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

Maureen Smith, MSN, ARNP, CS, Linda Casey, MS, ARNP, AOCN®, Darlene Johnson, MBA, CCRA, Clement Gwede, PhD, MPH, RN, and Ona Z. Riggin, EdD, RN

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 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 radiation therapy. 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

Maureen Smith, MSN, ARNP, CS, is a nurse practitioner in the geriatric psychiatry department and Linda Casey, MS, ARNP, AOCN®, is a nurse practitioner in the radiation oncology department, both at the James A. Haley Veterans Affairs Medical Center; Darlene Johnson, MBA, CCRA, is the radiation oncology program administrator and Clement Gwede, PhD, MPH, RN, is the clinical research coordinator, both in the radiation oncology department at H. Lee Moffitt Cancer Center and Research Institute; and Ona Z. Riggin, EdD, RN, is a distinguished university professor in the College of Nursing at the University of South Florida, all in Tampa. This study was supported, in part, by a grant from Sigma Theta Tau, Delta Beta Chapter, of the College of Nursing at the University of South Florida. (Submitted May 2000. Accepted for publication September 5, 2000.)