

# A Retrospective, Cross-Sectional Study of Self-Reported Physical Activity and Depression Among Breast, Gynecologic, and Thoracic Cancer Survivors

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**OBJECTIVES:** To describe cancer survivors' self-reported frequency and intensity of physical activity and depression.

**SAMPLE & SETTING:** 1,412 breast (n = 375), gynecologic (n = 369), and thoracic (n = 668) cancer survivors at an urban comprehensive cancer center between July 2017 and December 2018.

**METHODS & VARIABLES:** Attainment of recommended physical activity was assessed using the Godin-Shepard Leisure-Time Physical Activity Questionnaire, and depression was assessed using the Patient Health Questionnaire (PHQ)-2 or PHQ-9. Abstracted characteristics, including age, sex, race, years since diagnosis, pain, body mass index, smoking, and marital and employment status, were also assessed.

**RESULTS:** 872 patients were insufficiently active, and 105 patients reported some level of depression. Breast cancer survivors were significantly more likely to attain recommended activity levels than gynecologic or thoracic survivors. There was no intergroup difference in the incidence or severity of depression.

**IMPLICATIONS FOR NURSING:** Nurses working with survivors should assess physical activity and support patients to meet weekly exercise duration and intensity recommendations.

**KEYWORDS** physical activity; depression; cancer survivors; exercise adherence; survivorship

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According to the American Cancer Society (ACS, 2019), there were more than 16.9 million cancer survivors in the United States in 2019, and that number is projected to exceed 22.1 million by 2030. Cancer survivors have an increased prevalence of physiologic and psychological distress compared to the general population for multiple reasons, including fear of death, disease recurrence, pain, fatigue, memory issues, and poor sleep quality (ACS, 2019; Iadeluca et al., 2017; Syrowatka et al., 2017). A growing body of evidence suggests that this population is at elevated risk for mood disorders, such as depression, for years following diagnosis. Synthesis of the data regarding the overall prevalence of depression among people with cancer during and after treatment is complicated by differences in the type and stage of cancer, as well as time since diagnosis and treatment completion (Krebber et al., 2014). Previous multicenter studies and meta-analyses describing depression in the population of patients with cancer reported overall mean depression prevalence from 8% to 24%, but noted that prevalence was highest during treatment (27%) and decreased to 19%–21% one year postdiagnosis and 12%–15% when measured more than one year postdiagnosis (Eichler et al., 2018; Krebber et al., 2014; Mitchell et al., 2013). Among longer-term survivors who have completed treatment and are without metastatic disease, reports of depression prevalence also varied by tumor type. In a systematic review of 42 studies, depression was prevalent in 4%–26% of breast cancer survivors who were 6–10 years postdiagnosis (Syrowatka et al., 2017). Fewer reports focused on long-term survivors of other cancers, with depression prevalence of 19%–20% and 13% among lung and ovarian cancer survivors who were more