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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 those 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.