical healing and emotional, mental, and spiritual balance.
- ▶ **Reiki:** A process of laying-on of the hands to channel energy. A practitioner lays his or her hands over a fully clothed individual for conducting universal life energy into the patient with the aim of unblocking energy centers. The blockage may be physical, spiritual, or psychological.
- ▶ **Therapeutic Touch:** A contemporary interpretation of ancient healing practices. The underlying assumption of therapeutic touch (TT) is that human beings are systems of energy and that the energy field extends a few inches beyond the skin's surface. Three distinct phases of intervention exist: (a) the nurse becoming aware of the helpfulness of TT for their patients; (b) the assessment phase, where the nurse uses slow, gentle, sweeping movement of his or her hands starting from the patient's head and proceeding to the patient's feet to assess the presence of any signs of energy dissymmetry; and (c) the unruffling phase, where the nurse uses symmetric movement of his or her hands over the energy field of the patient with the goal of smoothing out or relieving energy congestion.

FIGURE 1. Types of Biofield Therapies

Note. Based on information from the American Cancer Society, 2011; Healing Touch International, 2008; International Center for Reiki Training, 2013.

important factor in the healing process; therefore, psychological conditions, patients' expectations, and care satisfaction are explored with physical variables. Compared to a prior review (Anderson & Taylor, 2012), the current article provides a broader view of the main BTs in cancer care (see Figure 1), considering all the main cancer-related symptoms and not just pain.

Methods

A literature review was conducted using Cochrane Library, PubMed, CINAHL®, PsycINFO, and TripDatabase. Databases were searched for studies in patients with a diagnosis of cancer, aged older than 18 years, and undergoing BTs to relieve cancer-related pain, anxiety, or fatigue or to increase well-being and QOL. Articles referring to surgical pain linked to neoplasm excision were not examined. No time limitations were put in place, and case reports, case series, and expert opinions were excluded.

Twenty-six studies were identified, out of which 13 referenced the main cancer-related symptoms (i.e., pain, anxiety, fatigue, and QOL) measured as primary or secondary outcomes and were therefore included in this review. Figure 2 depicts the review process, and the analysis of studies is reported in Table 1.

Results

Six studies assessed healing touch and Reiki, whereas only one assessed therapeutic touch. Two randomized, controlled trials (RCTs) had a crossover design (Cook, Guerrero, & Slater, 2004; Post-White et al., 2003), and a third showed descriptive findings for the loss of study blinding (patients became aware

of the randomization group) (Pohl et al., 2007). BTs always represented an additional intervention to the usual analgesic therapy, and the method of delivery was accurately defined.

Studies showed substantial differences in frequency of interventions that could be carried out every day, once a week, twice a week, three times a week, or four times a week. The length of treatment sessions ranged from 5–90 minutes; however, the average time was usually from 30–45 minutes. Study length ranged from five days to eight weeks; however, the average length was four to six weeks.

BTs were compared to a control group receiving only the standard drug therapy (Olson, Hanson, & Michaud, 2003; Roscoe, Matteson, Mustian, Padmanaban, & Morrow, 2005; Tsang, Carlson, & Olson, 2007) or to a placebo group undergoing a sham touch without any therapeutic purpose (Aghabati, Mohammadi, & Esmail, 2008; Catlin & Taylor-Ford, 2011; Cook et al., 2004; Pohl et al., 2007). In three trials, both assessments (experimental group versus standard care and relaxation therapy) were carried out (Beard et al., 2011; Lutgendorf et al., 2010; Post-White et al., 2003).

Pain

Pain reduction was explored in seven studies. Pohl et al. (2007) showed a significant improvement in pain when an untrained person “lays on of hands.” Three studies suggested that BTs were

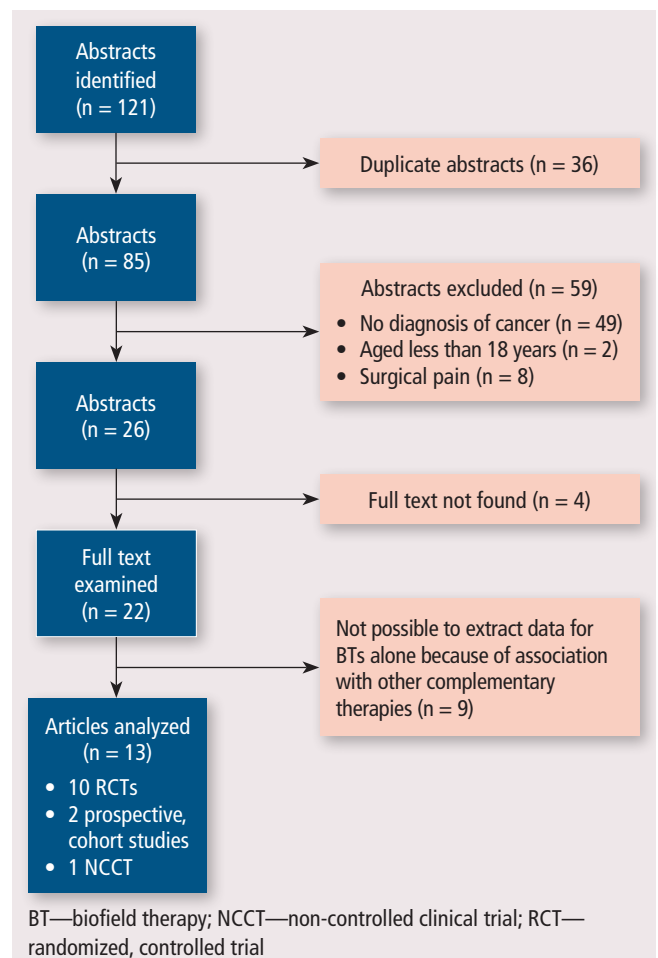


FIGURE 2. Diagram of Review Process

TABLE 1. Analysis of Reviewed Biofield Therapy Studies

Study	Design and Sample	Intervention	Main Research Variables and Instruments	Findings	Conclusions
Aghabati et al., 2008	Three-arm randomized, controlled trial 90 women with cancer undergoing CT • Age (years): 41 (SD = 12.46) • Ethnicity not reported	• TT (n = 30) • Sham touch (n = 30) • Control group (n = 30) One daily 30-minute session for five days	Pain (VAS), fatigue (RFS)	Significant decrease in pain and fatigue in TT versus sham touch and control group throughout the five days. Significant decrease in pain in sham group versus control group from second to last day and in fatigue after second, third, and fourth session.	TT-analgesic therapy is more effective than sham TT-analgesic therapy and drug therapy alone in reducing pain and fatigue.
Beard et al., 2011	Phase II randomized clinical trial 54 men with non-metastatic prostate cancer undergoing RT • Age (years): 64.5 (range = 46–91) • 91% Caucasian	• Reiki (n = 18) • RRT (n = 18) • Control group (n = 18) Two weekly 50-minute Reiki sessions or one weekly 60-minute RRT session and daily relaxation practices for eight weeks, with follow-up at 8–12 weeks.	Anxiety (STAI), depression (CES-D), quality of life (FACT-G)	No difference in STAI, CES-D and FACT-G scores; trend for Reiki group in anxiety and quality of life. Significant improvements in participants' anxiety (STAI > 42) undergoing RRT and trend for Reiki-treated patients Significant improvements in well-being FACT-G subscale in RRT group versus Reiki and the control group Significant reduction in CES-D score for participants who were depressed (CES-D > 16) undergoing RRT and trend for Reiki-treated patients	RRT reduces anxiety and depression and improve well-being. A positive trend for Reiki.
Birocco et al., 2012	Prospective cohort study 118 patients with cancer at any stage and different site distribution undergoing CT • 67 women, 51 men • Age (years): 55 (range = 33–77) • Ethnicity not reported	Up to four 30-minute Reiki sessions for each patient by trained volunteer practitioners over a three-year study period with pre- and postevaluations after each session.	Pain (NRS from 0–10), anxiety (NRS from 0–10), description of physical feelings perceived during the session	Significant reduction in anxiety and pain after the fourth session Sessions were considered helpful to improve well-being (70%), relaxation (88%), pain relief (45%), sleep quality (34%), and to reduce anxiety (70%).	Reiki therapy has no side effects and is highly appreciated by all patients; it seems to be a promising aid in anxiety control as well as in pain.
Catlin & Taylor-Ford, 2011	Three-arm double-blind, randomized, controlled trial 189 patients with cancer undergoing CT • Age (years): range = 69–78 • 82% Caucasian • Gender not reported	• Standard care • Sham Reiki placebo: One 20-minute session administered by oncology nurses without any type of treatment • Reiki: One 20-minute session administered by an experienced Reiki therapist Pre- and postevaluation in each group and postevaluation between groups	Comfort (HTCQ); well-being (Well-Being Analog Scale)	Comfort: Sham Reiki placebo versus standard care (p = 0.0027), Reiki versus standard care (p = 0.0197) Well-Being: Sham Reiki placebo versus standard care (p = 0.005), Reiki versus standard care (p = 0.051) Reiki versus sham Reiki placebo: Comfort (p = 0.8435), well-being (p = 0.7453) No difference or improvement in well-being or comfort in standard care group	Placebo effect cannot be ruled out. Comfort and well-being may be improved by an one-on-one nursing presence rather than human presence alone because family members were in all groups.

(Continued on the next page)

BF1—Brief Fatigue Inventory; BPI—Brief Pain Index; CES-D—Center for Epidemiologic Studies—Depression; CT—chemotherapy; CTS—Credibility of Therapy Scale; DBP—diastolic blood pressure; ESAS—Edmonton Symptom Assessment System; FACIT-F—Functional Assessment of Cancer Therapy—Fatigue; FACT-G—Functional Assessment of Cancer Therapy—General; FSI—Fatigue Symptom Inventory; HR—heart rate; HT—healing touch; HTCQ—Healing Touch Comfort Questionnaire; MIDASI—M.D. Anderson Symptom Inventory; MT—massage therapy; NK—natural killer; NRS—numeric rating scale; NSAID—nonsteroidal anti-inflammatory drug; POMS—Profile of Mood States—Short Form; POMS-TMD—Profile of Mood States—Total Mood Disturbance; PT—polarity therapy; QOL—quality of life; RFS—Rhoten Fatigue Scale; RR—respiratory rate; RRT—response relaxation training; RT—radiotherapy; RT—relaxation training; SBP—systolic blood pressure; STAI—Spielberg State Anxiety Inventory; TT—therapeutic touch; VAS—visual analog scale; WHIIRS—Women's Health Initiative Insomnia Rating Scale

TABLE 1. Analysis of Reviewed Biofield Therapy Studies (Continued)

Study	Design and Sample	Intervention	Main Research Variables and Instruments	Findings	Conclusions
Cook et al., 2004	Randomized, prospective, controlled trial 78 women with gynecologic (61%) or breast (39%) cancer undergoing RT • Age (years): 51 (SD = 10.4) • 68% Caucasian	<ul style="list-style-type: none"> HT (n = 44) Sham touch (n = 34) One weekly 30-minute HT session for six weeks	Quality of life (SF-36), attitudes about HT, beliefs about group assignment	No difference in SF-36 total score Significant increase in functional score, emotional role functioning, mental health, and health transition with HT The 73% of HT randomized and the 26% of sham touch randomized correctly guessed the randomization group.	HT is more effective than sham touch in increasing physical functioning. No difference on overall QOL.
Danhauer et al., 2008	Prospective cohort study 12 patients with acute leukemia undergoing CT • 9 women, 3 men • Age (years): 60 (SD = 10.4) • 100% Caucasian	Three weekly 30-minute HT sessions for five weeks	Symptoms related to treatment (MDASI); sleep quality (WHIRS); mood (POMS-SF); stress, fatigue, nausea, and pain (Distress Thermometer); qualitative feedback on HT intervention (questionnaire)	Quantitative outcome No significant change in MDASI, WHIRS, and POMS-TMD scores Significant improvement in fatigue and nausea in the pre- and post-session; trend for stress and pain Qualitative outcome All patients felt the intervention was "very useful" and would recommend it. All operators were considered "very competent," and 73% of patients wanted to continue HT sessions. The most appreciated aspects of HT were the feelings of relaxation during and after intervention (75%), feelings of calm (50%), and pain and muscle tension reduction (25%). Patients would have preferred longer HT sessions.	HT reduces fatigue and nausea over a short period of time, a positive trend for stress and pain. No significant changes for treatment-related symptoms, quality of sleep, and mood disorders over a long period of time. All patients felt the intervention was "very useful," and 73% wanted to continue treatment.
Lutgendorf et al., 2010	Three-arm randomized, controlled trial 60 women with cervical cancer undergoing CT-Rt • Age (years): 46 (range = 24–82) • 96% Caucasian	<ul style="list-style-type: none"> HT (n = 21): 20–30-minute sessions by three nurses RT (n = 20): 20–25-minute sessions by three operators Standard care (n = 19) Four weekly sessions for six weeks	Depression (CES-D and two POMS subscales), quality of life (FACT-G), fatigue (FSI), expectations (CTS modified), immune activity (NK cell activity)	No difference in expectations, quality of life, and fatigue Significant preservation of NK cell number and activity in HT versus RT and standard care Significant reduction in depressed mood in HT versus RT and standard care after six weeks Activity and number of NK cells were not linked to depression improvement.	HT is more effective than RT and standard care alone in preserving NK cells activity and improving mood. No significant difference existed in QOL, fatigue, and patients' expectations.
Olson et al., 2003	Phase II randomized clinical trial 24 patients with cancer undergoing CT or RT • 15 women, 9 men • Age (years): 58 • Ethnicity not reported	<ul style="list-style-type: none"> Reiki (n = 11): Usual opioid therapy Rest (n = 13): Usual opioid therapy Two 90-minute Reiki sessions or observation alone one hour after drug administration	Pain (ESAS and VAS of daily diaries), quality of life (14 linear analog scale items), analgesics (equivalent morphine units)	Significant reduction in pain, DBP, HR, and improved quality of life with Reiki immediately post-session No change in pain and opioids dose over the week (diaries)	The combination Reiki-opioid therapy is more effective than rest-opioid therapy in reducing pain, DBP, HR, and improving quality of life. No difference existed in the use of analgesics. <i>(Continued on the next page)</i>

BFI—Brief Fatigue Inventory; BPI—Brief Pain Index; CES-D—Center for Epidemiologic Studies—Depression; CT—chemotherapy; CTS—Credibility of Therapy Scale; DBP—diastolic blood pressure; ESAS—Edmonton Symptom Assessment System; FACIT-F—Functional Assessment of Cancer Therapy—Fatigue; FACT-G—Functional Assessment of Cancer Therapy—General; FSI—Fatigue Symptom Inventory; HR—heart rate; HT—healing touch; HTCQ—Healing Touch Comfort Questionnaire; MDASI—M.D. Anderson Symptom Inventory; MT—massage therapy; NK—natural killer; NRS—numeric rating scale; NSAID—nonsteroidal anti-inflammatory drug; POMS—Profile of Mood States; POMS-SF—Profile of Mood States—Short Form; POMS-TMD—Profile of Mood States—Total Mood Disturbance; PT—polarity therapy; QOL—quality of life; RFS—Rhoten Fatigue Scale; RR—respiratory rate; RRT—response relaxation training; RT—radiotherapy; RT—relaxation training; SBP—systolic blood pressure; STAI—Spielberg State Anxiety Inventory; TT—therapeutic touch; VAS—visual analog scale; WHIRS—Women's Health Initiative Insomnia Rating Scale

TABLE 1. Analysis of Reviewed Biofield Therapy Studies (Continued)

Study	Design and Sample	Intervention	Main Research Variables and Instruments	Findings	Conclusions
Pohl et al., 2007	Phase III prospective, randomized trial (modified in descriptive study) 80 patients with solid or hematologic advanced neoplasm undergoing chemo-hormone or radio-immunotherapy • 52 women, 28 men • Age (years): 60 (range = 39–82) • Ethnicity not reported	<ul style="list-style-type: none"> • HT (n = 40) • Placebo (n = 40) • Five subgroups (n = 16) Three five-minute sessions for one week, and the fourth session the following week	Well-being (Well-Being Analog Scale)	After the first subgroup, the healer stopped blinding, and after the second subgroup, abandoned the study that was completed as descriptive. No difference for the first two subgroups Improvement in pre- and postevaluation for each session for the last three subgroups	An effectiveness assessment was not possible for the violations of protocol. "Laying on of hands" improves well-being of patients undergoing anticancer therapies.
Post-White et al., 2003	Randomized, prospective, crossover trial 230 patients with cancer undergoing CT • 198 women, 32 men • Age (years): 55 (range = 27–83) • 98% Caucasian	<ul style="list-style-type: none"> • MT (n = 78) • HT (n = 77) • Operator's presence alone (n = 75) One weekly 45-minute session (MT, HT, or operator) for four weeks and usual care alone for four weeks	Pain (BPI); anxiety, mood disorders, and fatigue (POMS); care satisfaction (questionnaire); analgesics use (personal diary)	Immediate postintervention effects: Significant decrease in RR, HR, DBP, SBP, and pain in MT and HT versus operator MT: Reduction in mood disorders and anxiety after four weeks HT: Reduction in mood disorders and fatigue, better inner peace and falling asleep after four weeks Improved satisfaction in MT and HT versus operator Significant NSAIDs reduction in MT versus control group	MT and HT are more effective than presence alone on decreasing pain, improving physiological parameters, decreasing mood disorders and anxiety, increasing feelings of relaxation, sleep quality, patient satisfaction, and reducing NSAIDs use (MT only) and fatigue (HT).
Roscoe et al., 2005	Three-arm randomized, prospective, controlled trial 15 women with breast cancer undergoing Rt • Age (years): 53 (range = 35–72) • 93% Caucasian	<ul style="list-style-type: none"> • Usual care alone (n = 5) • One session of PT (n = 5) • Two sessions of PT (n = 5) Weekly 60–75-minute session for two weeks	Fatigue (BFI), quality of life (FACT-F)	Significant improvement in fatigue and quality of life in the PT groups versus usual care alone Not significant dose-related response in fatigue and quality of life linked to the number of PT sessions	Energy therapy is more effective than usual care alone in reducing fatigue and improving quality of life. Additional studies are needed to test a dose-related response.
Tsang et al., 2007	Randomized, prospective, crossover trial 16 patients with cancer undergoing CT • 13 women, 3 men • Age (years): 59 (range = 33–84) • 12 Caucasian, 2 Asian, and 2 other	<ul style="list-style-type: none"> • Reiki-rest group (n = 8) • Rest group-Reiki group (n = 8) A daily 45-minutes Reiki session for five days, observation for a week, two additional Reiki sessions or 45-minutes of daily rest alone for five days, and observation for a week with a two-week washout period	Fatigue (FACT-F), quality of life (FACT-G), pain and anxiety (ESAS)	Significant decrease in fatigue and improved QOL in Reiki versus rest alone Reiki effectiveness on fatigue lasts at least a week	Reiki is more effective than rest alone in improving QOL and fatigue. (Continued on the next page)

BFI—Brief Fatigue Inventory; BPI—Brief Pain Index; CES-D—Center for Epidemiologic Studies—Depression; CT—chemotherapy; CTS—Credibility of Therapy Scale; DBP—diastolic blood pressure; ESAS—Edmonton Symptom Assessment System; FACT-F—Functional Assessment of Cancer Therapy—Fatigue; FACT-G—Functional Assessment of Cancer Therapy—General; FSI—Fatigue Symptom Inventory; HR—heart rate; HT—healing touch; HTCQ—Healing Touch Comfort Questionnaire; MDASI—M.D. Anderson Symptom Inventory; MT—massage therapy; NK—natural killer; NRS—numeric rating scale; NSAID—nonsteroidal anti-inflammatory drug; POMS—Profile of Mood States—Short Form; POMS-TMD—Profile of Mood States—Total Mood Disturbance; PT—polarity therapy; QOL—quality of life; RFS—Rhoten Fatigue Scale; RR—respiratory rate; RRT—response relaxation training; RT—radiotherapy; RT—relaxation training; SBP—systolic blood pressure; STAI—Spielberg State Anxiety Inventory; TT—therapeutic touch; VAS—visual analog scale; WHIIRS—Women's Health Initiative Insomnia Rating Scale

TABLE 1. Analysis of Reviewed Biofield Therapy Studies (Continued)

Study	Design and Sample	Intervention	Main Research Variables and Instruments	Findings	Conclusions
Weze et al., 2004	<p>Non-controlled clinical trial with pre/post design</p> <p>35 participants with cancer undergoing CT</p> <ul style="list-style-type: none"> • 23 women, 11 men • Age (years): 57 (range = 24–80) • Ethnicity not reported 	Four weekly 60-minute HT sessions for four weeks	Activities of daily living (EQ-5D); pain, sleep disturbances, drugs use, stress, coping skills, expectations, and satisfaction (VAS scale)	<p>Greater improvement in stress, pain, QOL, quality of sleep, and coping skills with more severe symptoms at baseline</p> <p>No statistically significant difference for participation in activities of daily living</p> <p>Use of drugs (analgesics, antidepressants, steroids) could be unchanged (62%), reduced (23%), or increased (15%).</p> <p>8 of 10 points satisfaction</p> <p>Baseline expectation “see what happens”</p>	Significant improvement in both the physical and psychological spheres with HT. Baseline expectation not predictive for outcomes. Good satisfaction with care received. No change in drug use.

BFI—Brief Fatigue Inventory; BPI—Brief Pain Index; CES-D—Center for Epidemiologic Studies–Depression; CT—chemotherapy; CTS—Credibility of Therapy Scale; DBP—diastolic blood pressure; ESAS—Edmonton Symptom Assessment System; FACT-F—Functional Assessment of Chronic Illness Therapy–Fatigue; FACT-G—Functional Assessment of Cancer Therapy—General; FSI—Fatigue Symptom Inventory; HR—heart rate; HT—healing touch; HTCQ—Healing Touch Comfort Questionnaire; MIDASI—M.D. Anderson Symptom Inventory; MT—massage therapy; NK—natural killer; NRS—numeric rating scale; NSAID—nonsteroidal anti-inflammatory drug; POMS—Profile of Mood States; POMS-SF—Profile of Mood States–Short Form; POMS-TMD—Profile of Mood States–Total Mood Disturbance; PT—polarity therapy; QOL—quality of life; RFS—Rhoten Fatigue Scale; RR—respiratory rate; RRT—response relaxation training; RT—radiotherapy; SBP—systolic blood pressure; STAI—Spielberg State Anxiety Inventory; TT—therapeutic touch; VAS—visual analog scale; WHIRS—Women’s Health Initiative Insomnia Rating Scale

more effective than an operator’s presence alone in reducing pain (Aghabati et al., 2008; Cook et al., 2004; Post-White et al., 2003). BTs were shown to reduce pain over short periods of time, but data were conflicting over longer lengths of time. In addition, Aghabati et al. (2008) found significant pain reduction in the experimental group versus the placebo ($p < 0.04$) and control ($p < 0.001$) groups; Post-White et al. (2003) had similar findings (HT versus placebo [$p < 0.0001$] and HT versus drug therapy alone [$p < 0.011$]). However, a prospective study (Danahauer, Tooze, Holder, Miller, & Jesse, 2008) found a trend ($p = 0.06$). Only Olson et al. (2003) and Weze, Leathard, Grange, Tiplady, and Stevens (2004) identified significant pain reduction ($p < 0.04$ and $p = 0.011$, respectively) over a medium-long time period (four to eight weeks).

Fatigue

Five studies assessed fatigue, and although all found significant post-treatment fatigue reduction, data were conflicting on a four to six-week time period. Post-White et al. (2003) and Tsang et al. (2007) reported decreased asthenia in the experimental group versus placebo and control groups, whereas Lutgendorf et al. (2010) revealed no difference in those undergoing BTs compared to placebo and drug therapy alone.

Analgesic Therapy and Physiologic Parameters

Two of three studies investigating analgesics use found no drug reduction in those undergoing BTs (Olson et al., 2003; Post-White et al., 2003). The third study showed unchanged opioid use in 62% of patients, a decrease in 23% of patients, and an increase in 15% of patients (Weze et al., 2004).

Two studies (Olson et al., 2003; Post-White et al., 2003) explored the main physiologic parameters. Post-White et al. (2003) showed that BTs reduced systolic and diastolic blood pressure, heart rate, and respiratory rate compared to drug therapy alone and reduced systolic blood pressure and heart rate compared to placebo. Olson et al. (2003) found significant decrease in diastolic blood pressure and heart rate in the experimental group versus analgesic therapy alone group.

Anxiety, Depressive Disorders, and Stress

Anxiety and depressive disorders were explored in seven studies, and only Danahauer et al. (2008) found no significant change. Post-White et al. (2003) and Lutgendorf et al. (2010) showed improved mood disorders in patients undergoing HT compared to drug therapy alone ($p = 0.003$ and $p = 0.03$, respectively). However, Tsang et al. (2007) noted that patients who used Reiki reported decreased anxiety ($p < 0.01$) compared to analgesic therapy alone. Beard et al. (2011) identified a positive trend both for anxiety and depression ($p = 0.1$), and a following prospective cohort study (Birocco et al., 2012) found significant anxiety reduction ($p < 0.000001$) and improved well-being and relaxation after four Reiki sessions. In addition, a double-blind, placebo-controlled trial (Catlin & Taylor-Ford, 2011) suggested that patients receiving Reiki or sham Reiki had significantly improved comfort and well-being compared to standard care; however, no difference had been found between Reiki and placebo (comfort [$p = 0.8435$], well-being [$p = 0.7453$]).

Two studies analyzed stress. Weze et al. (2004) conducted a clinical trial that noted significant stress reduction ($p = 0.003$) in patients receiving HT, and a prospective cohort study (Danhauer et al., 2008) confirmed the trend ($p = 0.08$).

Quality of Life

Seven studies assessed QOL. Four articles (Olson et al., 2003; Pohl et al., 2007; Roscoe et al., 2005; Tsang et al., 2007) showed improved QOL in patients receiving the experimental intervention compared to the control or placebo group ($p = 0.0002$, $p = 0.002$, $p < 0.05$, and $p = 0.02$, respectively) in the two to four weeks following the intervention. However, Cook et al. (2004) and Lutgendorf et al. (2010) did not find any significant change over a long period of time (six to eight weeks). Finally, Beard et al. (2011) suggested a trend ($p = 0.13$) at the end of the study (eight weeks) and at follow-up (8-12 weeks).

Expectations and Care Satisfaction

Three studies explored patients' expectations. Lutgendorf et al. (2010) found no difference in expectations between the experimental group and the drug therapy alone group both at baseline and at the end of the study. In Weze et al.'s (2004) study, patients wanted to wait and see what happened, whereas in Cook et al.'s (2004) study, 73% of patients randomized to HT and 26% of patients randomized to sham touch correctly guessed the randomization group.

Three studies measured care satisfaction. In a prospective cohort study by Danhauer et al. (2008), all patients felt the intervention "very useful" and professionals "very competent." In Weze et al.'s (2004) study, patients had an average of 8 points satisfaction (range = 1-10). In Post-White et al.'s (2003) study patients receiving massage therapy and HT had a significantly greater satisfaction questionnaire score ($p < 0.0001$) than those in the operator's presence alone.

Discussion

Although BTs are ancient healing methods, data on their effectiveness are poor, particularly over a long period of time.

- ▶ **Certificate in Holistic and Integrative Health:** This program includes 12 courses in holistic stress management, health and the human spirit, healing elements of meditation, healing environments, Chinese medicine, Ayurvedic medicine, music therapy and sound healing, nutrition, healing effects of physical activity, therapeutic massage and bodywork, and energy healing.
- ▶ **Healing Touch Certification Program:** This is an international multilevel educational program in energy-based medicine therapy, which uses light or near-body touch to clear, balance, and energize the human energy system to promote healing for the mind, body, and spirit. The program progresses from beginning to advanced practice and offers both practitioner and instructor certification.

FIGURE 3. Programs Endorsed by the American Holistic Nurses Association in Energy Field

Note. Based on information from the American Holistic Nurses Association, 2014a.

The bulk of BT studies had descriptive or quasi-experimental designs. A few trials, whose methods were often not rigorous, were conducted. Although RCTs could be criticized for ethical issues (e.g., denying a potentially helpful intervention to a group of patients), they are the best for an efficacy question. Well-designed experimental studies are unavoidable to show effectiveness, but only one of the trials included was adequately powered, used a placebo intervention, and was controlled for the intention of the practitioner (Aghabati et al., 2008), whereas manifold studies (Danhauer et al., 2008; Olson et al., 2003; Roscoe et al., 2005; Tsang et al., 2007) had small sample sizes. A usual care group is essential to make comparison but was not always included (Cook et al., 2004; Danhauer et al., 2008). Trials were rarely controlled for potential confounders such as other complementary therapies, which may promote relaxation. Post-White et al. (2003) didn't control for music played during the intervention. In addition, blinding is another essential trial feature often disregarded. Participants and assessors were open to treatment (Olson et al., 2003; Post-White et al., 2003) or blinding was lost during the study (Pohl et al., 2007); therefore, a placebo effect caused by the operator's presence could not be completely ruled out.

In addition, the great variability in age, cancer type, stage, performance status, and life expectancy, as well as in treatment duration (number and length of sessions), scheduled follow-up, and instruments used to assess the same concept made the comparison of studies difficult. This review was limited by the small number of studies available and their quality, and a publication bias could not be ruled out because negative results tend to remain unpublished. In addition, only a few studies reported ethnicity that could help understand whether cultures with a holistic view are more responsive to BTs.

The current review found the potential for BTs to show no known side effects or pharmacologic interactions and easy introduction in multiple hospital settings (Anderson & Taylor, 2011; Danhauer et al., 2008). However, rigorous trials (better if three-arm randomized) that include use of blinding, a standard care group, a comparison group to rule out the Hawthorne effect, mechanisms reproducibility, and outcome evaluation by up-front, well-defined objective indicators are needed.

Clinical Applicability and Need of an Integrative Approach

BTs can be applied in several cancer settings, helping patients to face pain in the postoperative period and fighting stress and anxiety before surgical interventions or invasive procedures, such as stem cells apheresis or biopsy. Prolonged stress decreases the body's defenses with a risen risk of illness and delays in recovery. BTs are demonstrated to strengthen the immune system and the body's ability to self-heal (Lutgendorf et al., 2010). BTs could be used to relieve early chemotherapy-related nausea or to improve general well-being and comfort during the palliative care stage.

BTs also are beneficial for all patients with chronic illnesses, such as advanced heart failure, lung disease, depression, diabetic neuropathy, as well as in reducing agitation in older adults with dementia and in back, neck, or joint pain and stiffness. BTs could help in the management of acute and chronic conditions, and could be applied in a wide range of settings, such as

Implications for Practice

- ▶ Implement biofield therapies (BTs) in clinical practice to satisfy patients' increasing initiative in considering treatment options.
- ▶ Consider including BTs in the management of acute or chronic conditions.
- ▶ Use BTs as a self-care modality to help patients, families, and healthcare professionals face the stressful event of disease and the risk of burnout.

hospital wards, surgeries, operating theaters, hospices, long-term facilities, and homes. However, Western society is not yet able to offer an integrative model for CAM because of skepticism related to the lack of scientific basis and well-designed studies. However, the increasing popularity of CAM makes an integrative approach necessary.

The number of nurses using BTs in conventional oncology settings is unknown, but to start their institutional implementation, a survey concerning existing educated staff could be useful (Pierce, 2006). Institutions should understand that BTs could be useful not only for patients, but also for their families and healthcare professionals. Trained practitioners can offer BTs at no additional cost to patients and can teach caregivers simple techniques, allowing them to feel useful in giving comfort to their loved ones and fighting disease-related powerlessness and uselessness (Pierce, 2006).

BTs not only are inexpensive, noninvasive, and easy to learn, but could have a positive impact on hospital costs, reducing drug need and hospitalization length, and increasing self-healing. BT may become a self-care modality to help patients, families, and healthcare professionals face the stressful event of disease and the risk of burnout. The use of BTs in promoting caregivers' and practitioners' well-being deserves to be explored.

Institutions should offer BTs to promote societal awareness of an integrated healthcare model. Making time for BTs promotes the integration between conventional and complementary therapies and shows how Western medicine is trying to face this emerging need. Further research exploring the prevalence of this unmet need and the effectiveness of CAM modalities in its relief are warranted. In addition, periodic literature reviews should supervise and widespread research progress.

Certification Opportunities in Biofield Therapies

The American Holistic Nurses Association (AHNA) is a non-profit membership association that has retained national accreditation status as an approver and provider of continuing nursing education and promotes the education of nurses and other allied healthcare professionals in all aspects of holistic caring and healing. In 2006, holistic nursing was recognized as an "official nursing specialty" by the American Nurses Association (AHNA, 2014b). AHNA's education department offers a variety of educational opportunities, such as approved continuing education programs, that offer content based on a well-developed body of knowledge congruent with the AHNA

mission and vision. Endorsed programs in BTs are reported in Figure 3 (AHNA, 2014a).

AHNA works with the American Holistic Nurses Credentialing Corporation (AHNCC), the only national credentialing corporation providing the certification in holistic nursing. AHNCC (n.d.) offers two certifications in basic holistic nursing (Holistic Nurse, Board Certified and Holistic Baccalaureate Nurse, Board Certified), two certifications in advanced holistic nursing (Advanced Holistic Nurse, Board Certified and Advanced Practice Holistic Nurse, Board Certified), and one certification examination in nurse coaching with two possible certification credentials (Nurse Coach, Board Certified or Health and Wellness Nurse Coach, Board Certified). Nurses can become certified after completing the certification process, which includes an application with a self-reflective assessment and a quantitative examination.

Conclusion

Although treatment for cancer is recognized as stressful and impairing to quality of life, few nonpharmacologic interventions have been shown to be efficacious in lessening treatment-related symptoms. The implementation of BTs in clinical practice is proceeding slowly because Western medicine is more symptom centered. Nevertheless, an integrative model is needed because patients' active search of these new modalities expresses an unmet need with a growing empowerment in facing illness and an increasing initiative in looking for new healing resources. The inclusion of these therapies in hospitals may become an autonomous field of nursing because nurses' proximity to patients allows them to detect changes in anxiety, depression, and stress.

This method allows operators not only to provide technical skills but also to build a relationship with the patient, so that professionals' gratification and motivation will improve. In addition, BTs make self-help possible and decrease pharmacologic costs. The ease of training and feasibility in multiple settings without special tools also make BTs a good option for many patients and caregivers. The idea that BTs may be efficacious in patients with cancer for reducing pain and improving satisfaction challenges the current healthcare system, but their addition to conventional care could be an important demonstration of changes in Western medicine paradigm, which is moving toward a more patient-centered, holistic, and integrative approach.

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