

# Theoretical Framework to Study Exercise Motivation for Breast Cancer Risk Reduction

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**Purpose/Objectives:** To identify an appropriate theoretical framework to study exercise motivation for breast cancer risk reduction among high-risk women.

**Data Sources:** An extensive review of the literature was conducted to gather relevant information pertaining to the Health Promotion Model, self-determination theory, social cognitive theory, Health Belief Model, Transtheoretical Model, theory of planned behavior, and protection motivation theory.

**Data Synthesis:** An iterative approach was used to summarize the literature related to exercise motivation within each theoretical framework.

**Conclusions:** Protection motivation theory could be used to examine the effects of perceived risk and self-efficacy in motivating women to exercise to facilitate health-related behavioral change.

**Implications for Nursing:** Evidence-based research within a chosen theoretical model can aid practitioners when making practical recommendations to reduce breast cancer risk.

## Key Points . . .

- No general consensus exists regarding which theoretical framework is best used to study exercise motivation and adherence in women.
- Perceived risk is a central concept of many theoretical models used to explain and predict health behavior.
- Perceived self-efficacy from the social cognitive theory appears to be the most common factor in increasing the likelihood of commitment to exercise behavior.
- Further research is needed about specific interventions that might motivate women to exercise to reduce their risk of developing breast cancer.

One in eight women in the United States will be diagnosed with breast cancer, with 95% of all breast cancer being diagnosed in women aged 40 years or older. In 2007, an estimated 240,510 women will be diagnosed and 40,460 will die from breast cancer in the United States (American Cancer Society, 2007). The incidence of breast cancer has risen steadily during the past century; breast cancer is considered the most common cancer and the second-leading cause of cancer death among women in the United States.

According to the U.S. Department of Health and Human Services (1996, 2000, 2007), physical activity reduces the risks associated with a variety of diseases, including breast cancer. Individuals who participate in the greatest amount of physical activity seem to have the lowest risk. Studies show that women who participate in moderate to vigorous activity at least three to four hours per week have a 30%–40% reduction in breast cancer risk over sedentary women, regardless of their menopausal status (John, Horn-Ross, & Koo, 2003; McTiernan, 2003). Despite the growing evidence, many women choose not to exercise. Data show that less than 50% of women participate in physical activity as recommended by the Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine. More than 25% are not active at all (CDC, 2005).

Difficulty with exercise initiation and adherence among women has been attributed to a variety of factors. Motivation, in particular, consistently has been a strong indicator (Dishman, 1991; Girvin & Reese, 1990), with outcome expectations playing a major role (Bandura, 1977, 1982; Dishman & Buckworth, 2001; Schwarzer & Fuchs, 1995). Several theoretical frameworks have been applied to investigate women's motivation

to exercise, identify what factors most predict initiation and adherence, and plan appropriate interventions to increase participation in physical activity. No general consensus exists at this time as to which theoretical framework is best used to guide research. This article explores the contributing factors to exercise adherence, specifically motivation, within the context of several theoretical frameworks (see Table 1) which can be used to identify an appropriate model to guide research in exercise motivation for breast cancer risk reduction among high-risk women.

## Health Promotion Model

According to Pender's (1996) Health Promotion Model, health promotion is directed toward behaviors that optimize well-being, personal fulfillment, and self-actualization. Pender's original model emphasized seven cognitive-perceptual factors that directly affect the likelihood of engaging in health-promoting behaviors and five modifying factors that indirectly influence health behaviors. The seven cognitive-perceptual factors are the importance of health, perceived control of health, perceived self-efficacy, definition of health, perceived health status, perceived benefits of health-promoting behaviors, and

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