Chemotherapy Knowledge and Health Literacy among Women with Breast Cancer

Chemotherapy education is imperative for patients to gain the knowledge to manage side effects, adhere to prescribed cycles, and recognize the severity of symptoms that require immediate provider contact. Two vital factors – the readability of teaching materials and the patient’s health literacy – must be considered during chemotherapy education. However, materials are often not assessed for readability. Further, the influence of a patient’s health literacy level and demographic factors on chemotherapy knowledge has not yet been investigated. The specific aims are to: (1) critique the readability and format of chemotherapy education materials; and (2) examine the relationships of a patient’s health literacy level and demographic factors with chemotherapy knowledge.

Forty-six women with breast cancer on intravenous chemotherapy were recruited from a large comprehensive oncology center. The women were surveyed in person and five instruments were administered: (1) demographic data form; (2) chemotherapy educational resource use form; (3) Rapid Estimate of Adult Literacy – Short Form; (4) Short Test of Functional Health Literacy in Adults; and (5) a revised Leuven Questionnaire on Patient Knowledge of Chemotherapy. Readability of the chemotherapy education materials was assessed using the: (1) Flesch Reading Ease; (2) Flesch-Kincaid; and (3) Simple Measure of Gobbledygook. Format of the materials was evaluated using the Suitability Assessment of Materials scoring. Thematic analysis was used to describe the experience of 37
participants undergoing chemotherapy education. Descriptive and inferential statistics were calculated to identify which factors influenced chemotherapy knowledge. The readability scores of the chemotherapy education materials ranged from 7th to a 12th grade reading level; areas most challenging for the reader pertained to information about treatment and chemotherapy drugs. The thematic analysis revealed three major themes: (1) finding control in learning; (2) receiving unexpected support; and (3) learning in unforeseen ways. Health literacy, income, and marital status were significantly related to chemotherapy knowledge.

This study highlights the importance of health literacy and social support in positively affecting chemotherapy knowledge despite the challenging reading levels of educational material. Future research should be directed to illuminate the effects of readability and health literacy across a spectrum of patients with a variety of cancers.