Exercise Programming and Counseling Preferences of Breast Cancer Survivors During or After Radiation Therapy

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Exercise participation after breast cancer diagnosis has been associated with a number of positive outcomes, including enhanced quality of life, reduced risk of recurrence, and improved survival times (Holick et al., 2008; McNeely et al., 2006). Despite these benefits, many breast cancer survivors do not achieve recommended amounts of physical activity (Courneya & Friedenreich, 1999; Haskell et al., 2007). Based on the National Coalition for Cancer Survivorship’s definition, the term cancer survivor refers to people anywhere along the cancer spectrum from diagnosis until the end of life (Leigh & Logan, 1991).

A myriad of variables influence exercise behavior, including demographic, biologic, psychological, behavioral, social, and environmental factors (Trost, Owen, Bauman, Sallis, & Brown, 2002). This article focuses on exploring exercise-related beliefs and features of programming and counseling that may influence exercise behavior in breast cancer survivors during or after radiation therapy. Although those variables represent only a small proportion of the factors that influence exercise behavior, they are important to study because they may be changed as a result of exercise interventions targeting social cognitive variables and thoughtful program design.

Few studies have examined exercise counseling and programming preferences in cancer survivors (Jones & Courneya, 2002; Jones et al., 2007; Karvinen, Courneya, Campbell, et al., 2007; Karvinen et al., 2006; Rogers, Courneya, Shah, Dunnington, & Hopkins-Price, 2007; Rogers, Markwell, Verhulst, McAuley, & Courneya, 2009; Vallance, Courneya, Jones, & Reiman, 2006), but almost all of them have been with survivors who were post-treatment. In general, cancer survivors indicated an interest in receiving exercise counseling and programming, preferred moderate intensity activity, enjoyed walking as a modality, and indicated a preference for starting exercise

**Purpose/Objectives:** To explore exercise programming and counseling preferences and exercise-related beliefs in breast cancer survivors during and after radiation therapy, and to compare differences based on treatment and insurance status.

**Design:** Cross-sectional survey.

**Setting:** Ambulatory cancer center in a rural community in eastern North Carolina.

**Sample:** 91 breast cancer survivors during or after radiation therapy.

**Methods:** The researchers administered the questionnaire to participants.

**Main Research Variables:** Exercise programming and counseling preferences and exercise beliefs moderated by treatment status (on-treatment, early, and late survivors) and insurance status (Medicaid, non-Medicaid).

**Findings:** Chi-square analyses indicated that fewer Medicaid users were physically active and reported health benefits as an advantage of exercise compared to non-Medicaid users (p < 0.05). In addition, more Medicaid users preferred exercise programming at their cancer center compared to non-Medicaid users (p < 0.05). More on-treatment and early survivors listed health benefits as advantages to exercise, but fewer indicated weight control as an advantage compared to late survivors (p < 0.05). Early survivors were more likely than on-treatment survivors to indicate that accessible facilities would make exercising easier for them (p < 0.05).

**Conclusions:** Medicaid users are less active, less likely to identify health benefits as an advantage for exercising, and more likely to prefer cancer center-based exercise programming compared to non-Medicaid users. In addition, on-treatment and early survivors are more likely to list health benefits and less likely to indicate weight control as advantages of exercising compared to late survivors.

**Implications for Nursing:** The low activity levels of Medicaid users may be best targeted by providing cancer center–based exercise programming. Exercise interventions may be most effective if tailored to the unique needs of treatment status.