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Biofield Therapies for Symptom Management in Palliative and End-of-Life Care

Ashley M. Henneghan, RN, BSN[1], and Rosa N. Schnyer, DAOM, LAc[1]

Abstract

Terminally ill patients experience negative symptoms at end of life (EOL) that hinder well-being and quality of life (QOL). Current intervention strategies are not always effective or feasible. A focused literature review to evaluate the use of biofield therapies (ie, Therapeutic Touch, Healing Touch, and Reiki) to manage the symptoms in EOL revealed no studies on the use these therapies, specifically in this population. Evidence from studies on relevant populations (patients with cancer, elderly patients, and patients experiencing chronic pain), which addressed the outcomes relevant to palliative and EOL care (EOLC; pain levels, changes in psychological symptoms, well-being, and QOL), supports the use of biofield therapies in relieving pain, improving QOL and well-being, and reducing psychological symptoms of stress. Further research to assess the use of biofield therapies in EOLC is clearly needed.

Keywords

end-of-life care, hospice care, Therapeutic Touch, biofield therapies, palliative care, complementary medicine, symptom management

Introduction

Those who are terminally ill face significant challenges. Pain, shortness of breath, restlessness, delirium, anxiety, and nausea are often common symptoms that negatively influence the patient's quality of life (QOL) and sense of well-being, and place undue burden on the caregivers. The impact of these symptoms is often exacerbated by emotional turmoil, patient isolation, and caregiver exhaustion.

Inherent to palliative and hospice philosophy is the knowledge that physical, psychosocial, emotional, and spiritual domains all affect QOL. Hospice interdisciplinary teams understand that these 4 domains impact the dying experience and influence patients' symptoms and sense of comfort.[1,2] A holistic approach to hospice and palliative care is congruent with the core principles of Complementary and Alternative Medicine (CAM), such as individualizing treatments based on patient preference, addressing the whole person, and recognizing the spiritual nature of each individual.[3] For this reason, there has been wide acceptance of these therapies within the realm of end-of-life care (EOLC), which includes both hospice and palliative care.[4]

Touch, which has been a valued aspect of nursing since the days of Florence Nightingale, is often an important component of various CAM therapies, and some treatment modalities are exclusively based on touch. Touch can be used as a simple form of interpersonal communication or therapeutically to deliberately affect a person's physical or emotional well-being and improve QOL.[4,5] Nurses use various forms of touch such as procedural touch to take vital signs, necessary touch for personal care, spontaneous touch when a patient is in distress, and intentional touch in massage. Interpersonal touch has been found to have physiological and psychological effects, influencing neuroendocrine functioning and reducing stress, pain,[6] and ultimately promoting comfort and well-being.[4] Therapeutic Touch (TT), Healing Touch (HT), Reiki, and other CAM modalities, which involve touch, may allow nurses to further improve EOL experiences for patients and their families, in a cost-effective way, whether administered directly or indirectly through caregiver education.

The purpose of this review is to explore the use of TT, HT, and Reiki in hospice care to manage multivariate symptoms in EOLC. These therapies are encompassed within a broader domain commonly known as biofield therapies.[7]

Background and Significance

Hospice Care and Utilization

Advancing technology is allowing individuals to live longer while creating an environment of unrealistic expectations and promoting medical interventions that do not emphasize QOL for the dying patient.[8] Hospice care, a model that provides quality compassionate care for people facing a life-limiting

[1] School of Nursing, University of Texas, Austin, TX, USA

Corresponding Author:
Ashley M. Henneghan, RN, BSN, School of Nursing, University of Texas, 1710 Red River, Austin, TX 78701, USA.
Email: ashleyhenneghan@gmail.com

illness,[9] has experienced considerable growth since it was introduced to the United States over 40 years ago. An estimated 1.65 million people received hospice care in 2011,[9] with numbers expected to grow each year given that one-fifth of the population will be older than 65 years by 2030.[10]

When considering implications for hospice interventions, patient demographics are important. In 2011, 66.4% of the hospice deaths occurred in the patient's place of residence and 41.6% of those were in private homes.[9] The top primary diagnoses were cancer (37.7%), debility (13.9%), dementia (12.5%), heart disease (11.4%), lung disease (8.5%), and stroke (4.1%) with the most growth seen in cancer and dementia diagnoses.[9] With the majority of patients receiving EOLC in their homes, there is limited access to medical expertise and resources.[11] Biofield therapies may provide a safe and effective symptom relief for these patients.

Monitoring Patients' Outcomes in EOLC

Assessing and monitoring patients' outcomes in EOLC is a high priority in hospice settings today. Beginning in 2012, the Centers of Medicare and Medicaid Services (CMS) mandate all hospice providers to report patient-centered outcomes directly to CMS. Reportable outcomes include pain management within 48 hours of admission, avoiding unwanted hospitalizations, avoiding unwanted cardiopulmonary resuscitation, and maintaining patient safety.[9]

Symptoms can vary greatly between individuals in the final stages of life, depending upon the diagnoses, length of time with terminal diagnoses, psychosocial, and spiritual well-being. Clinical experience and research evidence indicate that the most prevalent and significant symptoms at EOL include pain, breathlessness, anxiety, confusion, nausea, fatigue, and loss of appetite.[11] Many of these symptoms can be addressed by pharmacological and nonpharmacological interventions effectively in earlier palliative stages; however, treatment options are limited in later stages.[11] There is insufficient evidence to support the use of opioids, neuroleptics, and benzodiazepines for symptom management at EOLC. Many of these medications may alter pharmacodynamics due to common organ failure in dying persons potentially causing unforeseen side effects,[11] adverse events, and drug interactions that can increase medical morbidities.[12] Additionally, most dying persons are unable to swallow; therefore, medication use is further restricted.

Pain management, communication, and compassionate care are among the most important elements in maintaining QOL at the EOL identified by nurse case managers.[13] More research is needed to develop evidence-based practice standards for EOLC and multivariate measures that can effectively assess clinical outcomes in this population.

Holistic Approaches and CAM Therapies in EOLC

Hospice care is holistic in nature as all aspects of the individual are assessed and treated. This whole person delivery of care is congruent with the core principles of CAM therapies explaining the increasing integration of these therapies into EOLC.

The use of CAM therapies, which include "diverse medical and health care systems, practices and products that are not generally considered part of conventional medicine,"[14] has increased dramatically in the last decade, with an estimated 36% of US adults currently using CAM and spending US$40 billion dollars per year on these therapies.[15] Although exact statistics of patients utilizing CAM therapies at EOL are obscure, increasing number of hospice providers offer these modalities. A 2007 national survey of home health and hospice providers ($n = 955$) found that 54% of the hospice providers offered CAM therapies.[16]

The CAM therapies can enhance self-awareness, increase relaxation, and ease symptom management[4] of pain, dyspnea, and anxiety[16] and may help address unmet needs in palliative and EOLC. The reports of patient with cancer indicate that CAM therapies provide improved QOL and coping skills and a greater sense of control of discomfort due to illness or treatments.[17]

Biofield therapies, which involve either, hands-on or hands-off treatment or both in combination,[7] present the greatest challenge of all CAM therapies to the current biomedical model. They are based on the idea that in order to maintain themselves, living systems constantly exchange energy with information in their surroundings at multiple levels of organization.[18] This idea expands the biochemical and molecular view of biology to include a dynamic biophysical domain defined in terms of electric, magnetic, and electromagnetic fields as well as subtle energies (energies that appear to exist but have not yet been measured).[7] A biophysical view seeks to address the whole organism, its field interactions, and its integral exchange of information with the environment.[18] The core premise is that when the organism is diseased, the homeodynamic balance of the biofield has been disrupted, and therefore to promote healing, the biofield can be adjusted and balanced therapeutically.

Biofield therapies, also known as energy therapies, include TT, Reiki, HT, and Qigong[15] and have existed among many traditional cultures for centuries. In the 1970s, their use resurfaced within the nursing discipline. The TT, for example, was created by 2 nurses in the 1970s and was incorporated into nursing curricula. The TT is based on the ancient practices of Qigong and Reiki[15] and is a distinct-phase process that results in an exchange of energy to facilitate healing and relaxation. The HT developed as well out of nursing in the late 1980s and involves restoring the free flow of energy by opening blockages that contribute to disease and imbalance.[15]

Plausible Mechanisms of Action

There is a lack of agreement for a plausible mechanisms of action for biofield therapies,[19] and it is not well understood how these therapies work[18]; therefore, their use remains controversial. Biofield therapies are based on the concept of a dynamic biophysical regulatory system. Although the study of biolelectrical and bioelectromagnetic fields produced by the

body forms the basis of some common techniques used in medicine today (ie, electrocardiogram or electroencephalogram), we still do not yet know how to best measure other subtle biophysical currents.

Biofield therapies are based on the premise that together bioelectrical, bioelectromagnetic, and other biophysical currents constitute a person's endogenous biofield, which affects physiologic processes.[18] The homeodynamic balance of an organism is maintained by inter- and intracommunication via chemical, electrical, and electromagnetic exchanges,[20] and according to biofield therapies, via subtle energy exchanges that project beyond the surface of the skin, interacting with the environment. Therefore, the biofield can be adjusted therapeutically to affect the internal system.[18]

An adequate scientific foundation and well-developed experimental models based on complexity theory are being explored and may help our understanding of these therapies.[18] In the meantime, bioelectric fields are now being measured by modern superconducting quantum interference devices, which are used in "clinical medicine for measuring the biomagnetic fields of the heart and brain (magnetocardiography and magnetoencephalography, respectively)."[7] More research is clearly needed to fully understand this phenomenon.[21]

Methods

To evaluate the current use of biofield therapies in palliative care and EOLC, we searched PubMed using the mesh term "Therapeutic Touch" which includes Reiki, Healing Touch, Therapeutic Touch, and Qigong. We limited our inclusion to reviews and studies published in the last 5 years (January 2008 to June 2013). We found insufficient evidence on the use biofield therapies, specifically in EOLC, and therefore expanded our criteria to include their use in related populations such as patients with cancer, the elderly patients, and persons experiencing pain. We focused on studies that addressed outcomes relevant to palliative care and EOLC such as pain levels, changes in psychological symptoms, and improvements in well-being and QOL. We excluded articles in languages other than English and studies for which no outcomes were reported.

Results

A total of 30 (n = 30) publications were included in our final review (meta analysis [n = 1], reviews [n = 11], randomized-controlled trials [RCTs; n = 10], clinical trials [n = 1], comparative effectiveness studies [n = 1], cohort studies [n = 1], and case studies [n = 5]), see Table 1. The results are summarized in the following sections.

Biofield Therapies to Relieve Pain, Reduce Anxiety, and Improve QOL

Chronic diseases are often accompanied by pain, which has a significant negative impact on QOL and can continue into the EOL. As we age, pain manifests differently due to significant changes in the brain, such as decreased cognitive reserves, decreased opioid receptors, and changes in metabolism.[12] In addition, multiple comorbidities, common use of multiple medications, social isolation, and loss of independence often result in a decreased ability to respond to the stress caused by persistent pain.[12] The CAM therapies, and specifically biofield therapies, may prove beneficial as adjunctive treatment of pain in aging populations without causing adverse effects.[12]

In a review of the literature (1980-2008) on biofield healing conducted by Fazzino et al,[22] a trend toward effectiveness was detected for Reiki, TT, and HT on pain relief in addition to decreasing either the amount of narcotics participants required or increasing the time span between narcotic dosages for those receiving biofield treatments. However, conclusions were limited by the lack of studies with robust sample sizes, appropriate blinding, adequate treatment dose, and rigorous research methods. The need to evaluate the use of energy therapies as adjunctive treatments in pain management was highlighted by the authors. Monroe[23] reviewed the literature (5 studies) on TT for pain relief (1997-2007) and reported that despite the limitations of the studies, the majority showed significant reduced pain with TT in mixed populations experiencing pain and identified no risks. In the management of pain, depression, and anxiety in mixed populations (9 studies),[24] a modest trend toward clinical significance was reported for Reiki on pain reduction. A 2008 Cochrane review on touch therapies for chronic and acute pain relief (24 studies)[25] reported a modest effect on pain relief for TT, HT, and Reiki, with Reiki studies indicating greater effects on pain reduction. Participants exposed to Reiki had an average of 1.24 points less pain on a 0 to 10 scale (95% confidence interval: −2.06 to −0.42).[25] Ultimately, the small number and quality of studies, and insufficient data, also limited conclusions drawn from this review. The authors noted the need to conduct future studies that evaluate side effects and reported the practitioners' experience. In 2 case studies, HT was found effective to manage pain associated with spinal cord injuries,[26] and Reiki was reported to decrease chronic back pain in a person with parapalegia.[27]

Biofield therapies, such as TT, HT, and Reiki, may also be beneficial in managing emotional distress, reducing anxiety, and increasing relaxation in patients facing the EOL. For example, a case study found HT effective for treating poststroke-related anxiety.[28] Furthermore, HT was evaluated as a treatment for symptoms of posttraumatic stress disorder (PTSD) in active duty military (n = 123) compared to treatment as usual (including cognitive behavioral therapy, biofeedback, relaxation training, and medication). When combined with guided imagery, HT significantly reduced PTSD symptoms ($P < .0005$, Cohen d = 0.85), depression ($P < .0005$, Cohen d = 0.70), mental QOL ($P = .002$, Cohen d = 0.58), and cynicism ($P = .001$, Cohen d = 0.49) compared to treatment as usual.[29]

HT was found to be clinically effective in improving health-related QOL and chronic disease management,[30] although the studies included in this review had several methodological flaws. An article summarizing a case study on HT found it effective for intractable pruritus.[31] Few studies met criteria for

Table 1. Summary of Articles.

Reference #	Author (year)	Publication type	Population	Energy therapy	Outcomes (instruments)	Authors' conclusions
25	So et al (2008)	Meta analysis	Adults with pain	HT (5)	VAS (0-10)	Evidence supports the use of touch therapies for pain relief
			24 RCT/CCT (n = 1153)	TT (16) Reiki (3)	Participants exposed to touch had on average 0.83 units (on a 0-10 scale) lower pain intensity than unexposed participants (95% confidence interval: −1.16 to −0.50)	Touch therapies may have a modest effect in pain relief Need for higher quality research on effectiveness of HT and Reiki are needed, currently data are lacking and inconclusive Practitioners with more experience had greater effects Reiki had greatest effects on pain
24	Lee et al (2008)	Review	Mixed populations	Reiki	Pain Anxiety	Suggest beneficial effects on depression, pain, and anxiety Most of the trials had inadequate blinding, methods and sample sizes
			9 RCTs		Depression Hopelessness	Effects of Reiki are still unproven
32	vanderVaart et al (2009)	Review	Oncology Chronically ill	Reiki	31 outcomes in all studies Evaluating therapeutic effects of Reiki	Study evaluating the evidence for effects of Reiki Of the 12 trials, 9 detected a significant therapeutic effect of the Reiki intervention; however, using the Jadad Quality score, 11 of the 12 studies ranked "poor."
			12 studies			Serious methodological and reporting limitations in evidence of Reiki
39	Jain and Mills (2010)	Review	Mixed (majority cancer and pain disorders)	TT (7) Qigong (10)	Fatigue Pain intensity	Biofield therapies show strong evidence of reducing pain intensity by patients with pain
			66 clinical studies	Reiki (10)	Anxiety	Biofield therapies moderate evidence for pain intensity reduction in patients with cancer
				Spiritual healing (5)	Quality of life	Biofield therapies moderate evidence for anxiety reduction in hospitalized patients
				HT (5)		Evidence for effects on fatigue and quality of life for patients with cancer
				Johrei (5) Laying on of hands (2) Johnson bioenergy (1) Polarity therapy (1)		Further high-quality studies are needed
30	Anderson and Taylor (2011)	Review	Chronic disease 5 RCT	HT	Clinical efficacy of HT	Studies support clinical effectiveness of HT on quality of life for chronic disease Limitations to included studies due to inadequate designs and methods
41	Fouladbakhsh (2012)	Review	Osteoarthritis pain	TT 3 studies	Function Pain Distress Mood	Studies noted a trend toward clinical effectiveness of TT to improve functional ability and mood, decrease pain and distress
23	Monroe (2009)	Review	Mixed: elderly, arthritis, burns, fibromyalgia	TT	Pain Quality of life	No identifiable risks to TT Majority of findings demonstrated support for use of TT for pain reduction, especially osteoarthritis, musculoskeletal, or burn pain
			5 studies			Limitations to the studies due to convenience sampling and homogeneity samples

(continued)

Table 1. (continued)

Reference #	Author (year)	Publication type	Population	Energy therapy	Outcomes (instruments)	Authors' conclusions
22	Fazzino et al (2010)	Review	Mixed (chronic pain, procedural pain, pain disorders)	Reiki TT HT	Pain Anxiety	Trend toward effectiveness was detected for Reiki, TT, and HT on pain relief Biofield therapies as an adjunct to standard treatment, either decreased the amount of pain medications that subjects required or increased the time span between dosages of narcotic analgesics
			22 studies			Future research should have larger and diverse samples and comparisons among the various modalities
19	Agdal et al (2011)	Review	Patients with cancer	Reiki	Pain	Trend toward clinical effectiveness of improved pain well-being, quality of life, and fatigue
			6 quantitative; 2 qualitative	TT HT	Well-being Quality of life Fatigue	5 studies report reduced pain 3 had statistically significant results All articles had method weaknesses: self-selected participants, convenience samples, lack of blinding
15	Coakley and Barron (2012)	Review	Oncology	Reiki (11) HT (5) TT (6)	Cancer-related symptoms: Pain Anxiety Relaxation	Growing evidence that energy therapies have a positive effect on symptoms associated with cancer Further research should include the efficacy, meaning, and underlying mechanisms influenced by energy therapies
38	Bossi et al (2008)	Review	Oncology	Reiki	Pain Anxiety Quality of life	Reiki increased relaxation and quality of life; reduced pain, anxiety, and depression Reiki had no effect stroke rehabilitation functionality
				14 studies	Relaxation Depressions	
37	Anderson and Taylor (2012)	Review	Oncology	Reiki HT TT	Pain Fatigue Distress	Studies support potential clinical effectiveness on biofield therapies on cancer-related pain Studies have methodology shortcomings including small sample sizes and inadequate blinding
33	Lutgendorf et al (2010)	RCT	Oncology (chemotherapy radiation)	HT compared to relaxation treatment and usual care	Cellular immunity Mood and quality of life (CES-D depressed mood subscale and POMS depression scale)	HT group showed greater decreases in indicators of depressed mood compared to those receiving relaxation treatment and usual care ($P < .05$) HT group had minimal decrease in natural killer cell cytotoxicity (NKCC) over the course of treatment whereas NKCC of Reiki and usual care patients declined sharply during chemo radiation ($P = .018$)
			n = 51		Treatment-related toxicities	Long-term implication of findings are unknown
40	Beard et al (2011)	RCT	Oncology, prostate patients receiving radiation n = 54	Reiki compared to relaxation response therapy	Anxiety (Spielberger State Anxiety Inventory [STAI]) Depression (Center for Epidemiologic Studies Depression [CES-D] scale) Function (Functional Assessment of Cancer Therapy-General [FACT-G] Scale)	No statistically significant difference found between group mean comparison Positive trend toward improved anxiety found in Reiki group who were categorized as "anxious" at baseline ($P = .10$) Relaxation response improved emotional well-being and eased anxiety in participants that were "anxious" at baseline ($P = .01$)
35	Catlin and Taylor-Ford (2011)	RCT	Oncology (chemotherapy recipients) n = 189	Reiki compared to sham Reiki and standard care	Comfort (Healing Touch Comfort Questionnaire [HTCQ]) Well-being (Well-Being Analog Scale)	Reiki and sham Reiki were statistically significant in raising the comfort and well-being of patients posttherapy ($P < .05$)

(continued)

Table 1. (continued)

Reference #	Author (year)	Publication type	Population	Energy therapy	Outcomes (instruments)	Authors' conclusions
45	Sutherland et al. (2009)	Clinical trial, pilot study, repeated measures	Chronic headache n = 13	HT intervention comparison at baseline, third session, and final session	Pain (visual analog scale [VAS]) Qualitative interviews	Qualitative interviews suggests HT improved various pain frequency, intensity, and duration of headaches by or before the third session per VAS. Almost half of participants reported a decreased need for pain medications during the trial.
44	McCormack (2009)	RCT	Elderly patients in occupational therapy n = 90	TT compared to placebo and usual treatment	Postoperative pain (Memorial Pain Scale, the Tellegen Absorption Scale, the Health Attribution Scale)	73% of those receiving TT demonstrated a statistically significant decrease in pain intensity scores from pretest to posttest ($t_7 = 7.24$, $P < .01$) mean scores of the placebo and control groups and were better able to participate in occupations Results support the clinical efficacy of TT as an adjunctive treatment for reducing pain and discomfort in the elderly patients
47	Woods et al (2009)	RCT	Nursing home residents with dementia n = 65	TT compared to placebo and usual treatment	Agitation (Agitated Behavior Rating Scale [mABRS]) Stress hormones (and salivary cortisol levels, measured by enzyme-linked immunosorbent assay [ELISA])	Restlessness was significantly reduced in the experimental group compared to the control group ($P = .03$) Findings suggest TT may be effective for the management of restlessness coupled with stress reduction
42	Richeson et al (2010)	RCT	Community dwelling older adults n = 20	Reiki treatment compared to no treatment	Anxiety (Hamilton Anxiety Scale [HAM-A]) Depression (Geriatric Depression Scale-Short Form [GDS-15]) Pain (Faces Pain Scale [FPS]) Blood pressure Heart rate	Findings suggest that those who received the Reiki intervention significantly improved on the measures of pain, depression, and anxiety when compared with those who did not receive the intervention ($P < .001$) No significant difference noted in heart rate ($P > .45$) or blood pressure ($P > .25$) The most common health-related outcome was a feeling that most participants (n = 10) characterized as relaxation
43	Wardell et al (2012)	RCT	Older adults with persistent pain n = 20	HT compared with presence care	Pain (Verbal Descriptor Scale and Pain Assessment Tool in Cognitively Impaired Elders [PATCIE]) Daily living (Katz Index of Independence in Activities of Daily Living)	HT may be beneficial for some older adults within long-term care facilities as an adjunct for chronic pain Experiences varied from no perceived effect on pain to improved psychological and physical symptoms of pain No statistical data reported on outcome measures
48	Hawranik et al (2008)	RCT	Patients with Alzheimer disease n = 51	TT compared to usual care and sham TT	Agitation (Cohen-Mansfield Agitation Inventory [CMAI]) Cognitive impairment (MMSE)	A significant decrease in the number of physically aggressive behaviors displayed by all the 3 groups was evident ($\chi 2 = 24.53$, $P < .001$) after 5 days of treatment Findings suggest that TT reduced general levels of distress but did not reduce physically aggressive behaviors
46	Park et al (2011)	RCT	Osteoarthritis pain n = 21	Reiki compared to chair yoga and education	Pain (Western Ontario and McMasters Arthritis Index [WOMAC]) Depressed mood (Center for Epidemiologic Studies Depression Scale [CES-D]) Physical function (Western Ontario and McMasters Arthritis Index [WOMAC])	No statistically significant results found for the Reiki group Qualitative interviewing noted a theme that Reiki increased relaxation and was soothing emotionally

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Table 1. (continued)

Reference #	Author (year)	Publication type	Population	Energy therapy	Outcomes (instruments)	Authors' conclusions
29	Jain et al. (2012)	RCT	Active duty military n = 123	Healing Touch with Guided imagery compared to treatment as usual	PTSD symptoms Depression Quality of life Hostility	Findings include: statistically and clinically significant reduction in PTSD symptoms ($P < .0005$, Cohen d = 0.85) and depression ($P < .0005$, Cohen d = 0.70) for experimental group compared to treatment as usual Significant improvements in mental quality of life ($P = .002$, Cohen d = 0.58) and cynicism ($P = .001$, Cohen d = 0.49) for treatment group compared to treatment as usual
34	Danhauer et al (2008)	Cohort study	Adult leukemia n = 12	HT	Distress (MD Anderson Symptom Inventory, Profile of Mood States—Short Form [POMS-SF], Distress Thermometer) Sleep (Women's Health Initiative Insomnia Rating Scale) Fatigue (0-10) Nausea (0-10) Pain (0-10)	Immediate prepost session ratings of fatigue, nausea, distress, and pain revealed that HT may have short-term benefits The most commonly cited benefit was feeling relaxed and calm following HT sessions
12	Decker et al (2012)	Comparative study, repeated measures pilot study	Adults with pain n = 20	HT compared with presence care	Pain (Verbal Descriptor Scale and Pain Assessment Tool in Cognitively Impaired Elders [PATCIE]) Activities of daily living (Katz Index of Independence in Activities of Daily Living) Quality of life (EuroQoL 5D)	Reductions in pain were nonsignificant however, within the sample, the pain scores decreased from preintervention to postintervention Improvements in the activities of daily living were nonsignificant No change in quality of life
27	Pocotte and Salvador (2008)	Case report	Patient with paraplegia	Reiki	Chronic back pain	Patient received 6 weekly 30-minute Reiki sessions that consisted of 15 hand placements for the whole body and reported a decrease in pain level and an increase in overall feelings of well-being and relaxation His pulse rate decreased during all treatments
49	Meland (2009)	Case report, n = 6	Patients with dementia	Reiki	Well-being (Wong-Baker Smiley Face Scale) Pain (Wong-Baker Smiley Face Scale) Anxiety (behaviors observed by recreational therapist)	Anxiety levels, dropped for 5 of the 6 participants Pain improved for those in the study experiencing pain Participants reported feeling better, more talkative, less depressed, more relaxed, and with less pain after Reiki treatments
28	Williams and Fugate (2010)	Case report	Patient after stroke	HT (1)	Anxiety Vital signs	After 45-min session of Healing Touch, vital signs lowered and self-rated anxiety of 7 decreased to 1
31	Curtis et al (2011)	Case report	Patient with traumatic brain injury	HT	Self-rated neuropathic itching	The patient reported a progressive decrease in itching after 1 month and rated the itch 2 of 10 After 4 months of HT therapy, he reported he was free of itching
26	Wardell et al (2008)	Case report	Patients with spinal cord injury n = 7	HT	Neuropathic pain	HT did have an effect on the perception of pain for some case and may be clinically significant when dealing with intractable and chronic pain

Abbreviations: CCT, controlled clinical trial; HT, Healing Touch; PTSD, posttraumatic stress disorder; RCT, randomized-controlled trial; TT, Therapeutic Touch; $\chi 2$, chi-square.

inclusion on a systematic review on the therapeutic effects of Reiki in various populations,[32] and even though the majority of those that met criteria demonstrated evidence for effects, they were of poor quality.

Biofield Therapies in Oncology Care

Negative symptoms associated with cancer treatments overlap with those that frequently occur in EOL. These include pain, fatigue,[33] fear, anxiety, distress, decreased QOL,[34] dyspnea, depression, and cognitive dysfunction.[35] CAM therapies are often integrated into the care of patients with cancer. Several research studies are currently being conducted to evaluate the use of CAM in improving symptom management and QOL for patients with cancer.[36]

Recent reviews of biofield therapies for cancer pain indicate that Reiki, TT, and HT may be effective in improving the management of cancer pain,[37,15,38,39] reducing anxiety, and enhancing relaxation.[15,38] A review of qualitative and quantitative studies for efficacy and effectiveness of biofield therapies (Reiki, TT, and HT) on cancer-related symptoms (pain, fatigue, anxiety, and depression)[19] also noted a trend toward effectiveness in easing pain and improving psychological symptoms such as feelings of well-being and relaxation.[19] HT has been found to have positive effects on stress, fatigue, pain, and mood of patients with cancer.[34] Qualitative comments of participants indicate that HT can be relaxing and comforting for patients with cancer.[15] The evidence on the effectiveness of biofield therapies (Reiki, TT, and HT) in reducing fatigue and enhancing QOL in these patients is still inconclusive.[39]

Overall, these reviews have found the evidence for the use of biofield therapies (Reiki, TT, and HT) in cancer care to be limited by the poor quality of the studies (eg, lack of usual care group for comparisons, multiple independent variables, mixed types of cancer populations studied, small sample sizes, poor blinding methods, and the use of multiple subjective measurement instruments). The authors concluded that there is insufficient evidence to draw robust conclusions and indicate the need for well-designed studies.[15,19,22,23,24,25,30,32,37,39]

A few additional RCTs provide further insight. In a recent 3-arm placebocontrolled randomized trial, patients undergoing chemotherapy (n =189) were randomized to receive Reiki, placebo Reiki, or standard of care. Increased well-being and mental comfort were significantly associated ($P < .05$) with Reiki therapy, compared to standard of care.[35] In patients undergoing radiation treatments (n = 54), those receiving Reiki therapy reported reductions in anxiety, depression scores, and improved sense of emotional well-being, compared to controls.[40] HT was found to help decrease depressed mood in patients undergoing chemoradiation (n = 51) compared to treatment as usual ($P < .05$)[31] and improve relaxation during treatment (n = 12).[34]

Biofield Therapies in Elderly Care

A recent review of various CAM therapies for the treatment of symptoms associated with osteoarthritis in elderly populations[41] indicated a scarcity of studies in the use of biofield therapies (Reiki, TT, and HT). This review stated, however, that early small studies indicated that TT is helpful in decreasing pain and distress as well as improving mood and functionability in elderly patients with osteoarthritis.[41]

A small RCT measuring the effects of Reiki therapy on older adults (n = 20) found significant improved pain ($P < .001$), depression ($P < .001$), and anxiety ($P < .001$) with the effects persisting beyond the duration of treatment compared to the controls.[42] Another small RCT studying the effects of HT on persistent pain in long-term care patients (n = 20) reported that HT might be beneficial for older adults with chronic pain; however, the results of the study were not statistically significant.[43] In an additional RCT (n = 90), 73% of those who received TT had a statistically significant decrease in pain ($P < .01$) compared to controls.[44] In a clinical trial (n = 13), qualitative results from those receiving HT for chronic headaches experienced improvement in frequency, intensity, or duration of pain and discomfort during treatments compared to baseline visual analog scores.[45] A feasibility study of HT for elderly patients (n = 20) with pain found it to be an acceptable and easy-to-deliver intervention for community-dwelling elder patients by HT practitioners for seven 30-minute sessions.[12] In a small study comparing Reiki to both chair yoga and patient education for older adults with osteoarthritis (n = 21), the results of focus group data indicated that Reiki participants experienced improved relaxation, although no significant changes were reported on the quantitative measures.[46] Two RCT of TT interventions on people with dementia found significantly decreased restlessness (n = 65, $P = .03$)[47] and decreased levels of distress (n = 51).[48] A report on case studies on the effects of Reiki on people with dementia indicated less anxiety as a result of treatment.[49]

Discussion

Multiple symptoms experienced in EOL affect the whole person and significantly impact QOL. The causes of many of these symptoms are difficult to isolate; evaluation of clinical effectiveness of interventions is often unclear, and assessment of outcomes is challenging.

Patients at EOL are at increased risk of adverse effects of medications due to impaired drug metabolism. Biofield therapies have a good safety record; for example, HT[34] and Reiki[50] have been found to have no adverse effects in most of the studies. There are no reports of morbidity or mortality due to biofield therapies.[51] For patients at EOL, nonpharmacological interventions such as biofield therapies may provide effective relief[12] free of dangerous side effects.[17]

With resources generally scarce in EOLC, interventions that are cost-effective, safe, and easy to implement are necessary. Biofield therapies are noninvasive, can be readily learned, require no equipment, and can be delivered in any setting.[47] Both health care providers and caregivers can be taught these techniques. For instance, TT can be taught to family members who otherwise may feel unsure of how to interact with their

loved ones experiencing pain or distress.[48] Reiki has been cited as being easy to learn, inexpensive, noninvasive, and associated with relaxation and pain reduction.[35] HT and similar therapies such as TT do not require any energy expenditure from patients,[34] which make them especially applicable to patients at EOL. With limited resources, hospice providers need to think "outside the box," and biofield therapies provided by professionals or trained members of the hospice team may prove beneficial.

The purpose of this review was to explore the feasibility of biofield therapy utilization in hospice care to manage multivariate symptoms in a cost-effective way. We summarized the literature to date exploring evidence on various biofield therapies for pain relief, psychological distress, and improved sense of well-being in the general adult population, patients with cancer, and the elderly patients. We found no studies that focused specifically on biofield therapies for the EOLC or hospice care. In general, the findings are promising, but inconclusive due to poor research methods and designs. Although this focused review was extensive in scope, only 1 database was searched; it is possibly that we overlooked other reviews or studies.

Acceptance of biofield therapies has been impeded by a dearth of high-quality systematic empirical research.[27] Statistically nonsignificant findings,[12] limited evidence,[52] lack of consensus on mechanism of actions,[19] multiple research methods, small sample sizes,[50] and overall poor research methodology[48] all contribute to inconclusive findings.

CAM therapies routinely address patients' multivariate symptoms at the whole-person level. Although, research is currently being conducted in this area, there are no validated instruments to measure outcomes at the level of the whole person.[45] Clinical evidence indicates that patients receiving biofield therapies with a whole-person focus experience a sense of wholeness and connectedness, which conventional instruments may not effectively measure.[45] Despite lack of empirical evidence, patients continue to seek biofield therapies.[39]

High-quality studies[50] and more research in this area are warranted and clearly needed. Controversies regarding proper methods for conducting biofield therapy research[7,53,32] still need to be resolved. Due to ethical considerations in hospice and EOLC, however, the efficacy placebo RCT may not be the most adequate design to answer important questions in this area. Research in the use of biofield therapies at the EOLC should focus on comparative effectiveness to assess whether these therapies may provide a viable option for improving the QOL, relieving pain, and managing emotional distress symptoms experienced by patients at the end of their life. Additionally, multivariate instruments need to be developed and validated to assess biofield therapies use by this patient population. The feasibility of training hospice providers to provide biofield therapies at bedside should also be evaluated.

Conclusion

In summary, a large segment of the population is aging, resulting in a growing need for hospice care. Those who are terminally ill, along with their caregivers, face a wide variety of challenges at EOL. Hospice providers approach the terminally ill patients holistically; however, current intervention strategies are not always effective in treating challenging symptoms at EOL. Limited resources and intervention options call for exploration of other modalities to maintain patient comfort and QOL in EOLC. The CAM modalities, namely, biofield therapies, approach patients holistically and overlap with hospice and palliative philosophies. Our review of the literature indicates that no research has been published specifically on the use of biofield therapies to manage symptoms at EOLC. Evidence in related populations (eg, patients with cancer and elderly patients) support its use in relieving pain, improving QOL and well-being, and reducing psychological symptoms of stress. Further high-quality research is needed to assess the feasibility, acceptability, and clinical impact of providing biofield therapies at the EOLC. The role of nurses or other trained health care professionals in providing these modalities or teaching them to family members should be explored.

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