

# **Abstract Template**

**Title:** The emotional/psychological well-being among long-term female breast cancer survivors by treatment type and status: A Health Information National Trends Survey (HINTS) data analysis.

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**Background/Significance:** Breast cancer treatment adversely impacts various domains of health-related quality of life (HRQOL) among women in the United States. However, the association of treatment on psychological well-being remains unclear among long-term breast cancer survivors (BCS). The purpose of this analyses was to assess the association between depression & anxiety and 1) cancer treatment types and 2) status of cancer treatment among BCS.

**Methods:** Analyses were conducted using data from HINTS 5 cycle1 (2017), and HINTS 4 cycle 4 (2014), which included 6962 participants of whom 1046 (15%) identified themselves as a cancer survivor. Of these 1,046, 204 (19%) were BCS. This analysis used 187 (17.8%) 40 years of age or older BCS women. Depression and anxiety outcomes were self-reported, and the algorithm applied to the Patient Health Questionnaire (PHQ-4) data. Univariate groups comparison relied on the t-test/Kruskal Wallis techniques for continuous variables and chi-square/Fisher exact tests for categorical variables. Multiple linear regression and logistic function techniques were used to assess the outcomes of interest. SAS version 9.4. was used for the analysis.

**Results:** BCS younger than 65 years old, with an income of less than \$50K, were more likely to report depression/anxiety (OR (95% CI): 2.9; (1.1,7.8), and unemployed/retired/disabled vs. employed were more likely to be depressed (OR (95% CI): 10.3 (1.7,61.7). Also, those who received chemotherapy/radiotherapy/surgery vs. other treatment combinations were less likely to be depressed (OR (95% CI):0.43 (0.19, 0.97). Based on the PHQ-4 score, those who received treatment within one year vs. 10+ years ago were less likely to be depressed (OR (95% CI): 0.022 (0.001, 0.52).

**Conclusions and Implications:** The findings of this national study suggest the need for continued surveillance of long-term BCS. Clinical and non-clinical interventions addressing HRQOL among long-term BCS should target psychological well-being (anxiety and depression), particularly among the young and unemployed/retired/disabled. Further research is needed to further elucidate the late and long-term effects of treatment on long-term BCS.

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