

# Factors Associated With Poor Sleep in Older Women Diagnosed With Breast Cancer

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**OBJECTIVES:** To determine the relationship among gait, grip strength, cognition, depression, pain, and fatigue, and to identify which variables are most predictive of poor sleep.

**SAMPLE & SETTING:** 60 women with breast cancer aged 69 years or older who were receiving treatment in the Senior Adult Oncology Program at the James Cancer Hospital at the Ohio State University.

**METHODS & VARIABLES:** The variables were gait and grip strength (functional domains), cognition, depression, pain, and fatigue. Patients were tested using the Timed Up and Go Test (TUG), Jamar Hydraulic Hand Dynamometer, Mini-Cog, Numeric Pain Rating Scale, Brief Fatigue Inventory, Geriatric Depression Scale, and Pittsburgh Sleep Quality Index. Pearson correlation coefficients and logistic regression models were used.

**RESULTS:** The mean age of the sample was 78 years. Pain and fatigue, depression and pain, and depression and fatigue each were positively related, and grip strength and TUG scores were negatively related. Fatigue was the strongest predictor of poor sleep.

**IMPLICATIONS FOR NURSING:** These findings are important to the comprehensive care of older women diagnosed with breast cancer. Understanding symptoms associated with poor sleep helps nurses develop comprehensive care plans for older adults with breast cancer.

**KEYWORDS** sleep disorder; comprehensive assessment; geriatric; breast cancer

**ONF, 45(3), 359–371.**

**DOI** 10.1188/18.ONF.359-371

About 49% of newly diagnosed breast cancers occur in women aged 55–74 years (National Cancer Institute [NCI], 2014). The risk of breast cancer increases with age (Howlander et al., 2016), with the median age of diagnosis at 62 years (NCI, 2014). In older women, sleep problems can be common and are associated with falls (Takada et al., 2017), mental status changes (Thomas, Redd, Wright, & Hartos, 2017), obesity, and other health limitations (Liu, Wheaton, Chapman, & Croft, 2013). About 75% of Americans report experiencing some type of sleep disturbance (Stanford Center for Sleep Sciences and Medicine, 2017), and 60% of older women diagnosed with breast cancer report poor sleep quality (Costa et al., 2014). Many individuals complain of problems sleeping even before receiving any cancer treatment (Fontes, Pereira, Costa, Gonçalves, & Lunet, 2017). Treatment for breast cancer often increases problems associated with poor sleep during and after cancer therapy (Costa et al., 2014). Problems with sleep, particularly those associated with depression and anxiety, can persist for as long as three years following a diagnosis of breast cancer (Fontes, Severo, Gonçalves, Pereira, & Lunet, 2017).

The purpose of this study was to understand which common health concerns are predictive of poor sleep in older women diagnosed with breast cancer. The objectives of this study were to determine the relationship among gait, grip strength (functional status domains), cognitive status, depression, pain, and fatigue, and to understand which factors are associated with poor sleep. This study is significant in that the NCI (2016) suggests that people diagnosed with cancer are at risk for developing sleep disturbances.

## Definition of Sleep Disorders

Sleep disorders include more than 80 types of problems that interfere with sleep (National Center for Complementary and Integrative Health, 2017;