

# Partner-Delivered Reflexology: Effects on Cancer Pain and Anxiety

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**Purpose/Objectives:** To compare the effects of partner-delivered foot reflexology and usual care plus attention on patients' perceived pain and anxiety.

**Design:** The experimental pretest/post-test design included patient-partner dyads randomly assigned to an experimental or control group.

**Setting:** Four hospitals in the southeastern United States.

**Sample:** 42 experimental and 44 control subjects comprised 86 dyads of patients with metastatic cancer and their partners, representing 16 different types of cancer; 23% of patients had lung cancer, followed by breast, colorectal, and head and neck cancer and lymphoma. The subjects had a mean age of 58.3 years, 51% were female, 66% had a high school education or less, and 58% were Caucasian, 40% were African American, and 1% were Filipino.

**Methods:** The intervention included a 15- to 30-minute teaching session on foot reflexology to the partner by a certified reflexologist, an optional 15- to 30-minute foot reflexology session for the partner, and a 30-minute, partner-delivered foot reflexology intervention for the patient. The control group received a 30-minute reading session from their partners.

**Main Research Variables:** Pain and anxiety.

**Findings:** Following the initial partner-delivered foot reflexology, patients experienced a significant decrease in pain intensity and anxiety.

**Conclusions:** A nurse reflexologist taught partners how to perform reflexology on patients with metastatic cancer pain in the hospital, resulting in an immediate decrease in pain intensity and anxiety; minimal changes were seen in the control group, who received usual care plus attention.

**Implications for Nursing:** Hospitals could have qualified professionals offer reflexology as a complementary therapy and teach interested partners the modality.

## Key Points . . .

- Partners can be taught by qualified professionals to perform foot reflexology on patients with metastases from cancer.
- Partners can be taught to observe patients for signs and symptoms of deep vein thrombosis and to avoid reflexology if signs and symptoms are noted.
- Study findings indicate that partner-delivered foot reflexology results in an immediate effect in decreasing pain and anxiety in patients with metastases.

parts of the body (Byers, 1983). Reflexology is an ancient practice; the earliest reported use was by the Chinese in 3000 BC. However, although reflexology is Eastern in origin and many Eastern theories explain its actions (Booth, 1994; Byers, 1983; Hang, 1991; Kunz & Kunz, 1999), the current use of reflexology for pain relief is based on the Western neuromatrix theory of pain (Loeser & Melzack, 1999; Melzack, 1999). The theory is an expansion of the Gate Control Theory (GCT) of pain that proposes that pain is a multidimensional experience involving three major psychological dimensions: sensory-discriminative, motivational-affective, and cognitive-evaluative.

The GCT describes pain as a noxious stimulus that could be increased or decreased by modulations in the gating mechanisms (Melzack & Wall, 1982). The sensory-discriminative dimension of pain is affected mainly by the rapidly conducting spinal system. The motivational-affective system is influenced by activities in the reticular and limbic areas of the brain and

In the United States, more than one million people are diagnosed with cancer every year, and as many as 91% of all patients with cancer have reported using at least one complementary and alternative therapy (Yates et al., 2005). Miaskowski et al. (2002) found that patients with bone metastases had inadequate pain control even with around-the-clock dosing of analgesics, suggesting that pain management is still an unmet need among patients. Complementary and alternative therapies are being used widely to assist with pain relief, even at centers such as Memorial Sloan-Kettering Cancer Center in New York, NY (Okie, 2000), sometimes for as many as 80% of patients (Bernstein & Grasso, 2001).

Deng and Cassileth (2005) recommended massage and reflexology for cancer pain and anxiety relief. Reflexology is defined by the International Institute of Reflexology as a manual technique based on the theory that reflex areas in the feet and hands correspond to all glands, organs, and

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