

Supporting Breast Self-Examination in Female Childhood Cancer Survivors: A Secondary Analysis of a Behavioral Intervention

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This article has been chosen for a podcast conversation with Cheryl L. Cox, PhD, RN, the primary author. Dr. Cox shares the development of her interest in the subject of the article, the need to focus on survivors of childhood cancer, and the developing specialty of cancer survivorship. To access the podcast, visit www.onsforum.org.

Purpose/Objectives: To identify intervention targets that will increase the frequency of breast self-examination (BSE) in female survivors of childhood cancer.

Design: Secondary data analysis of longitudinal clinical trial data.

Setting: Outpatient clinic in a children's research hospital.

Sample: 149 female survivors (aged 12–18 years) a median of 11 years after diagnosis of leukemia or lymphoma (59%) or solid tumor (41%).

Methods: Paired t tests, Wilcoxon signed rank tests, repeated measures analysis of variance, and analysis of covariance.

Main Research Variables: BSE frequency, health risk perceptions, motivation, and fears or worries.

Findings: Baseline BSE frequency was the strongest influence on follow-up BSE. Baseline and follow-up age and school grade influenced follow-up BSE. Other influential variables included motivation for behavior change, motivation to commit to health promotion, concern about appearance, and an interaction between the intervention and mother's highest grade level. When baseline BSE frequency and school grade were statistically controlled, diagnosis and significant interactions between grade level and the follow-up measures of the mother's education, general fears about cancer, fears about cancer returning, and perceptions of susceptibility to late treatment effects were significant influences on BSE after intervention.

Conclusions: Survivors least likely to perform BSE are fearful about cancer and are not motivated to change health behaviors.

Implications for Nursing: Nurses should explore survivors' fears about cancer and late treatment effects to address misconceptions, use modeling techniques with return demonstrations to ensure competency in BSE, and tailor risk information to each survivor's background (socio-economic status, age, development) and cognitive (disease and treatment knowledge, risks) and affective (fears) characteristics to increase BSE motivation.

Key Points . . .

- ▶ Young female childhood cancer survivors are at increased risk of breast cancer as a result of treatment, and interventions that increase the frequency of breast self-examination (BSE) may extend life.
- ▶ General fears about cancer and fear of cancer returning predicted decreased BSE frequency in older survivors.
- ▶ Nursing interventions aimed at promoting BSE in young female survivors should take into account the positive and negative effects of fear on BSE frequency.

risk for developing breast cancer than women in the general population (Bhatia et al., 2003), with a cumulative risk over 25 years of follow-up at 9.9% overall and 12.2% for those treated with supradiaphragmatic irradiation (Taylor, Winter, Stiller, Murphy, & Hawkins, 2006). The Childhood Cancer

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Female survivors of childhood cancer are at significant risk for developing breast cancer. Survivors who receive mantle, abdominal, or craniospinal radiation and fail to enter puberty or enter premature menopause face an increased risk for developing breast cancer (National Research Council, 2003). Childhood Hodgkin survivors are at greater