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# Feasibility of a Patient-Controlled Cognitive-Behavioral Intervention for Pain, Fatigue, and Sleep Disturbance in Cancer

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Improvements in cancer treatment have allowed people diagnosed with advanced (recurrent or metastatic) disease to live longer; however, these patients experience a heavy symptom burden. Patients with advanced cancer often report experiencing up to five symptoms at a given time and significantly more when receiving chemotherapy or radiation therapy (Chang, Hwang, Feuerman, & Kasimis, 2000; Feyer, Kleeberg, Steingraber, Günther, & Behrens, 2008). Researchers have identified co-occurring pain, fatigue, and sleep disturbance as a common symptom cluster among people with advanced cancer (Beck, Dudley, & Barsevick, 2005; Hoffman, Given, von Eye, Gift, & Given, 2007). Because the science regarding symptom clusters is new, few treatments that target co-occurring symptoms have been investigated. One logical option is to test interventions that have been effective for each of the cluster component symptoms when experienced in isolation. Evidence supports cognitive and behavioral strategies such as relaxation, distraction, and imagery for each of the three component symptoms (Kwেকেboom, Cherwin, Lee, & Wanta, 2009). The purpose of this study was to evaluate the feasibility and initial efficacy of a patient-controlled cognitive-behavioral intervention for managing pain, fatigue, and sleep disturbance during treatment for advanced cancer.

## Background

### Symptom Clusters

Patients with cancer often experience multiple symptoms (Potter, Hami, Bryan, & Quigley, 2003; Saini et al., 2006; Teunissen, de Graeff, Voest, & de Haes, 2007), and as oncology specialists working with particular groups of patients may notice, certain symptoms tend to occur together. Symptoms such as nausea and vomiting have

**Purpose/Objectives:** To evaluate the feasibility of a patient-controlled cognitive-behavioral intervention for pain, fatigue, and sleep disturbance during treatment for advanced cancer and to assess initial efficacy of the intervention.

**Design:** One group pre- and post-test design.

**Setting:** Outpatient oncology clinics at a comprehensive cancer center in the midwestern United States.

**Sample:** 30 adults with advanced (recurrent or metastatic) colorectal, lung, prostate, or gynecologic cancer receiving chemotherapy or radiotherapy.

**Methods:** Participants completed baseline measures (e.g., demographics, symptom inventory) and received education and training to use an MP3 player loaded with 12 cognitive-behavioral strategies (e.g., relaxation exercises, guided imagery, nature sound recordings). Participants used the strategies as needed for symptom management for two weeks, keeping a log of symptom ratings with each use. Following the two-week intervention, participants completed a second symptom inventory and an evaluation of the intervention.

**Main Research Variables:** Feasibility, patient-controlled cognitive-behavioral intervention, pain, fatigue, and sleep disturbance.

**Findings:** Thirty of 43 eligible patients (73%) agreed to participate; of them, 27 (90%) completed the study. Most reported that they enjoyed the intervention, had learned useful skills, and perceived improvement in their symptoms. Symptom scores at two weeks did not differ significantly from baseline; however, significant reductions in pain, fatigue, and sleep disturbance severity were found in ratings made immediately before and after use of a cognitive-behavioral strategy.

**Conclusions:** The patient-controlled cognitive-behavioral intervention appears to be feasible for additional study and could reduce day-to-day severity of co-occurring pain, fatigue, and sleep disturbance.

**Implications for Nursing:** A randomized, controlled trial is needed to test efficacy of the intervention for co-occurring pain, fatigue, and sleep disturbance. Meanwhile, based on previous efficacy studies, cognitive-behavioral strategies can be recommended for certain individual symptoms.