Sleep Quality and Associated Factors Among Survivors of Breast Cancer: From Diagnosis to One Year Postdiagnosis

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OBJECTIVES: To examine sleep quality and self-reported causes of sleep disturbance among patients with breast cancer at diagnosis and one year later.

SAMPLE & SETTING: 486 of 606 patients with histologically confirmed breast cancer completed a Pittsburgh Quality Sleep Index (PSQI) survey at the time of diagnosis and again one year later.

METHODS & VARIABLES: In this secondary data analysis, descriptive statistics were computed for seven PSQI components and its global score. Wilcoxon signed-rank tests and McNemar's tests were used. Self-reported reasons for sleep disturbances were summarized.

RESULTS: PSQI scores significantly increased from baseline ($\bar{X}$ = 6.75) to one-year follow-up ($\bar{X}$ = 7.12), indicating worsened sleep. Sleep disturbance and onset latency scores increased, whereas sleep efficiency decreased. The two most frequently reported reasons for sleep disturbance were waking up late in the night or early in the morning (more than 50%) and needing to use the bathroom (49%). Feeling too hot and experiencing pain three or more times per week were reported by participants at baseline and one year later.

IMPLICATIONS FOR NURSING: Results can aid in monitoring patient response to treatment methods and formulating benchmarks to manage sleep problems.

reast cancer is the most common form of cancer in women worldwide (Siegel et al., 2024), with about 2.3 million newly diagnosed cases in 2020, representing 11.7% of all cancer diagnoses (Sung et al., 2021). The American Cancer Society (2024) estimates that in 2024 there will be 310,720 new cases and 42,250 deaths from invasive breast cancer in women. According to Cheng et al. (2017), such a large number of breast cancer diagnoses, in addition to significantly improved survival rates, resulted in a surge of breast cancer survivors (BCSs) whose health needs warrant attention but are often ignored.

Quality sleep, defined as an individual's self-satisfaction with all aspects of the sleep experience (Buysse et al., 1989), is crucial for overall well-being and affects cognitive function and various aspects of health (Ramar et al., 2021). This prevalence is alarming because poor sleep quality is associated with increased risk of mortality, cardiovascular disease, diabetes, obesity, and cancer (Ramar et al., 2021).

Based on a systematic review and meta-analysis by Leysen et al. (2019), the prevalence of sleep disturbance, mainly defined as insomnia and/or sleep–wake disturbance, is about 40% among BCSs. Studies using validated questionnaires, such as the Pittsburgh Sleep Quality Index (PSQI) or the Insomnia Severity Index, suggest that the prevalence of poor sleep ranges from 38% to 66% (Gonzalez & Lu, 2018; Lowery-Allison et al., 2018; Otte et al., 2010; Reinsel et al., 2015). The prevalence of clinically significant moderate to severe insomnia among BCSs ranges from 18% to 46% (Bao et al., 2016; Desai et al., 2013; Taylor et al., 2012).

Addressing poor sleep quality among BCSs is vital because it correlates with diminished quality of life, impaired performance, and adverse health outcomes (Lowery-Allison et al., 2018). Although previous studies emphasized single aspects of sleep