ARTICLES

Virtual Reality: A Distraction Intervention for Chemotherapy

Susan M. Schneider, PhD, RN, AOCN®, and Linda E. Hood, MSN, RN, AOCN®
ONS Excellence in Cancer Nursing Research Award

Purpose/Objectives: To explore virtual reality (VR) as a distraction intervention to relieve symptom distress in adults receiving chemotherapy treatments for breast, colon, and lung cancer.

Design: Crossover design in which participants served as their own control.

Setting: Outpatient clinic at a comprehensive cancer center in the southeastern United States.

Sample: 123 adults receiving initial chemotherapy treatments.

Methods: Participants were randomly assigned to receive the VR distraction intervention during one chemotherapy treatment and then received no intervention (control) during an alternate matched chemotherapy treatment. The Adapted Symptom Distress Scale–2, Revised Piper Fatigue Scale, and State Anxiety Inventory were used to measure symptom distress. The Presence Questionnaire and an open-ended questionnaire were used to evaluate the subjects' VR experience. The influence of type of cancer, age, and gender on symptom outcomes was explored. Mixed models were used to test for differences in levels of symptom distress.

Main Research Variables: Virtual reality and symptom distress.

Findings: Patients had an altered perception of time (p < 0.001) when using VR, which validates the distracting capacity of the intervention. Evaluation of the intervention indicated that patients believed the head-mounted device was easy to use, they experienced no cybersickness, and 82% would use VR again. However, analysis demonstrated no significant differences in symptom distress immediately or two days following chemotherapy treatments.

Conclusions: Patients stated that using VR made the treatment seem shorter and that chemotherapy treatments with VR were better than treatments without the distraction intervention. However, positive experiences did not result in a decrease in symptom distress. The findings support the idea that using VR can help to make chemotherapy treatments more tolerable, but clinicians should not assume that use of VR will improve chemotherapy-related symptoms.

Implications for Nursing: Patients found using VR during chemotherapy treatments to be enjoyable. VR is a feasible and cost-effective distraction intervention to implement in the clinical setting.

Key Points . . .

➤ Virtual reality is feasible to use as a distraction intervention during chemotherapy treatments and is well accepted by patients.

➤ Virtual reality alters the perception of time, making treatments seem shorter.

➤ Clinicians should not assume that the use of virtual reality will improve chemotherapy-related symptoms.

associated chemotherapy-related distress symptoms, patients often have difficulty adhering to the prescribed schedule. Developing interventions to assist people to better tolerate cancer treatments and, therefore, increase their chances for survival is an oncology nursing priority and a major focus of oncology nursing research.

The specific aim of this study was to determine the immediate and long-term effects of a virtual reality (VR) distraction intervention on symptom distress levels in adults with lung, colon, or breast cancer receiving IV chemotherapy. Specific research questions included whether measurements

Susan M. Schneider, PhD, RN, AOCN®, is an associate professor and director of the Graduate Oncology Nursing Specialty in the School of Nursing at Duke University and Linda E. Hood, MSN, RN, AOCN®, is a research nurse clinician at Duke University Medical Center, both in Durham, NC. This study was funded by a symptom management research grant from the ONS Foundation through an unrestricted grant from Ortho Biotech Products, L.P., and by Duke University Medical Center. *As the recipient of the 2006 Oncology Nursing Society (ONS) Excellence in Cancer Nursing Research Award, Schneider presented this article at the ONS 31st Annual Congress in Boston, MA. The ONS Excellence in Cancer Nursing Research Award is supported by Schering Corporation.*

Cancer continues to be a major health problem in the United States. Chemotherapy is prescribed either prior to or after surgery in an attempt to diminish tumor mass, eradicate occult micrometastatic disease, and increase disease-free survival. The chances for survival are enhanced if patients receive all of the recommended chemotherapy treatments for their specific disease. However, because of