Music as a Therapeutic Intervention for Anxiety in Patients Receiving Radiation Therapy

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**Purpose/Objectives:** To determine whether music moderates the level of anxiety that patients experience during radiation therapy.

**Design:** Experimental, longitudinal, random assignment to music or no music therapy.

**Setting:** Urban radiation oncology center in a Department of Veterans Affairs hospital in the southeastern United States.

**Sample:** Forty-two men (19 in the experimental group, 23 in the control group) aged 39–80 years (74% white, 12% African American, 12% Hispanic, and 2% other) receiving definitive external beam radiation therapy for pelvic or abdominal malignancies.

**Methods:** Patients in the experimental group listened to music of their choice provided via audiotapes and headphones before and during their simulation and daily treatments for the duration of the planned course of therapy. The control group received standard care. The State-Trait Anxiety Inventory was administered initially to participants in both groups at the time of evaluation (time 1), post-simulation (time 2), at the end of the first week (time 3), at the end of the third week (time 4), and at the end of the fifth week or end of radiation therapy (time 5).

**Main Research Variable:** State anxiety.

**Findings:** No significant difference existed between the two groups to suggest that music moderated the level of anxiety during radiotherapy. However, post-hoc analyses identified changes and trends in state anxiety scores, suggesting a possible benefit of music therapy during radiotherapy.

**Conclusions:** Despite a lack of group differences, early intervention with music therapy for patients with high levels of anxiety may be beneficial.

**Implications for Nursing Practice:** Nurses and other clinicians may administer state anxiety scales at the initial visit or prior to pretreatment radiation planning (simulation). Individuals who have high state anxiety scores may receive nursing interventions tailored to reduce anxiety during simulation and the early part of radiotherapy.

**Key Points . . .**

- Radiation in cancer treatment can induce fear and anxiety in patients.
- Efforts to address the psychological well-being of patients with cancer may include manipulation of the treatment environment to be less stressful.
- Music may be one therapeutic intervention to moderate a high level of state anxiety during simulation and the early part of radiation therapy.
- Music is a simple, low-cost intervention that may help to moderate anxiety when resources are limited.

A common form of treatment for patients with cancer is radiation therapy. According to Weintraub (1992), “few therapeutic modalities in medicine induce more misunderstanding, fear, and anxiety than the use of radiation in cancer treatment” (p. 46). This necessitates creative interventions to alleviate patient concerns and anxiety. One such approach may include manipulation of the treatment environment to be less stressful.

**Literature Review**

Anxiety in Patients Receiving Radiotherapy

A few early research studies addressed anxiety and emotional reactions to radiation therapy. Peck and Boland (1977) studied 50 patients receiving radiation therapy using structured...

In the United States, men have a one in two lifetime risk of developing cancer, and, for women, the risk is one in three (American Cancer Society [ACS], 2000). With medical advances producing longer survival periods for many patients with cancer, clinical concerns are expanding to include not only patients’ physical needs but also their psycho-social well-being (Johnson, Casey, & Noriega, 1994).