COMPARISON OF LIFESTYLE BEHAVIORS AND GENERAL HEALTH BETWEEN FEMALE BREAST CANCER SURVIVORS WITH AND WITHOUT DIABETES

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Background

- Diabetes and breast cancer share some risk factors such as aging, obesity, diet and physical inactivity.
- The risk of breast cancer in women with type 2 diabetes is increased by 27%, and remained16% after adjustment for BMI (Boyle, et al, 2012).
- Lifestyle modifications can prevent or delay diabetes.
 - But for breast cancer survivors, whether lifestyle behaviors and general health differ between women with and without diabetes is unclear.

Objectives

- To compare the demographic variables between female breast cancer survivors with diabetes and those without diabetes.
- To compare the lifestyle behaviors between the two groups
- To identify variables that relate to physical inactivity

Results

Length of time since diagnosis of breast cancer:

- ≤5 years: 31.4%
- 6-10 years: 19.9%
- >10 years: 48.7%

Having Diabetes:

- n=217 (17.7%)

Diagnosis sequence:

- Diabetes before cancer: 91 (48.7%)
- Diabetes after cancer: 89 (47.8%)
- Diagnosed same year: 7 (3.5%)

Table 1. Demographic and clinical variables

	No diabetes	Have diabetes	χ^2
Marital Status			14.18*
Not married	77.1%	22.9%	
Married	85.6%	14.4%	
Race			22.19*
White	84.5%	15.5%	
Non-White	68.7%)	31.3%	
Income			25.66*
<35K	76.0%	24.0%	
≥35K	88.2%	11.8%	
Education			17.08*
≤High school	76.8%	23.2%	
> high school	86.1%	13.9%	
Length of diagnosis			2.70
≤5 years	80.9%	19.1%	
6-10 years	86.0%	14.0%	
>10 years	83.3%	16.7%	

*p<0.001|

Methods

Data

- Data were obtained from the 2016 Behavioral Risk Factors Surveillance System (BRFSS), which included a nationally representative sample generated using the multi-stage random sampling methods.
- Ten states/territories administered the cancer survivorship module.

Inclusion/Exclusion criteria:

- Adult women diagnosed with breast cancer
- Completed cancer treatment at the time of the survey
- Women who were underweight were excluded

Final Sample:

- N=1,106 participants.

Variables

- General health (poor/fair vs good to excellent)
- Weight (normal vs overweight/obese)
- physical activity (whether exercised within the past 30 days)
- Sleep (<7 hours versus ≥7 hours).
- Demographic variables

Results

Table 2. Lifestyle behaviors

	No diabetes	Have diabetes	χ^2
Physical activity			30.93*
No	26.4%	45.5%	
Yes	73.6%	54.5%	
Weight			37.76*
Normal	36.0%	13.2%	
Overweight/Obese	64.0%	86.8%	
Sleep			7.52**
<7 hours	25.8%	35.0%	
≥7 hours	74.2%	65.0%	
General Health			23.25*
Fair/poor health	20.1%	39.7%	
Good health	79.9%	20.1%	

*p<0.001 **p<0.01

Conclusions

- Among breast cancer survivors, women with diabetes had higher risks for physical inactivity, overweight/obesity, sleep less than 7 hours, and fair/poor health than those without diabetes.
- In multivariate logistic regression model, diagnosis of diabetes, education, income and body weight are significantly related to physical activity.
- Lifestyle interventions are needed to target survivors with diabetes, especially those with low socioeconomic status.