

# Determinants of Physical Activity Maintenance in Breast Cancer Survivors After a Community-Based Intervention

C. Ellen Lee, PhD, PT, MPH, Diane Von Ah, PhD, RN, FAAN, Beth Szuck, RD, BA, HEc, and Yiu-Keung James Lau, MD, PhD

Lee is a visiting assistant scientist in the School of Nursing and School of Health and Rehabilitation Sciences, and Von Ah is an associate professor and the Department Chair of the School of Nursing, both at Indiana University in Indianapolis; Szuck is a registered dietitian at the Winnipeg Regional Health Authority Breast Health Centre in Manitoba; and James Lau is a medical advisor in Indianapolis, IN.

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Lee can be reached at leece@iupui.edu, with copy to editor at ONFEditor@ons.org.

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**Purpose/Objectives:** To determine whether empirically selected and social cognitive theory-based factors, including baseline characteristics and modifiable behavioral and psychosocial factors, were determinants of physical activity (PA) maintenance in breast cancer survivors (BCSs) six months after a PA intervention.

**Design:** Single-group longitudinal study.

**Setting:** The Breast Health Centre in Winnipeg, Manitoba, Canada.

**Sample:** 42 survivors with stage 0–III breast cancer who completed chemotherapy and/or radiation therapy.

**Methods:** The community-based PA intervention included six weekly education and practice sessions on home-based aerobic, resistance, balance, and flexibility exercises.

**Main Research Variables:** The dependent variable, PA maintenance, was determined based on PA level measurement at six months postintervention. The independent variables of baseline characteristics (age, stage of cancer, and chronic musculoskeletal symptoms) and modifiable behavioral and psychosocial factors (PA level, fatigue, PA self-efficacy in overcoming barriers and performing tasks) were assessed at baseline and postintervention.

**Findings:** Multivariate regression analyses revealed that baseline fatigue and chronic musculoskeletal symptoms were the only factors significantly associated with PA maintenance.

**Conclusions:** Baseline fatigue level and chronic musculoskeletal symptoms were significant determinants of PA maintenance in breast cancer survivors who had completed a community-based PA intervention. However, other key factors were considered.

**Implications for Nursing:** Prior to participation in community-based PA interventions, clinicians should take into account the effects of high baseline fatigue levels and chronic musculoskeletal symptoms on potential PA maintenance, and consider additional assessments and support for BCSs to sustain their PA behavioral change.

Physical activity (PA), including both occupational and leisure activities, is increasingly recognized as having an important role in breast cancer (BC) outcomes and survivorship. Breast cancer survivors (BCSs) often experience side effects from treatment (surgery, chemotherapy, radiation, adjuvant endocrine therapy), including functional limitations, poor quality of life, fatigue, weight gain, psychosocial distress, and increased risk of other chronic diseases (Schmitz, 2011; Speck, Courneya, Masse, Duval, & Schmitz, 2010). Evidence indicates that PA can help optimize the recovery of physical functioning, decrease deconditioning, improve quality of life, manage treatment side effects, and potentially protect against disease recurrence and mortality among BCSs (Kim, Choi, & Jeong, 2013; Lahart, Metsios, Nevill, & Carmichael, 2015). However, the benefit of PA for BCSs depends on the extent of their PA maintenance (Stull, Snyder, & Demark-Wahnefried, 2007), which is defined as the ability to sustain initial improvement in PA six months or more