Physical activity level differences among Non-Hispanic White and Chinese American breast cancer survivors

Can Cao, MD, Theresa Shao, MD, Ashley Tsang, MD, Maryann Kwa, MD, Roger Brown, PhD, Lei-Shih Chen, PhD, Marc Schwartz, PhD, Douglas Roblin, PhD, Michael Antoni, PhD, Leena Hilakivi-Clarke, PhD, Gary Kowk, PhD, Annie Lin, PhD, Kathie-Ann Joseph, MD, Jose Xum Osorio, Judy Huei-yu Wang, PhD, Steven Cai, MD

Icahn School of Medicine at Mount Sinai

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Background

- Increased physical activity (PA) in breast cancer patients has been associated with benefits including lower fatigue, depression and anxiety levels, better tolerance of treatment related side effects, and lower cancer recurrence rates.[1]
- The American Cancer Society (ACS) recommends that cancer survivors undergo at least 150-300 minutes of moderate intensity activity or 75-150 minutes of vigorous activity per week and encourages exceeding these upper limits.[2]

Purpose

- This study aimed to evaluate and better quantify PA in this population given the limited data on PA in Chinese American breast cancer survivors.

Methods

- In a broader prospective cohort study comparing breast cancer survivorship between Chinese American breast cancer patients and Non-Hispanic White (NHW) patients over a 12-month period, recruited patients underwent a baseline phone survey administered by trained staff (National Cancer Institute grant # 5R01CA248413-03).
- This study analyzed responses to the included Global Physical Activity Questionnaire developed by World Health Organization (WHO) to calculate total metabolic equivalent (MET) minutes spent per week on PA.
- Student's T-test analysis was used to evaluate for significant differences between groups.

Data and Results

Graph 1: Reported Weekly PA by Activity Type

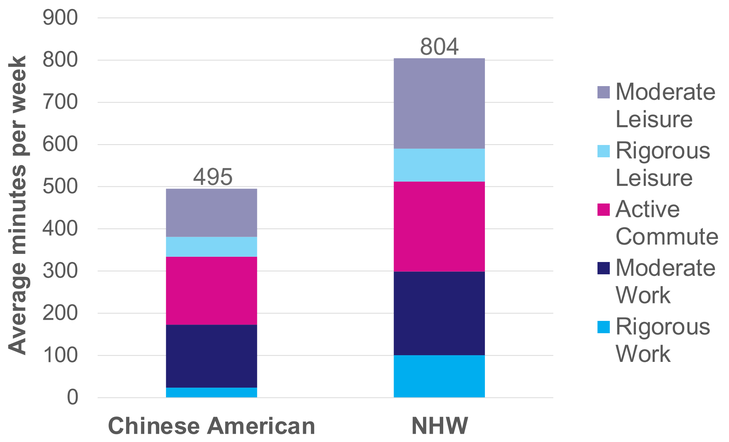


Table 1: Summarized initial survey results for PA

	Chinese American	NHW
Number of patients	110	133
Average age (years)	56	59
Average age at diagnosis (years)	54	56
Average BMI	23.6	25.7*
Average total PA per week (MET-minutes)	2270	3950*
Average daily sedentary time (minutes)	337	348
Average daily step count	6590	8430*

*Difference between groups was statistically significant at $\alpha = 0.05$

Results Analysis

- Both groups exceeded NCS recommended minimums when accounting for both leisure and work-related PA
- The average BMI of Chinese Americans was significantly lower than that of NHWs ($p = 0.0003$) within the survey group.
- Chinese American had a lower average weekly total PA in MET-minutes than their NHW counterparts ($p = 0.0053$).
- Among patients using step counters, Chinese Americans reported significantly lower average number of steps than NHWs ($p = 0.0056$)
- There was no statistically significant difference between the average reported daily sedentary time between the two groups ($p = 0.675$).

Conclusions

- While both groups exceeded recommended weekly minimum PA, Chinese American patients reported significantly lower PA than their NHW counterparts.
- Further studies are needed to determine the effect of this difference on breast cancer survivorship

References

1. Le Y, Gao Z, Gomez SL, Pope Z, Dong R, Allen L, Chang MW, Wang JH. Acculturation and Adherence to Physical Activity Recommendations Among Chinese American and Non-Hispanic White Breast Cancer Survivors. J Immigr Minor Health. 2019 Feb;21(1):80-88. doi: 10.1007/s10903-018-0721-x. PMID: 29569102; PMCID: PMC6151158.
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