

# Assessing a culinary medicine program to increase healthy eating among cancer survivors and their caregivers

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## Objective

To evaluate a 6-week culinary medicine program for cancer survivors, their caregivers, and primary care patients

## Introduction

- Culinary Medicine focuses on the relationship between food, health, and disease prevention, utilizing the Mediterranean Diet (MedD) principles
- MedD has been associated with a lower risk of chronic diseases, such as cancer<sup>1</sup>
- With higher rates of comorbidity among cancer survivors<sup>2</sup>, there is a need for nutrition-centered interventions targeting this population

## Methods

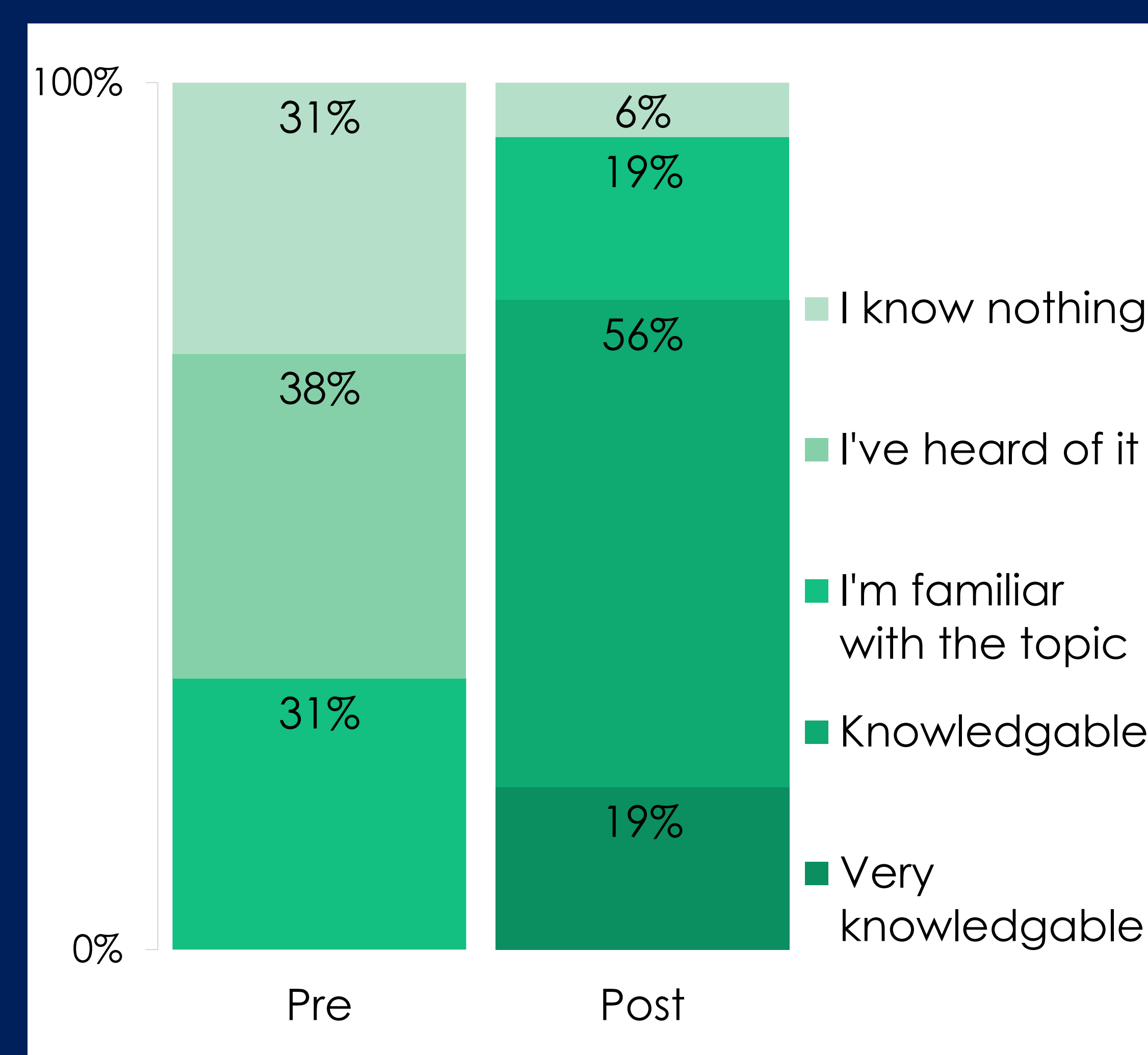
- 16 cancer survivors, their caregivers, and primary care patients enrolled in a 6-week culinary medicine program from September to October 2019
- Weekly sessions included a 30 minute didactic nutrition lesson and 1.5 hours of hands-on cooking
- Pre- and post-tests assessed dietary knowledge, self-reported weekly diet, and cooking behaviors
- Wilcoxon signed-rank test was used to analyze 5-point Likert-scale questions (e.g., How many times in a usual week do you cook or help cook a meal?)

Table 1: Demographics

Demographic	N=16 (%)
<b>Age range (years)</b>	
25-34	1 (6.3)
55-64	9 (56.3)
65-74	6 (37.5)
<b>Sex</b>	
Male	2 (12.5)
Female	14 (87.5)
<b>Race</b>	
African-American	5 (31.3)
White	11 (68.8)
<b>Education</b>	
High school diploma	3 (18.8)
Trade or technical certificate	4 (25.0)
Bachelor's degree	2 (12.5)
Master's or professional degree	6 (37.5)
Doctoral degree	1 (6.3)
<b>BMI</b>	
>18.5	2 (12.5)
18.5 – 24.9	4 (25.0)
25 – 29.9	4 (25.0)
>30	6 (37.5)
<b>Cancer Survivor</b>	9 (56.3)
<b>Cancer Survivor Caregiver</b>	3 (18.8)
<b>Primary Care Patient</b>	4 (25.0)

Figure 1: Increased MedD Knowledge

Post-program, the percentage of participants who reported themselves as being knowledgeable or very knowledgeable of the MedD and its associated health effects increased from 0 to 75% (p=0.0002)



*"The instructors were fantastic...they all make each person feel so special! I have already shared information and the [educational] binder with many people."*

Quote from cancer survivor participant

Table 2: Self-Reported Cooking and Behaviors

Frequency Performing Task, N=16	Pre-Program		Post-Program		Difference		Sign Rank p-value
	Median	IQR	Median	IQR	Median	IQR	
<b>How many times in a usual week do you:</b>							
Cook or help to cook a meal?	2.5	2.5	3.5	2.0	1.0	1.0	<b>0.033</b>
Prepare breakfast at home?	3.0	3.0	3.0	1.5	0.0	1.0	0.531
Prepare lunch at home?	2.5	2.0	3.0	1.5	0.5	1.0	<b>0.027</b>
Prepare dinner at home?	2.0	1.5	3.0	2.0	0.0	1.0	<b>0.047</b>
Eat leftovers from home-cooked meals?	1.0	1.0	2.0	1.0	0.0	2.0	1.000
Plan meals ahead of time?	1.5	1.0	2.0	2.0	0.5	1.0	0.394
Go grocery shopping?	1.0	0.5	1.0	0.0	0.0	0.0	0.688
Use a nutrition label to help you make food choices?	2.0	3.0	3.0	3.0	0.0	2.5	0.281
Use MyPlate to help make sure you have the suggested food groups and portion sizes?	0.0	0.5	1.0	1.5	0.0	1.0	<b>0.047</b>

IQR indicates interquartile range

Note: P values for differences are from Wilcoxon signed-rank test

## Results

- 100% program completion with high attendance rate: 82%
- Significant increases in the frequency participants cooked or helped cook a meal (p=0.033), prepared lunch and dinner at home (p=0.0273 p=0.047), and used MyPlate to for suggested food groups and portion sizes (p=0.047)
- For unhealthy eating habits, significant decreases in the number of times per week participants ate from a fast food restaurant (p=0.031)
- For healthy eating habits, significant increases in the number of times per week participants ate legumes (p=0.010), but no other MedD food groups
- Significant decreases in the belief that preparing healthy home-cooked meals is too costly or time-consuming (p=0.020)
- No significant decreases in reported BMI post-program



Cancer survivors are often motivated to engage in behaviors they believe will improve their health



Culinary medicine is a feasible tool to increase nutrition knowledge and health eating behaviors



Further research is needed to see if changes are long-lasting and if metabolic indices are improved

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