

Research

Effects of Healing Touch in Clinical Practice

A Systematic Review of Randomized Clinical Trials

Joel G. Anderson, PhD

Ann Gill Taylor, EdD, MS, RN, FAAN

University of Virginia, Charlottesville

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Hands-on healing and energy-based interventions have been found in cultures throughout history around the world. These complementary therapies, rooted in ancient Eastern healing practices, are becoming mainstream. Healing Touch, a biofield therapy that arose in the nursing field in the late 1980s, is used in a variety of settings (i.e., pain centers, surgical settings, and private practices) with reported benefits (i.e., decreased anxiety, pain, and depressive behaviors; increased relaxation and a sense of well-being). However, clinical trial data concerning the effectiveness of Healing Touch have not been evaluated using a systematic, evidence-based approach. Thus, this systematic review is aimed at critically evaluating the data from randomized clinical trials examining the clinical efficacy of Healing Touch as a supportive care modality for any medical condition.

Keywords: *Healing Touch; biofield therapy; systematic review*

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; Maville, Bowen, & Benham, 2008; Wang & Hermann, 2006). These complementary therapies, rooted in ancient Eastern healing practices, are becoming mainstream. In 1994, the NIH Office of Alternative Medicine (now the National Center for Complementary and Alternative Medicine) referred to these practices as "biofield therapies" (Gronowicz, Jhaveri, Clarke, Aronow, & Smith, 2008; Movaffaghi & Farsi, 2009), and in 2001 redefined the concept of "frontier medicine" to include biofield therapies as those therapies "for which there is no plausible biomedical explanation" (Krucoff et al., 2005). The biofield therapy known as Healing Touch is a "hand-mediated" therapy that has been used to reduce pain, anxiety, and promote health (Eschiti, 2007). This therapy involves 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, or to treat a particular dysfunction through modifying the energy field (Maville et al., 2008).

Healing Touch is based on a foundation that, in addition to the physical dimension, humans have an energetic, spiritual dimension necessary for sustaining

life that must be taken into account during the healing process (Aghabati, Mohammadi, & Pour Esmaei, 2008; Forgues, 2009). In a healthy individual, the energy field is symmetrical and balanced, allowing energy to flow evenly (Jackson et al., 2008; Kemper, Fletcher, Hamilton, & McLean, 2009; Peters, 1999). Both physical and psychological symptoms may cause or arise from imbalances in the energy field, and Healing Touch is believed to restore, energize, and balance energy field disturbances (Jackson et al., 2008; Kemper et al., 2009; Peters, 1999). Although biofield therapies are among the most ancient of healing practices, scientific quantification of the methods, mechanisms, safety, and effectiveness of these therapies is limited (Krucoff et al., 2005).

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Healing Touch arose in the nursing field in the late 1980s and is described as a patient-centered modality in which the practitioner and recipient participate jointly in the healing process (Eschiti, 2007; Wardell & Weymouth, 2004). Established by a nurse, Janet Mentgen, the Healing Touch program grew out of a foundation in another biofield therapy, Therapeutic Touch, as well as combining selected techniques from other ancient energy healing practices and those developed by Mentgen (Hutchinson et al., 1999). Healing Touch involves an intention by the practitioner for the participant's highest good, with placement of the hands in specific patterns or sequences on or above the body (MacIntyre et al., 2008; Wardell & Weymouth, 2004). Healing Touch is taught as a multilevel didactic program that includes a 1-year mentorship leading to certification (MacIntyre et al., 2008), thus generating a cohort of highly skilled certified practitioners (Eschiti, 2007). Healing Touch is used in outpatient pain centers, private practices, and operating rooms (MacIntyre et al., 2008), with reported benefits in reducing anxiety, increasing relaxation, decreasing pain, diminishing depression, and increasing a sense of well-being (Hutchinson et al., 1999). However, Healing Touch has not been evaluated using a systematic, evidence-based approach. Existing reviews have been non-systematic (Eschiti, 2007; Hutchinson et al., 1999; Wardell & Weymouth, 2004), leaving them subject to bias, or have not focused on clinical trials of Healing Touch alone (Jain & Mills, 2010). Thus, this systematic review is aimed at critically evaluating the data from randomized clinical trials (RCTs) examining the clinical effectiveness of Healing Touch as a supportive care modality for any medical condition.

Method

Data Sources

Electronic databases (MEDLINE, CINAHL, and ClinicalTrials.gov) were searched from their respective inception date through to January 22, 2010, using the search term *healing touch* to locate potentially relevant peer-reviewed articles. Additionally, relevant journals and the references of all located articles were manually searched for other potentially relevant studies.

Study Selections

The following inclusion criteria for RCTs were applied: randomization of study participants, assessment of

human subjects who received Healing Touch alone or adjunctive to conventional treatment, and comparison of Healing Touch with any type of control group, including usual care alone and/or mock treatment. Any trials with Healing Touch as part of a complex intervention, those aimed at the development of the methodology of Healing Touch procedures without clinical outcomes, those in which no data or statistical comparisons were reported, or those assessing healthy participants were excluded. Abstracts were included, and hard copies of all documents were obtained and read in full.

Data Extraction and Quality Assessment

Two independent reviewers validated, extracted, and recorded relevant study data using predefined criteria. Allocation concealment was assessed using the Cochrane classification and the methodological quality of all studies independently assessed using the modified Jadad score for review of biofield therapies developed by Lee, Pittler, and Ernst (2008). Using this method, a maximum of 5 points was awarded. One point was given for a description of the trial as a randomized study. One point was awarded for an appropriate method of randomization being reported, with one point deducted for an inappropriate randomization method. One point was given for the blinding of participants to the interventions, and one point for the blinding of the evaluator. An additional point was awarded for reporting the details concerning withdrawals and dropouts from the trial. Blinding of participants was assumed in trials where the experimental intervention was indistinguishable from the control intervention, even if the term *blinding* was not used by the authors. Any discrepancies in the scoring of the trials were resolved by discussion between the two reviewers.

Results

Study Description

The searches identified 332 potentially relevant articles, of which 327 articles were excluded. This resulted in five RCTs being included in the review. A schematic of the excluded studies as well as the reasons for exclusion are outlined in Figure 1, with key data from each study summarized in Table 1. One RCT was excluded because it was not possible to extract data relating to the effects of Healing Touch alone due to a complex intervention design involving more than one

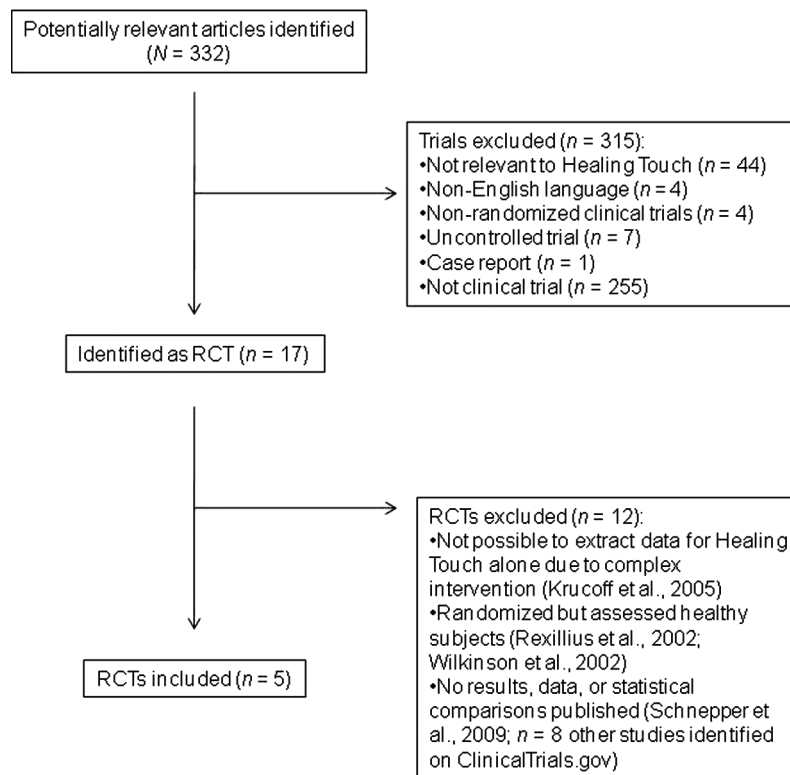


Figure 1. Diagram of Review Process and Trial Selection

complementary modality (Krucoff et al., 2005). Two RCTs were excluded because of the use of a healthy participant population (Rexilius, Mundt, Erickson Megel, & Agrawal, 2002; Wilkinson et al., 2002). One RCT abstract was excluded because no data or statistical comparisons were presented (Schnepper, 2009). Eight additional RCTs, identified on ClinicalTrials.gov, could not be included because the trials are ongoing and there are no published results as of yet. Of the five included trials, four used a parallel group design (Cook, Guerrero, & Slater, 2004; Krucoff et al., 2001; MacIntyre et al., 2008; Seskevich, Crater, Lane, & Krucoff, 2004), whereas one RCT used a crossover design (Post-White et al., 2003).

Study Quality

The quality scores of the included RCTs ranged between 2 and 5, of a possible 5 points. Of the five RCTs included, four adequately described the methods of randomization (Cook et al., 2004; Krucoff et al., 2001; MacIntyre et al., 2008; Seskevich et al., 2004). Assessor blinding was reported in three RCTs (Cook et al., 2004; Krucoff et al., 2001; Seskevich et al., 2004) and patient blinding in one (Cook et al., 2004). Details of study dropouts and withdrawals were

reported in three trials (Cook et al., 2004; Post-White et al., 2003; Seskevich et al., 2004), with all five of the RCTs reporting sufficient information concerning appropriate allocation concealment.

Studies Included

Krucoff et al. (2001) used a parallel design with five intervention groups, including usual care alone, imagery, Healing Touch, stress-relaxation therapy, or off-site intercessory prayer, in a sample of patients scheduled to undergo percutaneous coronary intervention (PCI) as part of the Monitoring and Actualization of Noetic Therapy Training (MANTRA) feasibility pilot study (modified Jadad score = 3). Noetic therapies are defined as treatments involving no tangible drug or medical device and include biofield therapies such as Healing Touch (Krucoff et al., 2005). Outcome measures included the Duke University Religion Index, the Spielberger State-Trait Anxiety Inventory, risk stratification by stress test abnormality as total ischemic burden during PCI, heart rate variability post-PCI, coronary insufficiency (defined as post-PCI ischemia), major adverse cardiovascular endpoints (MACE; defined as death, myocardial infarction, congestive heart failure, urgent repeat of PCI, or bypass surgery), all adverse cardiovascular endpoints

Table 1. Summary of Randomized Clinical Studies of Healing Touch

References	Design, Allocation, Concealment ^a	Modified Jadad Score	Subject's Condition, Mean Age, Sample Size (Randomized/ Analyzed)	Interventions (Regimen)	Main Outcome Measures	Main Results	Comments
Krucoff et al. (2001)	Parallel, 5 groups, open	3	Percutaneous coronary intervention; mean age = 63 years; sample size = 150	Imagery, Healing Touch, stress-relaxation therapy, and off-site intercessory prayer	DUREL, STAI, risk stratification, HRV, coronary insufficiency, MACE, ACE, ECG	No significant results with Healing Touch alone	25% to 30% reduction in ACE with any therapeutic intervention No other statistically or clinically significant results
Post-White et al. (2003)	Crossover, 3 groups, open	2	Cancer; mean age = 54.7 years; sample size = 164	Therapeutic massage, Healing Touch, and presence	Heart rate, respiratory rate, blood pressure, current pain (NRS), current nausea (NRS), BPI, BNI, POMS	Significant decrease in respiratory rate, heart rate, blood pressure, current pain, total mood disturbance, and fatigue with Healing Touch Healing Touch more effective than presence on decreasing respiratory rate and heart rate	Significant decrease in respiratory rate, heart rate, blood pressure, current pain, and total mood disturbance with therapeutic massage Significant decrease in respiratory rate, heart rate, and total mood disturbance with presence
Cook et al. (2004)	Parallel, 2 groups, blind	5	Gynecological or breast cancer; mean age = 50.7 years; sample size = 62	Healing Touch and mock Healing Touch	Attitudes about Healing Touch and beliefs about group assignment, SF-36	Significant increase in overall functional score, emotional role functioning, mental health, and health transition with Healing Touch	Music played during intervention without a standard protocol Significant increase in health transition and physical functioning with mock Healing Touch
Seskevich et al. (2004)	Parallel, 5 groups, open	4	Percutaneous coronary intervention; mean age = 64 years; sample size = 150	Stress management, imagery, Healing Touch, and intercessory prayer	Mood (VAS) using eight scales: happy, hopeful, calm, satisfied, worried, sad, upset, and short of breath	Significant decrease in worry and significant increase in satisfaction with Healing Touch	No usual care alone group Significant decrease in worry with imagery and stress management
MacIntyre et al. (2008)	Parallel, 3 groups, open	2	Coronary artery bypass graft surgery; mean age = 65 years; sample size = 237	Healing Touch and visitor/presence	Postoperative length of stay, incidence of postoperative atrial fibrillation, use of antiemetic medication, amount of narcotic pain medication, functional status, and anxiety (STAI)	Significant decrease in mean length of stay and mean anxiety scores with Healing Touch	Different treatment durations without a standard protocol

Note: DUREL = Duke University Religion Index; MACE = major cardiovascular end points (defined as death, myocardial infarction, congestive heart failure, urgent repeat percutaneous intervention, or bypass surgery); ACE = adverse cardiovascular end points (defined as MACE or postpercutaneous intervention ischemia); HRV = heart rate variability; ECG = electrocardiogram; VAS = visual analog scale; BPI = Brief Pain Index; STAI = State-Trait Anxiety Inventory; NRS = Numeric Rating Scale; BNI = Brief Nausea Index; POMS = Profile of Mood States.
a. Classified by Cochrane criteria.

(ACE; defined as either MACE or post-PCI ischemia), and electrocardiogram. A 25% to 30% reduction in ACE was observed following all the noetic therapy interventions. No other statistically or clinically significant results were observed, with no significant results from Healing Touch alone reported. Of the noetic therapies examined, off-site prayer seemed to have the most beneficial treatment effect. The MANTRA pilot study found that use of noetic therapies during acute care situations, such as the coronary care unit, was not only feasible but was welcomed and accepted by both patients and medical staff.

Post-White et al. (2003) examined the effects of therapeutic massage, Healing Touch, and presence in patients with cancer using a crossover design (modified Jadad score = 2). 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 respiratory rate, heart rate, blood pressure, current pain, total mood disturbance, and fatigue was observed following the Healing Touch intervention. Healing Touch was more effective than presence on decreasing respiratory rate and heart rate. Pain was reduced in the patients in the Healing Touch intervention group. A significant decrease in respiratory rate, heart rate, blood pressure, current pain, and total mood disturbance was reported following therapeutic massage. Participants in the presence group experienced a significant decrease in respiratory rate, heart rate, and total mood disturbance.

Cook et al. (2004) used a parallel design with two groups, Healing Touch and mock Healing Touch (modified Jadad score = 5). Participants were blinded to their treatment group, with the sample consisting of patients with gynecological or breast cancer. Measures included attitudes about Healing Touch and beliefs about group assignment, as well as the SF-36, which assesses both physical and mental aspects of health. A significant increase in overall functional score, emotional role functioning, mental health, and health transition in the Healing Touch group was reported. There was a significant increase in health transition and physical functioning in the mock Healing Touch group as well. Measurement of participants' beliefs about the efficacy of energy-based healing and their belief about group assignment add strength to this study.

Seskevich et al. (2004) continued the MANTRA study using a parallel design and the original five treatment groups: usual care alone, stress management, imagery, Healing Touch, and intercessory prayer

(modified Jadad score = 4). The sample was again made up of individuals undergoing PCI. Measures included subjective aspects of mood using eight visual analog scales assessing to what extent a participant was happy, hopeful, calm, satisfied, worried, sad, upset, and short of breath. A significant decrease in the level of worry and a significant increase in reported feelings of satisfaction were observed in the Healing Touch group when compared with standard care alone. A significant decrease in feelings of worry was also reported for the imagery and stress management groups.

MacIntyre et al. (2008) used a parallel design with three treatment groups (usual care alone, Healing Touch, and visitor presence) in a study of first-time elective and nonemergent inpatients undergoing coronary artery bypass graft surgery (modified Jadad score = 2). Measures included postoperative length of stay, incidence of postoperative atrial fibrillation, use of antiemetic medication, amount of narcotic pain medication, functional status, and anxiety using the State-Trait Anxiety Inventory. Patients in the Healing Touch group had significantly decreased length of stay (120% greater chance of length of stay \leq 6 days) and decreased anxiety levels when compared with a group receiving visitation or usual care alone. No differences in pain or antiemetic medication use, functional status, or atrial fibrillation were observed.

Discussion

Very few RCTs were identified in the process of conducting this review. Though the studies support the potential clinical effectiveness of Healing Touch in improving health-related quality of life (HQoL) in chronic disease management, more studies are required given that even the studies included with high-quality scores had limitations. One study (Cook et al., 2004) did not include a usual care alone group, which is essential when making comparisons with the standard of care. Krucoff et al. (2001) used a standardized Healing Touch method involving a "modified" chakra connection; however, no details were given as to how the technique was modified for the purposes of the study, making replication of the study difficult. 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. Additionally, the investigators did not use a standard Healing Touch protocol and included patients with

many different cancer types in the study, potentially contributing to some of the variability in the results. Although the second phase of the MANTRA study (Seskevich et al., 2004) gave rise to additional studies at multiple sites in patients with cardiovascular disease using noetic therapy interventions, including Healing Touch, with similar positive results on HQoL indicators (Krucoff et al., 2005), these studies were excluded from the present review because of the use of a complex intervention combining Healing Touch with other modalities, making it impossible to discern the effects of Healing Touch alone. The RCT by MacIntyre et al. (2008) used a Healing Touch intervention involving different treatment durations without the use of a standard protocol, again making replication difficult.

A major question about the field of energy medicine research is whether or not it lends itself to conventional scientific analysis (MacIntyre et al., 2008). Some complementary and alternative medicine (CAM) proponents consider it to be an art with an emphasis on patient's needs and have questioned applicability of strict scientific measures to assess validity of these CAM therapies (Bardia, Barton, Prokop, Bauer, & Moynihan, 2006). There remains a lack of rigorous trials that apply adequate methodology, including the use of blinding and placebo treatments (Shiflett, Nayak, Bid, Miles, & Agostinelli, 2002). Trials with inadequate levels of blinding are likely to show exaggerated treatment effects (Altman et al., 2001). Moreover, language issues loom large in all discussions of CAM given that practitioners are not always involved in developing research protocols, and investigators new to research may not have the experience or the vocabulary to engage actively in research-design discussions of complementary therapies (Forgues, 2009; Vuckovic, 2002). Reviews and meta-analyses have found many studies to be inadequate in design, such as appropriate controls, blinding, and adequate sample size, but promising enough to warrant further research (>80% of Consolidated Standards of Reporting Trials criteria; Pierce, 2007). However, proper integration of biofield therapies such as Healing Touch into the health care system requires scientific justification equal to more conventional therapies (Forgues, 2009).

Different subjective assessments were used in the RCTs included to determine outcomes such as fatigue and HQoL, making it difficult to compare studies using a more rigorous meta-analysis. This issue is not unique to the study of Healing Touch and other biofield therapies. Indeed, RCTs 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). The Patient-Reported Outcomes Measurement Information System (PROMIS; <http://www.nihpromis.org/Web%20Pages/PSYCHO%20Metricians.aspx>) Initiative aims to improve appreciably how these measures are selected and assessed in clinical research, including clinical trials (Garcia et al., 2007). Part of the NIH Roadmap Initiative, use of these measures supports the aim of the PROMIS Initiative, with its goals to revolutionize the way patient-reported outcome tools are used in clinical research and practice, and to aid in transforming the nation's medical research capabilities and speed the movement of research.

Previous studies have failed to use all types of outcomes (physiological, psychological, and qualitative), with few biofield studies correlating both physiological and psychological measures or including HQoL as a primary measure (Jain & Mills, 2010). These measures are needed to understand better the clinical impact of Healing Touch and other biofield therapies, and a triangulated approach using both quantitative and qualitative data may prove vital in understanding the uniqueness of the perceived effects of Healing Touch (Jain & Mills, 2010).

The results of a clinical study are only useful if the trial can be replicated. For this to occur, all aspects of the trial methodology must be reported including a full description of the Healing Touch intervention for those RCTs using a standardized protocol. Treatment duration and number of treatments should be included as well, given that the optimal dosage of Healing Touch has yet to be determined. None of the studies included in this review provided a clear rationale for the treatment specificity or duration. In addition, the level of experience of the Healing Touch practitioner should be described. There are numerous levels of Healing Touch training; therefore, a clear description of the level of expertise of the practitioner is essential.

The question of the safety of Healing Touch remains to be addressed. Healing Touch appears to be generally safe, and serious adverse effects have not been reported. Biofield therapies have not been shown to have any adverse side effects (So, Jiang, & Qin, 2008), and none of the reviewed studies reported any adverse events. Some patients with chronic disease have reported light-headedness, dizziness, irritability, agitation, or a temporary increase in symptoms following biofield therapy (So et al., 2008). Additionally, some

practitioners of Reiki, another biofield therapy, advise caution in treating people with psychiatric illnesses with Reiki because of a potential risk of bringing out underlying psychological illness; however, the incidence of this risk has not been reported in the published literature.

The mechanisms that may be involved in mediating the effects of Healing Touch remain hypothetical as the subtle energies that may form a component of the biofield have begun to be reliably and easily measured only recently (Movaffaghi & Farsi, 2009; Oschman, 2002), constituting an area for future study. Although electromagnetic fields generated by the body are readily detectable, a sustaining “life force” or *chi*, which is an essential component of biofield therapies, has yet to be adequately measured or characterized. Various techniques exist for visualizing the biofield (i.e., Kirlian photography, aura imaging, and gas discharge visualization; Oschman, 2000); however, it remains unclear what is being detected or photographed. Though the measurable electromagnetic fields generated by the body likely are a component of the biofield and play a role in mediating the effects of biofield therapies, it remains unclear as to how and whether or not these electromagnetic fields are affected by Healing Touch and other biofield therapies. A continued examination of specific biomarkers associated with the stress and relaxation response systems would aid in determining the impact of biofield therapies on physiology. Continuing studies of biofield therapies such as Healing Touch should examine whether or not these therapies are distinguishable from a general relaxation effect that could be achieved by a variety of other empirically supported complementary modalities. Such comparative data may potentially address general questions of mechanism and inform the current debate between the subtle energetic effects of ancient theories and Western theories of relaxation effects.

Limitations of this systematic review, and systematic reviews as a whole, involve the potential incompleteness of the reviewed evidence. Publication bias may produce an overall result more positive than the totality of all RCTs conducted would suggest. The distorting effects on systematic reviews from publication bias are well documented (Lee et al., 2008), given that negative studies tend to remain unpublished. A further weakness of systematic reviews involves the quality of the primary studies. Although the quality of the studies in the present review is moderate overall, methodological shortcomings such as small sample size and inadequate levels of blinding leave the overall

inconclusive result. Given that RCTs remain the “gold standard” in biomedical research, this review focused only on such trials. Nonrandomization introduces a potential selection bias that would create uninterpretable results. The exclusion of RCTs on healthy participants or those without clinical outcomes might be criticized; however, the inclusion of such trials would not provide reliable data on the clinical effectiveness of Healing Touch in chronic disease.

Although biofield therapies are among the most ancient of healing practices, scientific quantification of the methods, mechanisms, safety, and effectiveness of biofield therapies such as Healing Touch is still limited. This lack of knowledge provides the impetus for developing sound scientific research that will demonstrate both the effectiveness and the therapeutic potential of Healing Touch. Trials that address adequate methodological issues including the use of blinding and placebo treatments, a lack of quantitative data and a disregard for qualitative data, and the rigidity of standardized interventions versus individualized therapy are points that need to be considered and explored.

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- Joel G. Anderson**, PhD, is a Postdoctoral Research Fellow in the Center for the Study of Complementary and Alternative Therapies at the University of Virginia. Dr. Anderson's research interests involve the use of complementary modalities and nutritional interventions for cancer prevention and control.
- Ann Gill Taylor**, EdD, RN, FAAN, Norris Professor of Nursing, founded and directs the Center for the Study of Complementary and Alternative Therapies and the CAM Clinical Research Training Program at the University of Virginia. Research efforts in the Center focus on testing the efficacy of selected CAM modalities in reducing and/or managing symptoms, such as pain, anxiety, fatigue, depressed mood, and sleep disturbances, to improve health-related quality of life in a number of different patient populations.