

The Effectiveness of a Self-Care Management Interactive Multimedia Module

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Purpose/Objectives: To develop and test an interactive multimedia module prototype designed to accommodate adults with limited literacy and without computer skills.

Design: Experimental, randomized, controlled, pretest, post-test.

Setting: Cancer treatment centers in California, Louisiana (pilot), New Hampshire, Pennsylvania, and Texas.

Sample: Outpatients who were at least 18 years old with a minimum fifth-grade reading level; 86 experimental treatment, 88 control.

Methods: Experimental treatment involved use of the interactive multimedia module; the control group received customary instruction.

Findings: As compared to the control group, subjects in the experimental group had significant improvement ($p = 0.0001$; 257% gain) in self-care ability regardless of age, sex, race, education, geographic location, reading ability, computer experience, or preferred learning style; a 6,515% increase in fatigue content covered and 16,775% increase in instructional duration; and significantly greater benefit from sleep-related activities and a consistent, positive pattern of self-care behavior.

Conclusions: The program is instructionally effective, appropriate for a wide and geographically diverse audience, and feasible for use in the ambulatory setting.

Implications for Nursing Practice: The interactive multimedia module is an effective, self-directed resource for individualized patient fatigue education.

Fatigue, a universal symptom of illness (Ferrell, Grant, Dean, Funk, & Ly, 1996; Irvine, Vincent, Graydon, Bubela, & Thompson, 1994; Sitzia, Hughes, & Sobrido, 1995), is widely reported to be the most common side effect experienced by patients receiving cancer treatment (Irvine et al., 1994; Mock et al., 1997; Winningham et al., 1994) and their greatest expressed concern (Messias, Yeager, Dibble, & Dodd, 1997). Vogelzang et al. (1997) reported that 78% of patients surveyed experienced cancer- or treatment-related fatigue, yet 74% considered fatigue a symptom that had to be endured. Half of the respondents did not discuss fatigue treatment options.

Because most cancer treatments are administered in ambulatory settings, patients must be able to employ appropriate strategies to prevent, minimize, and cope with symptoms and side effects associated with cancer and its treatment (Adams, 1991; Fieler, Nail, Greene, & Jones, 1995; Morra & Grant, 1991). Inadequately managed side effects may result in dosage reductions, delayed treatment cycles, or treatment modifications that could impair quality of life (QOL) and jeopardize survival (Dodd, 1997).

Key Points . . .

- ▶ An interactive multimedia module can provide more detailed and extensive patient education than healthcare professionals could feasibly provide within the outpatient setting.
- ▶ Patients who are taught self-care may perform the same number or fewer self-care activities yet still experience significantly greater benefits than those who have not been taught self-care.
- ▶ Nursing intervention and support are essential when technologic advances and new products that can significantly benefit patients are incorporated into the clinical setting and brought to the attention of patients.

Over the last decade, cost-reducing efforts and limitations within healthcare settings have made it increasingly more difficult to ensure that patients are prepared adequately for the challenges they face (Morra & Grant, 1991; Schulmeister, 1991; Weaver, 1995). The volume and mobility of patients in ambulatory treatment areas combined with low staffing or shortages of healthcare professionals and educational resources hinder prolonged direct patient-education efforts (Griffiths & Leek, 1995; Schulmeister). Documentation of patient teaching—when it is provided—and patient learning rarely occur in the outpatient setting (Weaver). Inappropriate instructional materials, low literacy, and limited comprehension contribute to the inadequacy of patient education (Doak, Doak, & Root, 1996).

For years, the use of media was suggested for providing patient education without further burdening limited healthcare resources (Luker & Caress, 1989; Meade, 1996; Schulmeister, 1991; Theis & Johnson, 1995). Technologies (e.g., interactive video, computer-based multimedia) have been recognized as

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