Biofield Therapies and Cancer Pain

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The public and healthcare professionals have become increasingly aware and accepting of the benefit in physical, psychological, social, and spiritual support for patients with cancer. Patients with cancer often seek nonpharmacologic interventions to complement conventional care and decrease the pain associated with cancer and its treatment. Most often referred to as complementary and alternative medicine (CAM), these supportive therapies consist of a heterogeneous group of modalities used as adjuncts to allopathic health care. Biofield therapies are CAM modalities that involve the direction of healing energy through the hands to facilitate well-being by modifying the energy field of the body. This critical review of studies of biofield therapies emphasizes research using these modalities to decrease pain in patients with cancer. Although the therapies have demonstrated clinical efficacy, additional research is warranted. Oncology nurses should familiarize themselves with biofield therapies so they can offer informed recommendations to patients with cancer experiencing pain.

Patients can experience substantial levels of distress in response to many common treatment-related procedures, particularly when provided in the context of a potentially life-threatening diagnosis such as cancer (Seskevich, Crater, Lane, & Krucoff, 2004). A diagnosis of cancer elicits a variety of emotional reactions, leading to a potentially negative impact on psychological and physiologic outcomes involved in health-related quality of life (HRQOL) (Jackson et al., 2008; Kemper, Fletcher, Hamilton, & McLean, 2009; Seskevich et al., 2004). Conventional allopathic medical care often does not take a holistic approach to disease and symptom management (Burr, 2005). Randomized, controlled trials evaluating symptom management have found that patients with cancer undergoing chemotherapy experience significant levels of anxiety and pain during treatment that may not be recognized or adequately addressed by the healthcare team (Jackson et al., 2008). Although cancer treatment focuses on the three major domains of cure, extending survival, and improving HRQOL (Low, Ferrell, & Leong, 2007; Rossman, 2002), conventional care has focused primarily on cure and survival until recently. However, most patients with cancer prefer a holistic approach to treatment that helps not only to fight the disease, but also to alleviate emotional distress, improving treatment-related symptoms and HRQOL (Jackson et al., 2008). Subsequently, an integrated approach to support well-being is emerging to address the treatment- and disease-related adverse effects that patients with cancer continue to experience, despite advances in the pharmacologic management of the disease (Post-White et al., 2003).

Cancer Pain

Cancer, chemotherapy, radiation therapy, and surgery produce a variety of symptoms, which often are co-occurring as a symptom cluster (Aktas, Walsh, & Rybicki, 2010). Of those symptoms, patients with cancer often fear pain the most (DeSandre & Quest, 2010). Pain is defined by the International Association for the Study of Pain as “an unpleasant sensory and emotional experience arising from actual or potential tissue damage, or described in terms of such damage” (Monroe, 2009, p. 86). Originating from a physiologic source, pain is subjective and modifiable by psychological factors, such as negative affect. In the case of cancer, pain may be both acute and chronic, and can result from the disease itself, treatment, or unrelated causes (DeSandre & Quest, 2010).

Cancer pain can be described physiologically as nociceptive or neuropathic (DeSandre & Quest, 2010). Nociceptive pain results from damage to tissue and may be further classified as either somatic (sharp or aching localized pain) or visceral (dull or cramping diffuse pain). Neuropathic pain is caused primarily by nerve injury, which may be mechanical, metabolic, inflammatory, or toxic. Neuropathic pain typically is persistent and sometimes shock-like. A normal stimulus may elicit an abnormal pain response, whereas a light touch might cause searing pain.
In general, patients with nociceptive pain are more responsive to opioids than are patients with neuropathic pain, which often requires adjuvant nonopioid therapies to be treated successfully.

The assessment and management of cancer pain can be challenging (DeSandre & Quest, 2010), with cancer pain estimated to be managed poorly in 80% of patients (Aghabati, Mohammadi, & Pour Esmaeil, 2008). The National Cancer Institute acknowledges several major barriers to adequate management of pain, including inadequate skills among healthcare professionals; poor assessment of pain; reluctance of patients to report pain; concerns about regulation, addiction, and side effects of controlled substances; poor adherence to conventional treatment; and inadequate reimbursement (Bardia, Barton, Prokop, Bauer, & Moynihan, 2006). Pain control may indirectly improve other symptoms and HRQOL measures often correlated with pain intensity, such as nausea and vomiting, well-being, mood, and appetite (Aghabati et al., 2008). Ineffective management of cancer pain is a common issue complicated by the fact that high doses of opioids often are associated with multiple side effects that are difficult to manage.

Pain management is recognized as a quality measure for optimal care by the Joint Commission (Bardia et al., 2006), which emphasizes alternatives to pharmacologic interventions for patient comfort, pain control, and HRQOL (Ernst & Ferrer, 2009). The American Cancer Society and the National Comprehensive Cancer Network recommend nonpharmacologic modalities in the management of cancer pain when pain scores remain at 4 or higher on a 10-point scale following reevaluation and modification of conventional pharmacologic treatment (Bardia et al., 2006). Data from the 2002 National Health Interview Survey reveal that pain is the most prevalent symptom among cancer survivors and a significant predictor of complementary and alternative medicine (CAM) usage (Fouladbachsh & Stommel, 2008, 2010).

**Complementary and Alternative Medicine in Cancer Care**

Patients are increasingly involved in many aspects of their own healthcare (von Gruenigen, Frasure, Jenison, Hopkins, & Gil, 2006). With a growing interest in CAM as an adjunct to conventional treatment (Fouladbachsh & Stommel, 2007; von Gruenigen et al., 2006), cancer survivors are using complementary practices, products, and services with the goal of improving HRQOL. CAM is defined by the National Center for Complementary and Alternative Medicine (2011) as “a group of diverse medical and healthcare systems, practices, and products that are not generally considered part of conventional medicine” (para. 2). That definition remains fluid as more complementary therapies become incorporated into conventional care and considered mainstream (e.g., massage, acupuncture) (Buettner et al., 2006). In addition, the expectations of society in regard to the conventional healthcare system are changing, with people being more inclined to seek and use CAM (Forgues, 2009; vanderVaart, Gijsen, de Wildt, & Koren, 2009); 75% of American adults have used at least one CAM modality for improved health at some point in their lifetime (Fouladbachsh, Stommel, Given, & Given, 2005).

CAM use is even more widespread in the cancer population (Bardia et al., 2006; Fouladbachsh et al., 2005; Fouladbachsh & Stommel, 2010; Mansky & Wallerstedt, 2006). Predictors of higher CAM use by patients with cancer include female gender (Fouladbachsh et al., 2005; Fouladbachsh & Stommel, 2008, 2010; Mansky & Wallerstedt, 2006), stage of disease at diagnosis (Fouladbachsh et al., 2005; Mansky & Wallerstedt, 2006), age (Buettner et al., 2006; Fouladbachsh & Stommel, 2008), higher education (Buettner et al., 2006; Fouladbachsh & Stommel, 2008), higher income (Buettner et al., 2006; Fouladbachsh & Stommel, 2008), race (Fouladbachsh et al., 2005; Fouladbachsh & Stommel, 2008), and geographic location (Fouladbachsh et al., 2005; Mansky & Wallerstedt, 2006). In addition, individuals who live farther from healthcare providers may be more inclined to self-treat using CAM (Barish & Snyder, 2008; Fouladbachsh et al., 2005).

Complementary modalities are used by patients with cancer to enhance the benefits of conventional treatments (e.g., radiation, chemotherapy) and to improve overall well-being and HRQOL (Fouladbachsh et al., 2005; Fouladbachsh & Stommel, 2010; Kemper et al., 2009; Lev-ari, Maimon, & Yaal-Hahoshen, 2006; Mansky & Wallerstedt, 2006). Use of CAM by patients with cancer is significantly associated with receiving multiple treatments, management of illness- and treatment-related symptoms, improving survival, and decreasing recurrence (Fouladbachsh et al., 2005; Fouladbachsh & Stommel, 2007, 2008, 2010), with patients using CAM during chemotherapy, radiation therapy, palliative therapy, and phase 1 clinical trials (von Gruenigen et al., 2006). In addition, data from the 2002 National Health Interview Survey revealed that patients with cancer are more apt to use complementary modalities provided by a practitioner, including biofield therapies, than modalities requiring active engagement, such as meditation and imagery (Fouladbachsh & Stommel, 2008).

**Biofield Therapies**

Hands-on healing and energy-based interventions have been found in cultures around the world throughout history (Eschiti, 2007; Hutchinson, D’Alessio, Forward, & Newsham, 1999; Jain & Mills, 2010; Maville, Bowen, & Benham, 2008; Wang & Hermann, 2006) (see Table 1). Those biofield therapies involve the practitioner using his or her hands, either on or above the individual’s body, to direct healing energy to facilitate general health and well-being through modification of the energy field (Maville et al., 2008). Biofield therapies are based on a philosophy that, in addition to the physical, humans have an energetic, spiritual dimension necessary for sustaining life that must be taken into account during the healing process (Aghabati et al., 2008; Forgues, 2009). In a healthy individual, the energy field is symmetrical and balanced, allowing energy to flow evenly (Jackson et al., 2008; Kemper et al., 2009; Peters, 1999). Physical and psychological symptoms may cause or arise from imbalances in the energy field, and biofield therapies are believed to restore, energize, and balance energy field disturbances (Jackson et al., 2008; Kemper et al., 2009; Peters, 1999). Biofield therapies are used in a variety of healthcare settings (e.g., pain clinics, cancer centers), as well as private practices; are administered by trained practitioners who often are healthcare professionals, particularly nurses; and have been used to reduce pain and anxiety and promote health (Eschiti, 2007; Movaffagi & Farsi, 2009).

Reiki, therapeutic touch, healing touch, Johrei, and polarity therapy are considered contemporary biofield therapies, given
that the practice and development of those specific techniques occurred during the 20th century. The therapies share a similar historic philosophy regarding the human biofield and mostly differ in the placement of the hands during the delivery of the therapy (e.g., on or off the body, specific hand positions) and, in the case of polarity therapy, physical manipulation of the body and variations in pressure.

Reiki is a biofield therapy originating in the Tibetan sutras about 3,000 years ago that was reintroduced in Japan in 1920 by Mikai Usui. The word Reiki is composed of two Japanese characters that together translate as “universal life energy” (Wardell & Engebretson, 2001). Usui developed the contemporary specific treatment procedures after studying and meditating on ancient healing practices (Bossi, Ott, & DeCristofaro, 2008).

The therapeutic touch program was pioneered and standardized in the 1970s by Delores Krieger and Dora Kunz (Aghabati et al., 2008), with certification requiring a rigorous program of study and a highly structured and disciplined practice, making it useful for scientific studies (Gronowicz, Jhaveri, Clarke, Aronow, & Smith, 2008; Wardell & Engebretson, 2001).

Healing touch, a biofield therapy established in the 1980s by Janet Mentgen, was developed from a foundation in therapeutic touch and combines selected techniques from other ancient healing practices, as well as those developed by Mentgen (Hutchinson et al., 1999). Healing touch is taught as a multilevel, didactic program that includes a one-year mentorship leading to certification (MacIntyre et al., 2008), thus generating a cohort of highly skilled certified practitioners (Eschiti, 2007; Kemper et al., 2009).

Johrei, which translates as “purify spirit,” was founded by Mokichi Okada in Japan in 1935. Case reports on the history of Johrei maintained at the U.S. National Archives document recovery with Johrei treatment from exposure to the lethal radiation released by the atomic bomb in Hiroshima and Nagasaki (Hall, Luu, Moore, & Yount, 2006).

Finally, polarity therapy was developed by Randolph Stone, a chiropractor, osteopath, and naturopath, who began training others in the 1960s. It is founded on the principle that each cell of the body has both a negative and positive pole responsible for energy flow. The American Polarity Therapy Association oversees training programs and certification in the technique (Collinge, Lee, Tanguay-Colucci, Ulbricht, & Weissner, 2010).

### Biofield Therapies and Cancer Pain

In the holistic healthcare paradigm, the person is viewed as a physical, emotional, mental, and spiritual being (King, 2005). That interrelationship and the relationship of the individual to the environment are significant factors in the healing process, with physical crises affecting emotional, mental, and spiritual aspects of health, and vice versa (King, 2005). Relaxation or decreased anxiety and stress are hallmarks of biofield therapy (Shiflett, Nayak, Bid, & Agostinelli, 2002) and play a critical role in summoning the body’s own healing processes (Maville et al., 2008). Although a great deal of research has been conducted to test the effectiveness of biofield therapies to date, available data support the use of those modalities in improving health and easing discomfort and pain associated with illness (Cook, Guerrerio, & Slater, 2004). Because biofield therapies facilitate self-healing, the modalities support allopathic, patient-centered, holistic paradigms in health care; complement conventional care (Cook et al., 2004); and have been described as a potential comfort measure during cancer treatment (Danhauser, Tooze, Holder, Miller, & Jesse, 2008). Although several studies have demonstrated the effectiveness of energy-based healing modalities in reducing generalized pain (Eckes Peck, 1997; Gordon, Merenstein, D’Amico, & Hudgens, 1998; Jain & Mills, 2010; Keller & Bzdek, 1986; Meehan, 1993; Peck, 1998; Turner, Clark, Gauthier, & Williams, 1998), most have focused only on therapeutic touch, and few have specifically examined pain management in patients with cancer. This article provides a critical review of studies of biofield therapies, emphasizing research using those modalities to decrease pain in patients who have cancer and limited to studies with pain as a primary outcome measure.

### Literature Review

Danhauser et al. (2008) conducted a prospective cohort trial using a healing touch intervention in patients with leukemia. Twelve participants received nine 30-minute healing touch sessions using a standardized protocol. The intervention was conducted in an inpatient setting over a three-week period. Outcome measures included fatigue, nausea, pain, distress (using the Distress Thermometer), the MD Anderson Symptom Inventory, the Women’s
Health Initiative Insomnia Rating Scale, and the Profile of Mood States–Short Form, as well as qualitative feedback concerning the intervention. A trend toward a significant reduction in pain was reported ($p = 0.06$).

Aghabati et al. (2008) examined the use of therapeutic touch treatment for reducing pain and fatigue in 90 women undergoing chemotherapy compared to mimic therapeutic touch or usual care alone. In mimic therapeutic touch, a nonpractitioner uses the same hand positions as an actual practitioner to mimic the technique and control for that aspect of touch. Pain was assessed using a visual analog scale (VAS), with fatigue measured using the Relative Fatigue Scale. Pain was significantly decreased following therapeutic touch versus mimic therapy ($p = 0.04$) and usual care alone ($p = 0.04$). A significant decrease in pain also was observed in the mimic therapeutic touch group versus patients who received usual care alone ($p = 0.04$).

Olson, Hanson, and Michaud (2003) studied 24 patients with cancer experiencing pain using standard opioid management plus either rest or Reiki over a seven-day period. Pain assessment was conducted using the Edmonton Staging System. A multidimensional measure of HRQOL containing physical, social, and psychological subscales was used, along with daily diaries that recorded VAS pain scores, analgesic use (converted into morphine equivalent units), and other pain relief strategies. Before and after the interventions, blood pressure, heart rate, pain (VAS), and respirations were documented. A significant reduction in pain was observed following Reiki at day 1 ($p = 0.04$). At day 4, a significant decrease in pain was seen in the Reiki group versus the group receiving standard pain management ($p = 0.002$). No significant difference in the amount of pain medications used was reported.

Post-White et al. (2003) examined the effects of therapeutic massage, healing touch, and physical presence alone as a control intervention in 230 patients with cancer using a crossover design. Measures included heart rate, respiratory rate, blood pressure, current pain and nausea using a numeric rating scale, the Brief Pain Index, the Brief Nausea Index, and the Profile of Mood States. A significant decrease in current pain was observed following the healing touch intervention ($p < 0.001$).

**Discussion**

Although biofield therapies are among the most ancient healing practices, scientific quantification of the methods, mechanisms, safety, and effectiveness of those interventions is limited (Krucoff et al., 2005). Few studies of the effects of biofield therapies on cancer pain and no clinical studies evaluating Johrei in patients with cancer were identified in the current review. Some studies of biofield therapies in cancer populations with positive effects on overall HRQOL were excluded because pain was not measured as a primary outcome (Cook et al., 2004; Kemper et al., 2009; Lu-tgendorf et al., 2010; Roscoe, Matteson, Mustian, Padmanaban, & Morrow, 2005). Although the studies support the potential clinical effectiveness of biofield therapies in improving cancer pain management, more research is required, given the small number of studies available for review and their limitations.

One study reported by Cook et al. (2004) and Danhauer et al. (2008) did not include a usual care alone group, which is essential when making comparisons to the standard of care. In the study by Post-White et al. (2003), music was played during the healing touch intervention, potentially confounding the results by including another complementary therapy that may evoke a relaxation response. The investigators included patients with many different cancer types in that study, potentially contributing to some of the variability in the results. Three studies (Danhauer et al., 2008; Kemper et al., 2009; Olson et al., 2003) had small sample sizes and, therefore, were not adequately powered statistically. In the study by Olson et al. (2003), neither the participants nor the research nurse assessing outcomes were blinded to treatment. In addition, many participants were close to the end of life, which might have contributed to some of the variability in the results.

In contrast, the trial by Aghabati et al. (2008) was appropriately powered and was the only study reviewed that used a placebo intervention and controlled for the intention of the practitioner. The practitioner’s intention is a hallmark of biofield therapies that must be taken into account (Forgues, 2009). Having placebo practitioners cognitively engaged in mathematical calculations is believed to avoid energy interaction and to be an effective placebo (So, Jiang, & Qin, 2008). Different subjective assessments were used in the reviewed studies to determine outcomes. That issue is not unique to the study of biofield therapies. Clinical trials often use various outcome measures of patient symptoms to quantify the same concepts, limiting comparison across studies (Garcia et al., 2007). In addition, some patient-reported outcomes are likely to remain uncaptured because of a lack of sensitivity of the instrument or to the floor and ceiling effects of some measures that do not assess symptom extremes adequately (Garcia et al., 2007).

Limitations of this review relate to the potential incompleteness of the evidence and the possibility of publication bias producing a more positive result than the research of biofield therapies to date would suggest, given that negative studies tend to remain unpublished. A further weakness involves the quality of the primary studies. Although the overall quality of the studies in the current review is moderate, methodologic shortcomings such as small sample size and inadequate levels of blinding leave the findings inconclusive. Trials that address adequate methodologic issues, including the use of blinding and placebo treatments, need to be considered and explored.

Biofield therapies require no energy expenditure by the patient and may be more appropriate for some patients than cognitive interventions such as guided imagery, which could be difficult in patients with cancer who have cognitive impairment caused by the malignancy itself or side effects of medications, chemotherapy, or radiation (Bardia et al., 2006). In addition, biofield therapies have no known side effects or potential pharmacologic interactions (Danhauer et al., 2008). A Cochrane Review found no evidence in the literature of adverse effects of biofield therapies (So et al., 2008). Side effects and interactions with chemotherapy increasingly are being reported with herbal use (Powell, Dibble, Dall’Era, & Cohen, 2002), and concerns about potential interactions of complementary modalities with biomedical and pharmacologic treatment, safety, efficacy, cost, and establishment of scientific evidence are rising (Fouladbakhsh et al., 2005).

**Nursing Resources on Biofield Therapies**

The American Holistic Nurses Association offers information on the availability of biofield therapies for patient care. To learn more, visit www.ahna.org.
Implications for Practice

- Many biofield therapies have a foundation in nursing and improve symptoms such as pain in patients with cancer.
- Oncology nurses should increase their knowledge of the effectiveness of complementary modalities such as biofield therapies to maximize positive patient outcomes.
- Introducing patients and their families to energy modalities before pain reduction is needed will give nurses time to assess patients' expectations and barriers regarding those therapies.

Conclusions

Although treatment for cancer is recognized as stressful and impairing HRQOL, few standard nonpharmacologic interventions have been shown to be efficacious in lessening disease- and treatment-related symptoms such as pain. The idea that comforting interventions such as biofield therapies are feasible for patients with cancer experiencing disease- and treatment-related pain challenges the current healthcare system, in which most therapies are technologically or drug driven. However, given the community of patients and their caregivers that is stressed and actively seeking healing resources, healthcare professionals should consider the effectiveness of biofield therapies. As a result of the research by Olson et al. (2003), Reiki is now offered by volunteers, free of charge, on the inpatient palliative unit of the study hospital. Most participants in the study by Danhauer et al. (2008) liked healing touch very much, found it quite a bit or very helpful, wanted to continue using it, and would recommend it to others. An increasing number of hospitals are including biofield therapies in their services offered, given that those therapies provide a low-tech option that is more economically viable than conventional pharmacologic interventions (Forgues, 2009). In addition, successful integrative programs have been developed specifically to support oncology care (Pierce, 2007). The addition or option of a biofield therapy component to cancer care would represent an enhancement in the patient care concepts of the holistic paradigm by addressing cancer- and treatment-related symptoms that impact HRQOL. Oncology nurses should use the current review as a knowledge base with which to recommend potential biofield therapies for patients with cancer experiencing pain.

References


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