Predicting and Modifying Substance Use in Childhood Cancer Survivors: Application of a Conceptual Model

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Purpose/Objectives: To identify factors that predict or modify substance use in childhood cancer survivors and to describe how a risk-counseling intervention reduced young survivors’ substance use.

Design: Secondary analysis of clinical trial data and primary analysis of medical record data.

Setting: Outpatient clinic.

Sample: 149 females and 118 males 12–18 years of age whose cancer and treatment-related late effects are a new public health challenge. Five-year survival rates for patients with childhood cancer are 77% (Ries et al., 2002), and an estimated one in every 640 young adults aged 20–39 in the United States will be a childhood cancer survivor by the year 2010 (Hewitt, Weiner, & Simone, 2003). The life-extending therapies credited for the high survival rate, however, are associated with multiple late effects, including cardiotoxicity, second malignancy, organ damage, neurocognitive and psychological impairment, osteoporosis, diabetes, obesity, and related sequelae (Bhatia & Sklar, 2002; Glover et al., 2003; Hoffmeister, Storer, & Sanders, 2004). The late effects of therapy contribute to significant morbidity among survivors and a mortality rate that is 10.8 times greater than the general U.S. population’s (Mertens et al., 2001).

Survivors’ elimination of health-risk behaviors and participation in health-protective behaviors are the primary defenses against late effects of cancer treatment (Eshelman et al., 2004). Despite the risks, childhood cancer survivors continue to engage in behaviors that threaten their health and well-being significantly (Butterfield et al., 2004; Hollen & Hobbie, 1996; Tao et al., 1998). To modify survivors’ risks of

Key Points . . .

➤ Adolescent survivors of childhood cancer who smoke and consume alcohol compound their risks for late effects of treatment.

➤ Survivors’ worry about cancer exerts a negative and positive impact on behavior: Higher levels of worry predict substance use as well as increase survivors’ awareness of the need to change their behavior.

➤ Tailoring interventions to gender, age, and individuals’ motivation for change likely will be more effective than a traditional knowledge-based health education approach.

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