



FARM ALLIANCE OF BALTIMORE
HOLISTIC WELLNESS AND
HEALTH

NUTRITION AND
COOKING
DEMONSTRATIONS
EVALUATION

FALL 2021



ACKNOWLEDGEMENTS

First, we wish to acknowledge Chef Crystal Forman of Holistic Wellness and Health, for her devotion to and passion for delivering these nutrition and cooking demonstrations in partnership with the Farm Alliance of Baltimore. Throughout the COVID-19 pandemic, Chef Forman modified her programming and moved to delivering programming in the virtual format, showing great innovation during this unprecedented time.

We also wish to acknowledge the people of Baltimore who participated in the demonstrations and this evaluation. We are very grateful for their engagement with the program and with this evaluation, which allows us to learn from their experiences to ensure their needs and wishes can be met through this program.

We also thank the many urban growers in Baltimore for supplying locally grown produce to use within demonstrations.

Finally, we thank the Urban Health Institute of Johns Hopkins University for funding this evaluation.





BACKGROUND

It is recommended per the 2020-2025 Dietary Guidelines for Americans that individuals increase their consumption of fruits and vegetables to improve nutrition-related health outcomes, such as chronic diseases and overweight/obesity [1]. Yet, in the United States, the majority of individuals do not meet daily fruit and vegetable consumption recommendations, with lower income individuals being at a higher risk to miss the daily recommendation [2]. In Maryland, a recent cross-sectional study found that only 14% of people met daily fruit consumption recommendations while only 9% met daily vegetable consumption recommendations [2].

It is well understood that lack of access to fresh foods, including fruits and vegetables, and lack of affordability of these foods contributes to the lack of consumption seen among populations [3]. This has led to strategies that aim to increase accessibility and affordability of fruits and vegetables, such as the expansion of farmers markets and incentives to use federal nutrition assistance benefits (e.g., SNAP) at these markets [3]. Yet, the inequities of the food system continue to persist. Specifically, in Baltimore City, approximately one in four residents are living in a Healthy Food Priority Area, meaning they lack access to affordable, fresh foods [4]. Lack of consumption of fruits and vegetables is rooted in the generational structural and systemic inequities of the food system, but lack of cooking skills to prepare fresh produce have also been shown to be associated with the problem [5-7]. Cooking classes in which fresh produce is used have been shown to be effective in increasing cooking confidence and consumption of fruits and vegetables [6,7]. Cooking classes paired with larger systemic change could therefore enhance uptake of fruits and vegetables into the lives of many.



BACKGROUND

The Farm Alliance of Baltimore recognizes that many communities in Baltimore lack access to healthy foods due to structural inequities in the food system. The Farm Alliance aims to provide avenues for these communities to make informed choices about their food through sustainable agriculture and education. As a membership organization of urban farms, neighborhood growers, and friends, the Farm Alliance uses connection, resource sharing, and collective advocacy with respect to food, land and water to expand communities' self-determination and power. Through the guiding principles of sustainable agriculture, solidarity, collective power, equity, and education, the Farm Alliance aims to create a city in which communities are able to leverage their power to create a healthy food system for all. This vision is achieved, in part, by providing nutrition education to Baltimore City residents through cooking and nutrition demonstrations delivered by trained chef, Crystal Forman, MPH, of Holistic Wellness and Health.

These cooking and nutrition demonstrations are a component of the Double Dollars program of the Farm Alliance and first started in 2015. Today, demonstrations last from 30-60 minutes and engage people from 1 to 90+ years of age. Locations of demonstrations include public housing communities, urban farms, faith-based institutions, and other community centers. Through these demos, community residents are educated on how to use local, in-season produce in their home cooking.

In partnership with Johns Hopkins Bloomberg School of Public Health, an evaluation of the demonstrations was conducted in the Spring and Summer of 2021. The goal of this evaluation was to understand the perceived impact of and satisfaction with the nutrition and cooking demonstrations delivered by Chef Crystal Forman.



METHODS

Surveys and interviews with nutrition and cooking demonstration participants were conducted March – September 2021. The goal of the survey and interviews was to understand participants' views of the demonstrations, satisfaction with the demonstrations, and home cooking practices and habits. In total, 22 participants completed the survey, with 10 participants completing the supplemental interviews.

Participants were recruited from demonstration sites through a sign-up sheet and contacted via the phone to complete both surveys and interviews. Participants received a \$10 gift card for completing the surveys and an additional \$20 gift card for completing the interview.



FINDINGS

Sociodemographics and Food Security among Participants

Of the 22 participants surveyed, half (50%) were over 50 years old, with the average age of participants surveyed being 49 years (**Table 1**). The majority (68%) identified as female, Black or African American (64%), and had at least some college education (73%). Most participants (77%) lived either alone or with one other person, and most (82%) had no children living in their household. Over one in three (41%) participants reported an annual household income below \$35,000, and 36% received SNAP benefits. Participants lived in a variety of zip codes (**Table 2**), with 32% residing in zip code 21217.

Food insecurity was prevalent in our sample of participants. A total of 8 participants (36%) reported experiencing food insecurity, measured using the validated two-item Hunger Vital Sign screening tool (**Figure 1**).

Figure 1: Food Security Among Participants (n=22)

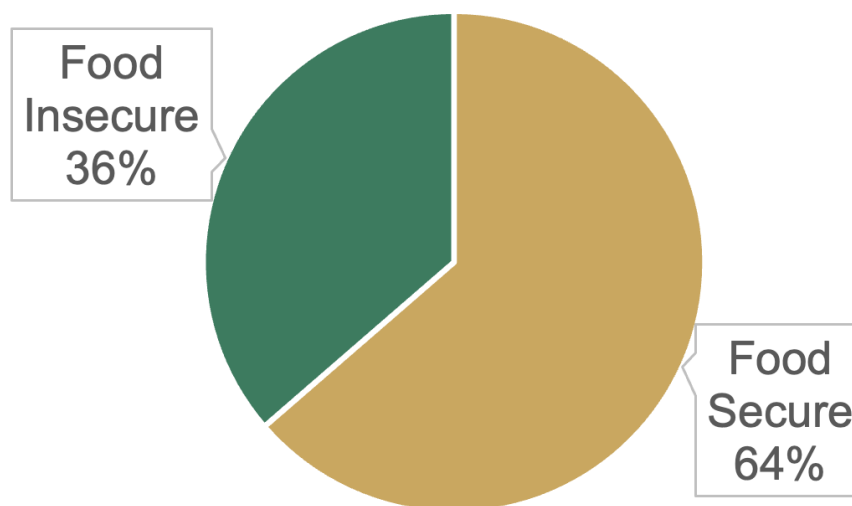


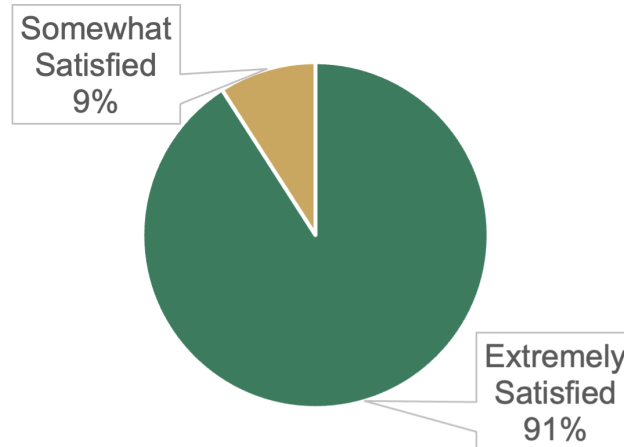
TABLE 1: SOCIODEMOGRAPHICS OF PARTICIPANTS (N=22)

CHARACTERISTIC	COUNT	%
Age		
20-30 yrs	7	32%
31-40 yrs	1	5%
41-50 yrs	3	14%
51-60 yrs	2	9%
61-70 yrs	5	23%
>70 yrs	4	18%
Gender Identity		
Female	15	68%
Male	5	23%
Non-binary	1	5%
Prefer not to say	1	5%
Race/Ethnicity		
Black	14	64%
Multiracial	4	18%
White	1	5%
Pacific Islander	2	9%
Prefer not to say	1	5%
Education		
High School	6	27%
Some College	11	50%
Bachelors or more	5	23%
Household Size		
1 person	10	45%
2 people	7	32%
3 people	3	14%
4 people	2	9%
Children in Household		
0 children	18	82%
1 child	3	14%
2 children	1	5%
Household Income		
<\$25,000	7	32%
\$25,000 - \$35,000	2	9%
\$35,001 - \$45,000	4	18%
\$45,001 - \$55,000	1	5%
>\$55,000	3	14%
Prefer not to say	5	23%
Nutrition Assistance		
SNAP	8	36%
WIC	0	0%
None	12	55%
Prefer not to say	2	9%

TABLE 2: ZIP CODES OF PARTICIPANTS (N=22)

ZIP CODE	COUNT	%
21217	7	32%
21201	3	14%
21202	3	14%
21215	2	9%
21044	1	5%
21206	1	5%
21207	1	5%
21211	1	5%
21218	1	5%
21234	1	5%
21234	1	5%

Figure 2: Reported Satisfaction with Cooking Demos Among Participants (n=22)

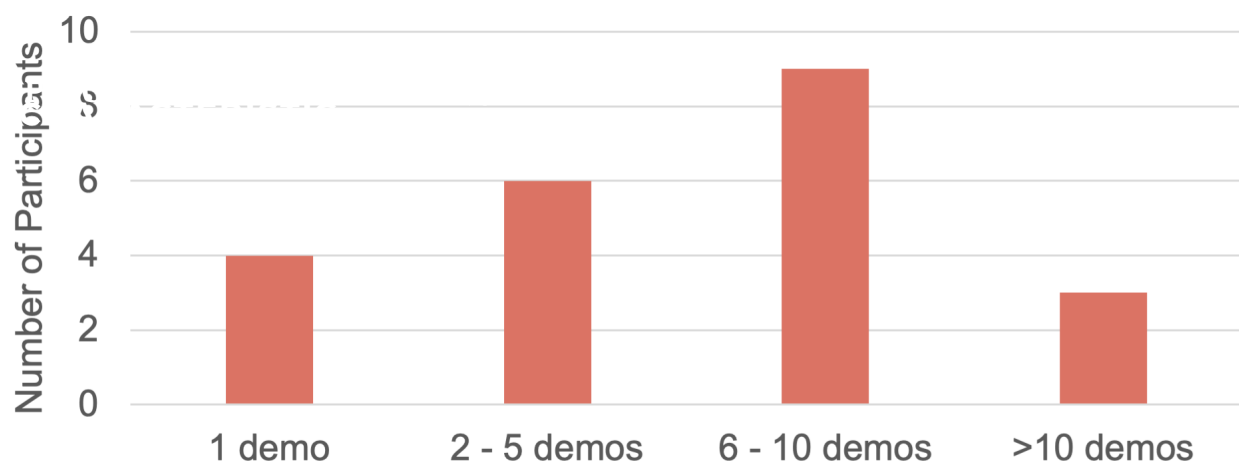


Attendance and Satisfaction with Cooking Demos

Participants surveyed attended cooking demonstrations at public housing communities (City View at McCulloh and Monument East) and urban farms (Plantation Park Heights Urban Farm, Whitelock Community Farm, Filbert Street Garden, and Cherry Hill Urban Garden). Overall, participants (91%) were extremely satisfied with the demonstrations (**Figure 2**), and the majority attended one or more demonstrations over the last 12 months (**Figure 3**).

“They impacted my view about local food. I see that in Baltimore City, especially, in the Park Heights area, there are barely any places to get fresh food. And the demonstrations made me realize how important they are for the community, because we don't have healthy options like that at all in the Park Heights area. And it made me realize that it's kinda unfair also, because if you go in other communities, they do have the access to [healthy food]. That's why Crystal's demonstrations have been very good for us in our community.” – Nutrition and Cooking Demonstration Participant

Figure 3: Number of Demos Attended by Participants over Past 12 Months (n=22)



Through interviews, participants shared how much they enjoyed Chef Crystal Forman's teaching style and how they learned many new skills from the demonstrations. Many participants shared that they appreciated how Chef Crystal takes the time to explain each ingredient in a recipe, the health benefits, and where to buy it for future use. Many participants also shared they loved being able to taste all the food being cooked so they could see if they liked it or not. All participants felt the demonstrations were good for the community because people could learn about local food, healthy eating, and how to cook foods at home. Interestingly, many participants shared they were motivated to attend cooking demonstrations because they wanted to learn new ways to cook vegetables and use vegetables as replacements in meals as they wished to consume less meat.

"For example, I'm watching TV and I'm watching the recipe, and they say "Tahini." I don't know what tahini is. She [Crystal] could explain that to me. And if it's some particular way or where I'm supposed to go and purchase it, she could tell me a place that she knows to purchase. This is that one-on-one interaction with her at the demonstration makes all the difference." – Nutrition and Cooking Demonstration Participant

Home Cooking Behaviors of Participants

The majority of participants (91%) reported that they were the primary cook in their households, and most (64%) reported cooking at least one meal at home every day (**Table 3**). The majority (64%) reported cooking for 45 minutes or more per day and nearly all participants (91%) reported cooking with local food at least one day per week.

Before attending demonstrations, 50% of participants reported cooking with fruits and vegetables four days or fewer per week, but following demonstrations, the majority of participants (64%) reported cooking with fruits and vegetables five days per week or more (**Figure 4**). Most participants (68%) reported eating fruits vegetables at least 3-4 times per day, on average (**Figure 5**). In interviews, participants attributed their increase in cooking with fruits and vegetables to attending the demonstrations. Many shared they learned new skills and recipes that made them want to cook more produce, especially vegetables, at home. Some participants also shared that they gained an appreciation for cooking specifically with local produce by attending the demonstrations. Other participants noted that the demonstrations helped them learn how to use various different varieties of fruits and vegetables that were provided for free through a produce distribution program in response to COVID-19 at one of the demonstration sites

“I didn't like vegetables, but now I learned that you don't have to cook greens, like kale, all day long [...] you cook all your vitamins out of it. It don't take that long to cook it now. I used to cook mine till they were mush, and now I learned you don't have to cook it that long. So I like going to the demonstration, I learn a whole lot, whole lot on how to cook my vegetables”. – Nutrition and Cooking Demonstration Participant

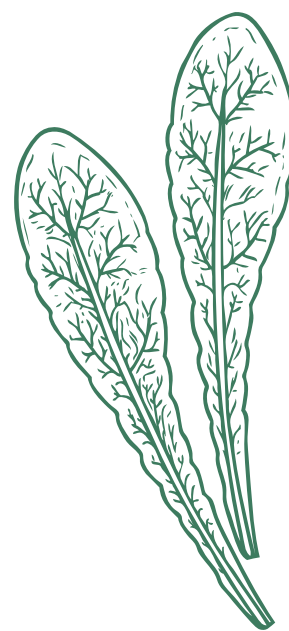
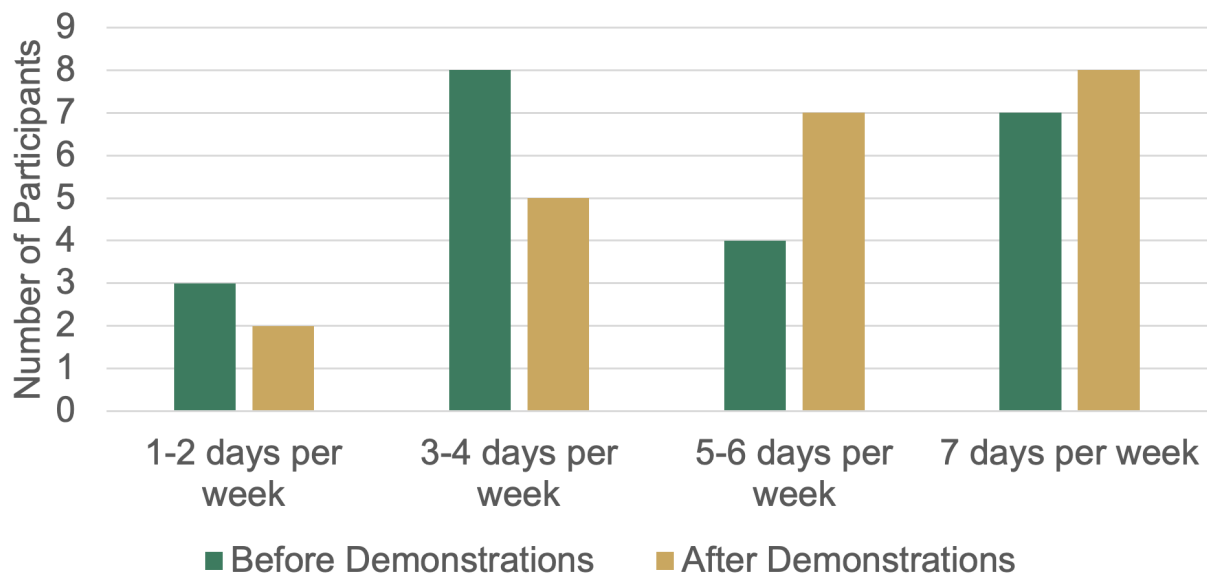


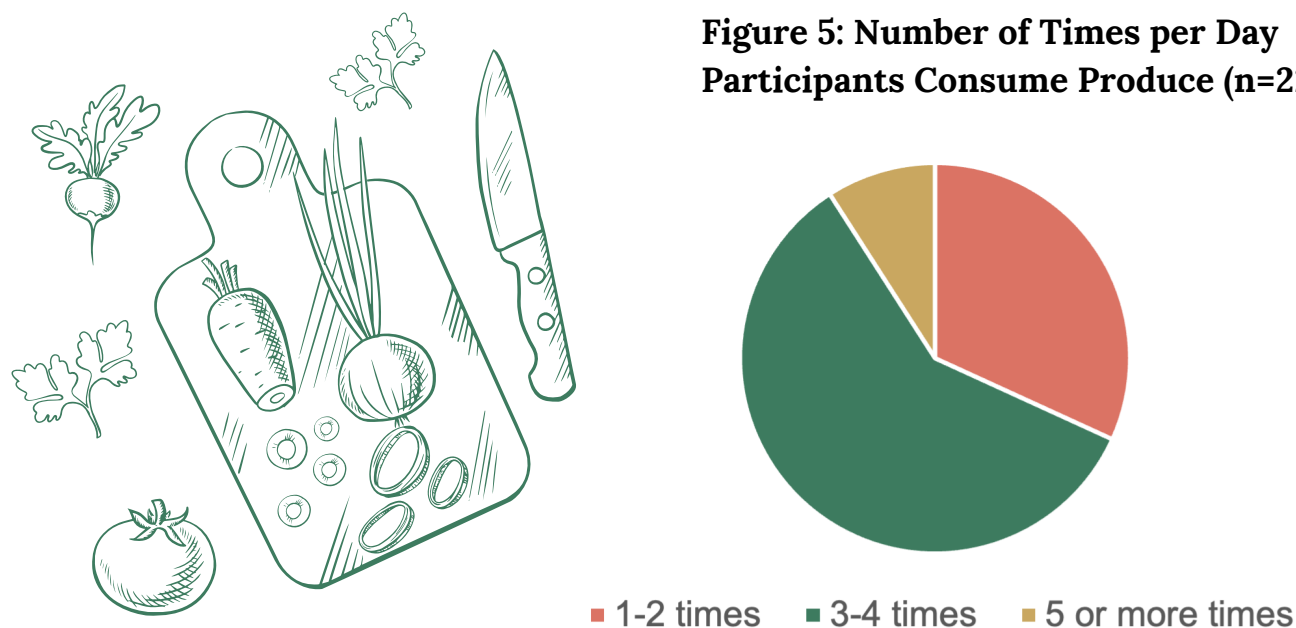
TABLE 3: COOKING HABITS AMONG PARTICIPANTS (N=22)

COOKING HABIT	COUNT	%
Primary Cook		
Yes	20	91%
No	2	9%
Days/wk Cooking at Home		
0-2 days	0	0%
3 days	1	5%
4 days	1	5%
5 days	3	14%
6 days	3	14%
7 days	14	64%
Time Spent Cooking/Day		
15-30 min	2	9%
31-45 min	6	27%
46-60 min	7	32%
>60 min	7	32%
Days/wk Cooking with Local Food		
Never	2	9%
1-2 days	13	59%
3-4 days	2	9%
5-6 days	1	5%
7 days	4	18%

Figure 4: Number of Days per Week Participants Cook with Produce (n=22)

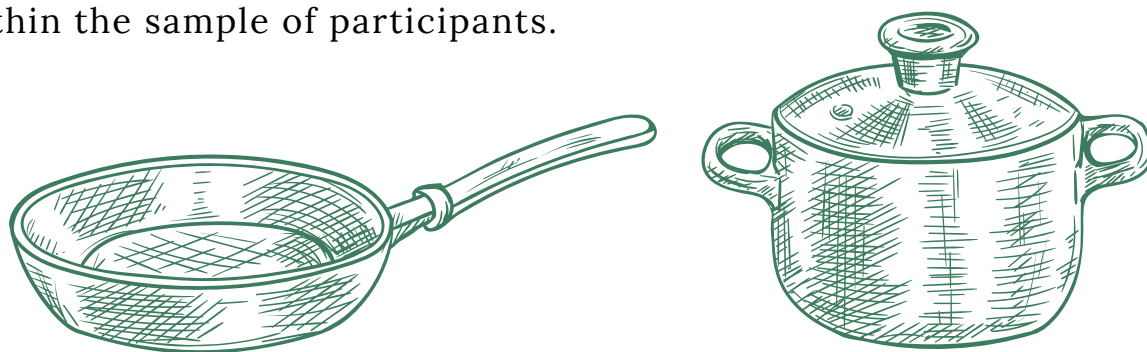


**Figure 5: Number of Times per Day
Participants Consume Produce (n=22)**



Food Agency among Participants

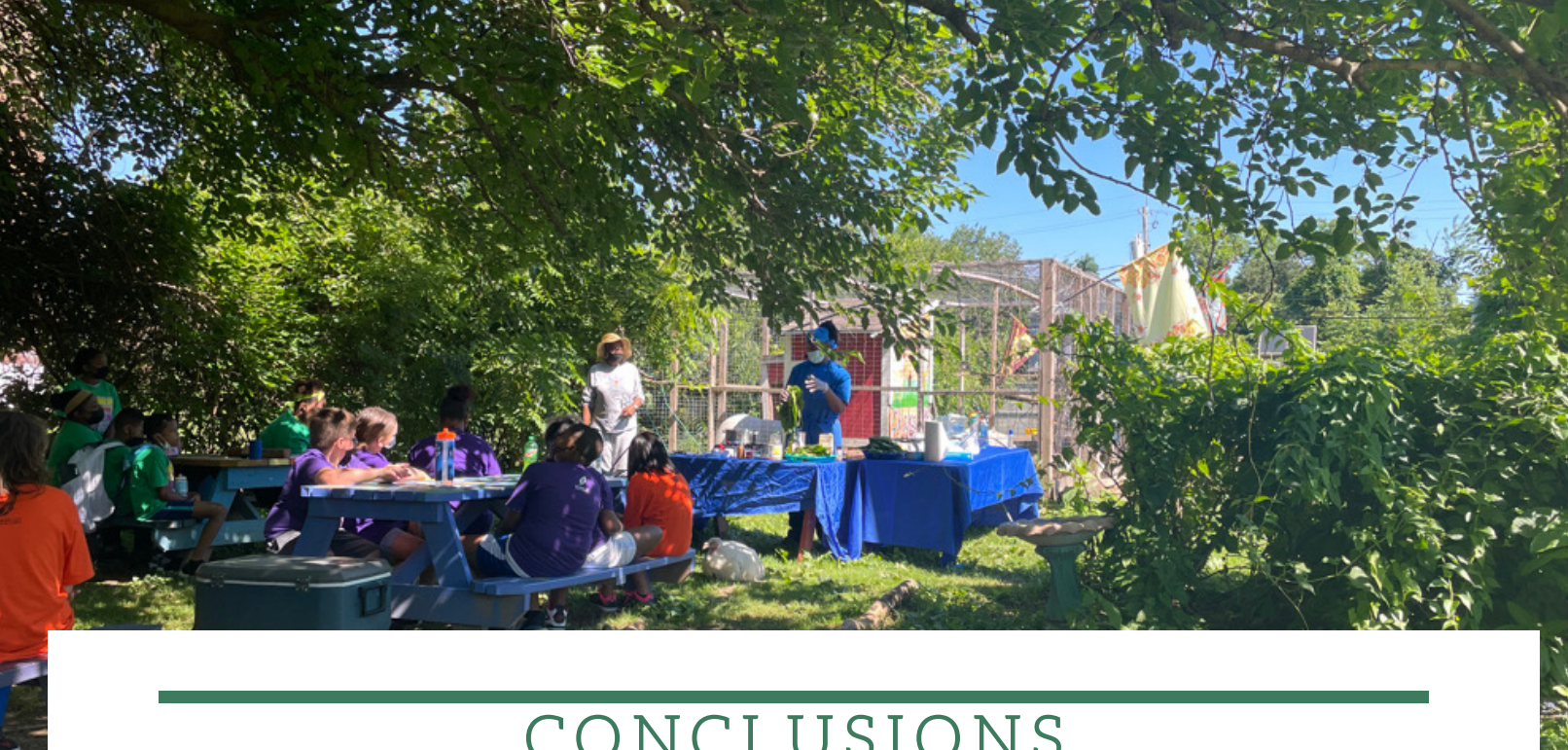
Food agency describes a person's ability to buy and cook food within the context of their own environment, taking into account how various social, economic, and physical access circumstances may impact a given person's ability[8]. We measured food agency using the Cooking and Food Provisions Action Scale (CAFPAS), which is a 28-item scale where a higher score indicates higher food agency[8]. There are three components to food agency including self-efficacy to buy and cook food (13 items), attitude towards buying and cooking food (10 items), structural barriers to cooking (5 items)[8]. In our sample of participants, the average food agency score was found to be 12.1, ranging from 9.2 points – 14.2 points, indicating moderate food agency within the sample of participants.



In interviews, participants reported that the cooking demonstrations improved their food agency. For example, many participants shared that Chef Crystal improved their skills to be able to cook vegetables and make them appetizing. Other participants shared that they learned new ways to use heart-healthy oils as a replacement for butter in cooking, or how to use herbs and spices to reduce the amount of sodium used in cooking. Some participants noted that they still faced some structural barriers to be able to implement all they learned in demonstrations. For example, one participant shared that it was hard for them to find all the ingredients used in demonstrations at the store they shopped at, but noted that Chef Crystal was helpful in providing some alternatives to look for when this was the case.

“So we're putting these urban gardens all over the city and making food a lot more accessible, but I feel like we have kind of been conditioned to just buy out. And we don't know what to do with some of the new crops that are at the farm, that are closer to us or whatever. Some people don't know how to cook that well because we have been flooded with fast food options, processed food options that don't really take a whole lot of effort. And so I think the purpose of this program is to re-introduce us to just like a basic way of cooking, a way of cooking the produce that is right there within our neighborhood.” – Nutrition and Cooking Demonstration Participant





CONCLUSIONS

High satisfaction was found among nutrition and cooking demonstration participants. All participants indicated they gained new cooking skills from the demonstrations and improved their home cooking practices, including incorporating healthier cooking behaviors and incorporating more produce into their daily cooking routines. Participants expressed great gratitude toward Chef Crystal Forman in interviews and expressed how approachable she made cooking for them, particularly with items that participants were not as familiar with. All participants expressed intent to continue to attend cooking demonstrations and shared they felt the program was an asset to the community.

“I think, overall, her demonstrations, they're very good for the community. I can see more and more people in the community coming to demonstrations and having a genuine interest in changing up their food habits and learning about stuff that they didn't know about and actually going home and trying it. So overall, I think her demonstrations have done very well for the community, especially ours, where people don't really have access to that type of food or knowledge to make that type of food”. – *Nutrition and Cooking Demonstration Participant*



GROWN
LOCAL

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