Food as Medicine: Community-Based Disease-State Cookbooks for Patrons of the Freestore Foodbank

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Introduction

In the 2015 USDA Dietary Guidelines for America report, it was found that nearly 50 percent of Americans have one or more preventable or diet-related disease, including hypertension and type 2 diabetes.[1] In Cincinnati in 2017, the age-adjusted prevalence of the aforementioned diseases was nearly 22 and 47 percent higher, respectively, than the national average.[2] Although the reasons for such outcomes are as numerous as they are complex, interventions for effective management of chronic diseases often focus on increasing patient health literacy.[3] Numerous studies have shown that increasing the health literacy of patients is linked to reduced disease severity and consequently better health outcomes.[4,5]

A major component of health literacy is the ability to engage in food-related behaviors, such as understanding food labels, cooking, and determining adequate intake.[3] Because food is largely attached to socio-cultural norms, however, it is imperative that information related to health literacy is produced in collaboration with members of the specific demographic community for which it is intended. In fact, food-focused interventions for chronic disease management, such as cookbooks, are most successful when the community is involved in the formation of the product from the beginning.[6] Thus, using the reported food practices and disease concerns of residents of Over-the-Rhine, Cincinnati, we developed disease-state-specific cookbooks designed to increase food literacy.

Service and Learning Objectives

- *Learning Objective:* To determine which diet-related diseases were of greatest interest to the clients of the Freestore Foodbank.
- *Service Objective:* To use our collected data to develop disease state-specific cookbooks using ingredients commonly found in the Freestore Foodbank so as to provide accessible, personalized, and culturally sensitive educational materials for clients trying to improve their health through diet.

Methods

Health Condition Screening: A single page survey was prepared to screen for interest in health-related conditions with a dietary component. In addition, the survey aimed to collect basic information on access to food preparation and storage options and comfort level at navigating the standard nutrition label. Finally, brief demographic data were collected.

Relevance Precautions: The foods available in the Marketplace at the Freestore Foodbank change often. Freestore team members were consulted to determine common foods stocked and each student member of the team designing recipes for the cookbook volunteered for shifts at the Marketplace to get firsthand experience with product availability. Items commonly in stock were used as bases for recipe design.

Cultural Sensitivity: A simple questionnaire was developed to assess what common foods and dishes were regularly consumed by clients of the Freestore Foodbank. These questions were asked during the intake process of registering for the Marketplace. This was done with the goal of the cookbooks centering on foods typically enjoyed by clients.

Cookbook Development: Three cookbooks were designed in total, one each to target the top three health conditions of interest. Each started with a relevant education piece and included additional tips through the recipes. Each contained three recipes for dishes identified by Foodbank clients as regular meal options that had been modified to be compatible with the target health condition. Recipes were taste-tested and photographed for realistic representations in the cookbooks.
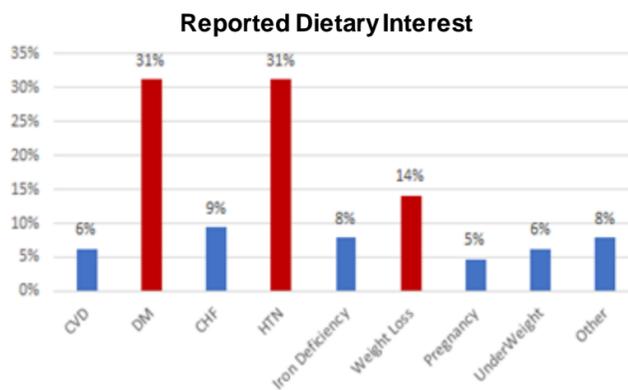
Results

Figure 1.1. Results showing percentage of individuals interested in diets for a variety of health-related conditions. The highest plurality of responses were to diabetes, hypertension, and weight loss (colored red). These were chosen to pursue for intervention.
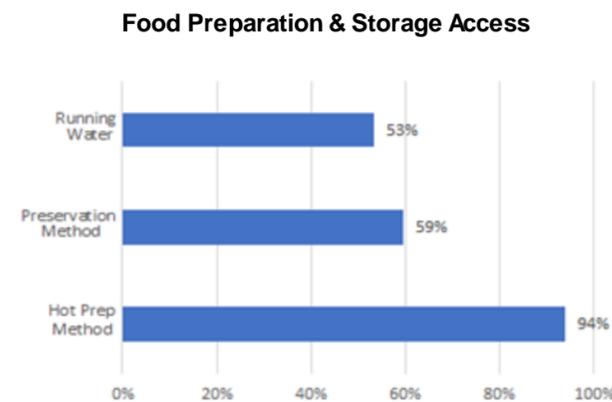

Figure 1.2. Results showing percentage of individuals reporting reliable access to necessities for cooking and preserving food. Different recipes were chosen to account for variety in methods of hot prep (ie. oven, stove) and with the understanding that not all individuals using the cookbook would be able to store leftovers.
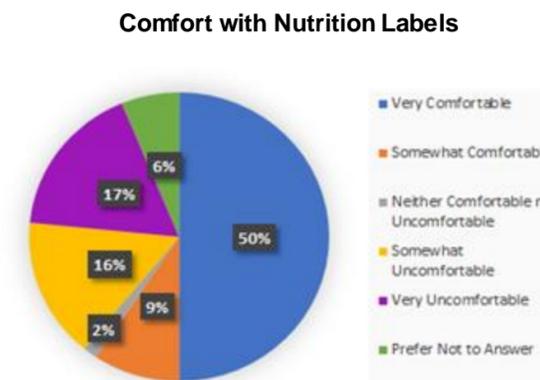

Figure 1.3. While 50% of respondents were comfortable with nutrition labels, 33% were either somewhat or very uncomfortable. The cookbook was designed to use methods other than nutrition labels to engage in health condition-related nutrition education.

Conclusions

Meeting our Objectives:
- *Learning Objective:* Through our surveys and questionnaires, we were able to directly interact with a diverse group of Freestore Foodbank clients to learn more about the community.
- *Service Objective:* By developing three separate cookbooks based on community insight and feedback, we were able to create a disease-state relevant resource for the Freestore community.

Barriers and Solutions:
- *Barrier:* Focus groups were unsuccessful due to low attendance, presenting a challenge in creating dialogue with community members.
- *Solution:* We attended the OTR Health Fair to conduct surveys, and Freestore Foodbank team members administered an intake screening to allow us to gain insight from a variety of community members.

Next Steps and Future Directions:
- Multiple languages, additional disease states, recipe trials with clients

Acknowledgements

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