



The Food Basket: Ho'olaha Ka Hua Plant-Based Diet Pilot





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INTRODUCTION

The Food Basket is more than just a food bank. They also serve as the perfect example of what a community health hub can look like: a trusted anchor organization that is reimagining what it means to provide “healthcare.”

This expansive view of their role led The Food Basket to a partnership with HI’A. Together, the two organizations designed a program and evaluation to measure—and hopefully amplify—The Food Basket’s impact on the health of their community.

The motivating drive for this project was the recent loss of two of The Food Basket’s long-time and dear employees, Bernard Torres and JoAnn Abiley, both of whom passed away due to heart-related health issues in recent years. This project was not only a tribute in their honor, but also a way to empower The Food Basket staff to take charge of their own health. As long-time champions of “healthy food for all” through their existing programs—including [DA BUX Double Up Food Bucks](#), [DA BUS Mobile Market and Food Pantry](#), and [DA BOX Community Supported Agriculture \(CSA\)](#)—The Food Basket staff seized the opportunity to “walk the talk” of healthy eating and living. With the partnership and support of their employer, the engagement of community leaders, and the expertise of local medical professionals, the hope was that participants in the HKH program, as well as their families and the people they serve, would be able to live healthier, happier and more productive lives.



STUDY OVERVIEW

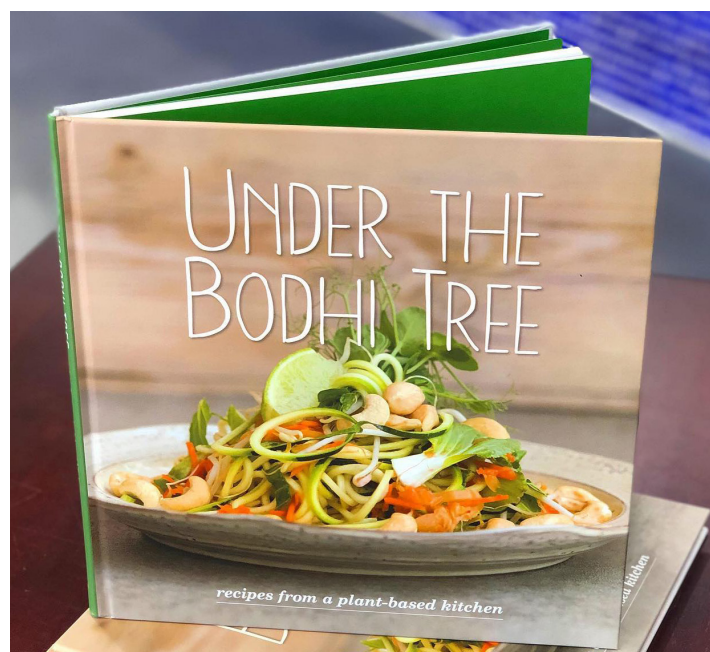
Intervention

On March 15, 2021, The Food Basket staff, their families, members of their Board of Directors, and Mayor Mitch Roth and his wife began a ten-day “jumpstart” dietary challenge. For ten days, participants were provided pre-made, plant-based meals for lunch and dinner (breakfast being on their own) prepared by local vegan chef Stephen Rouelle and Abraham Go from Under the Bodhi Tree. In addition, other chefs and restaurants included Chef Kaikili Roldan from Sushi Rolls and Bowls, Chef TK from Thep Thai, Chef Jeremy, Ashley Baxter and Rangihoro Walker from Kai Pasta.

Meals were inspired by the cuisine of the many cultures that live on Hawai’i Island. Dishes included plant-based poke with tomato; wakame, onion, cucumber, sesame soy, furikake and ocean salad; Portuguese bean soup with tomato cucumber salad; Korean “chicken” over brown rice with soy glazed vegetables; and Thai vegetable green curry with rice & tofu.

Following the initial ten-day challenge, all participants were enrolled in The Food Basket’s Ho`olaha Ka Hua DA BOX program. They received a weekly share of locally grown produce, along with recipes, check-ins from medical professionals, and featured monthly speakers.

Participants practiced reading ingredient labels, portion control, and incorporating mindful eating into their everyday lives. Additional education activities included daily speakers on various health topics, as well as inspirational stories from local residents who had experienced life-changing health outcomes by adopting a plant-based lifestyle.



Study design

To determine the impact of this initiative, we collected data from health screenings, gut microbiome (stool samples), and online surveys at three time points, as shown in the table:

Metrics Collected

Intake (pre-intervention) N=47	A1c, BMI, Cholesterol, blood pressure, Diet, self-esteem, microbiome
10-Day (post intervention) N=33	BMI, Cholesterol, blood pressure, Diet, self-esteem, microbiome, perception
6-month (follow up) N=22	A1c, BMI, Cholesterol, blood pressure, Diet, self-esteem, microbiome, perceptions

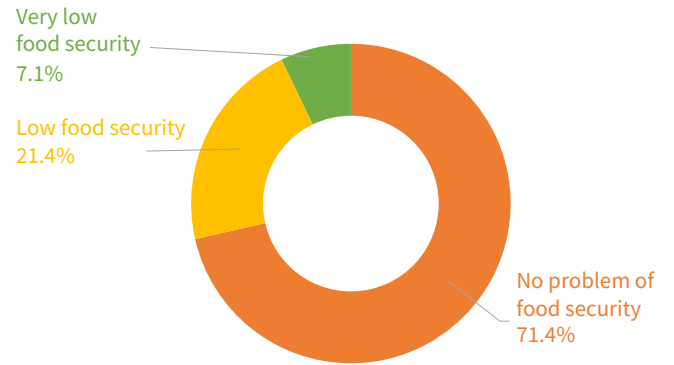
Study population

In total, 48 individuals participated in the study at entry. They included staff and board members of The Food Basket, local community leaders, and their families.

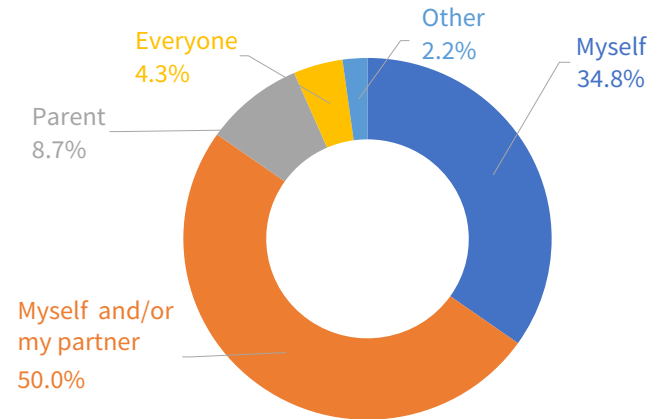
Most of the study sample (71%) came from food secure households, meaning that they consistently have enough food to eat at home. Although the majority (85%) said that either they or their partner did most of the cooking at home, most (64%) had no prior experience with a plant based diet.



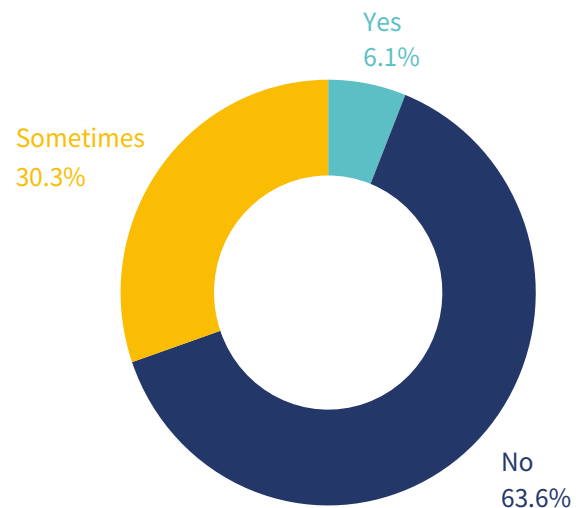
HOUSEHOLD FOOD SECURITY STATUS



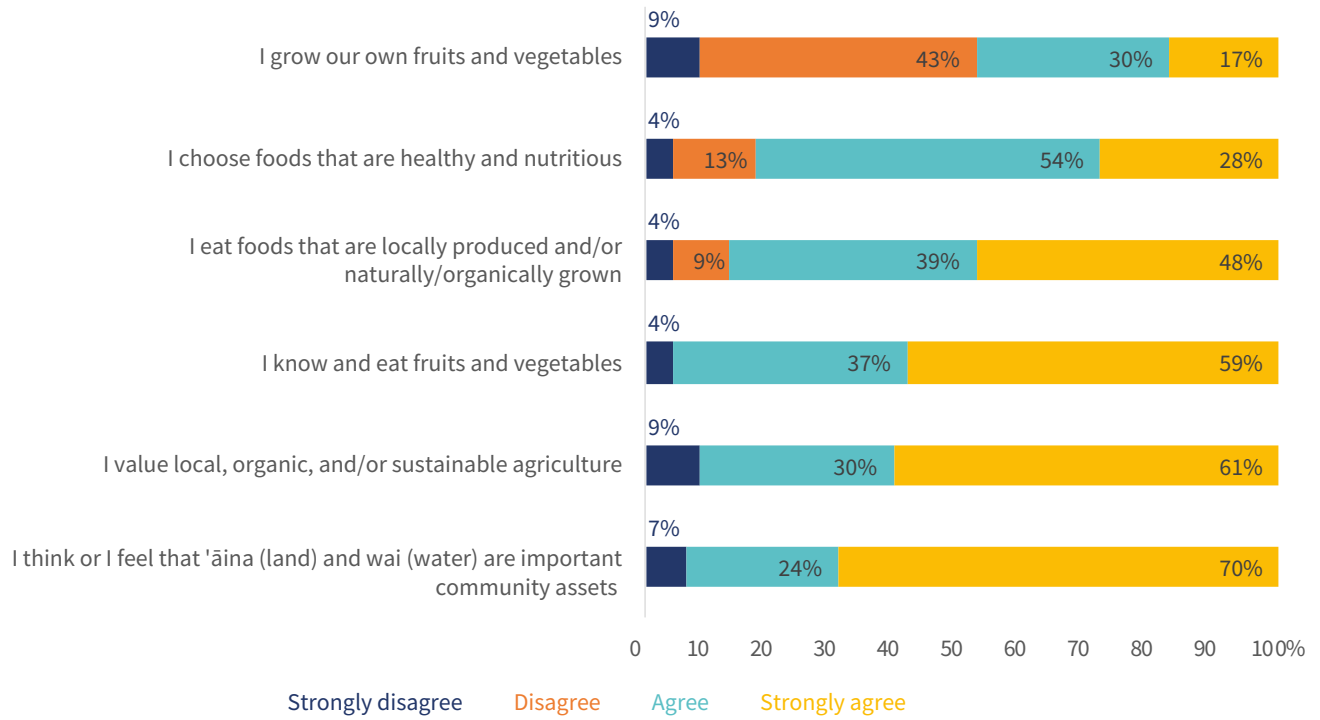
WHO COOKS IN YOUR HOUSEHOLD?



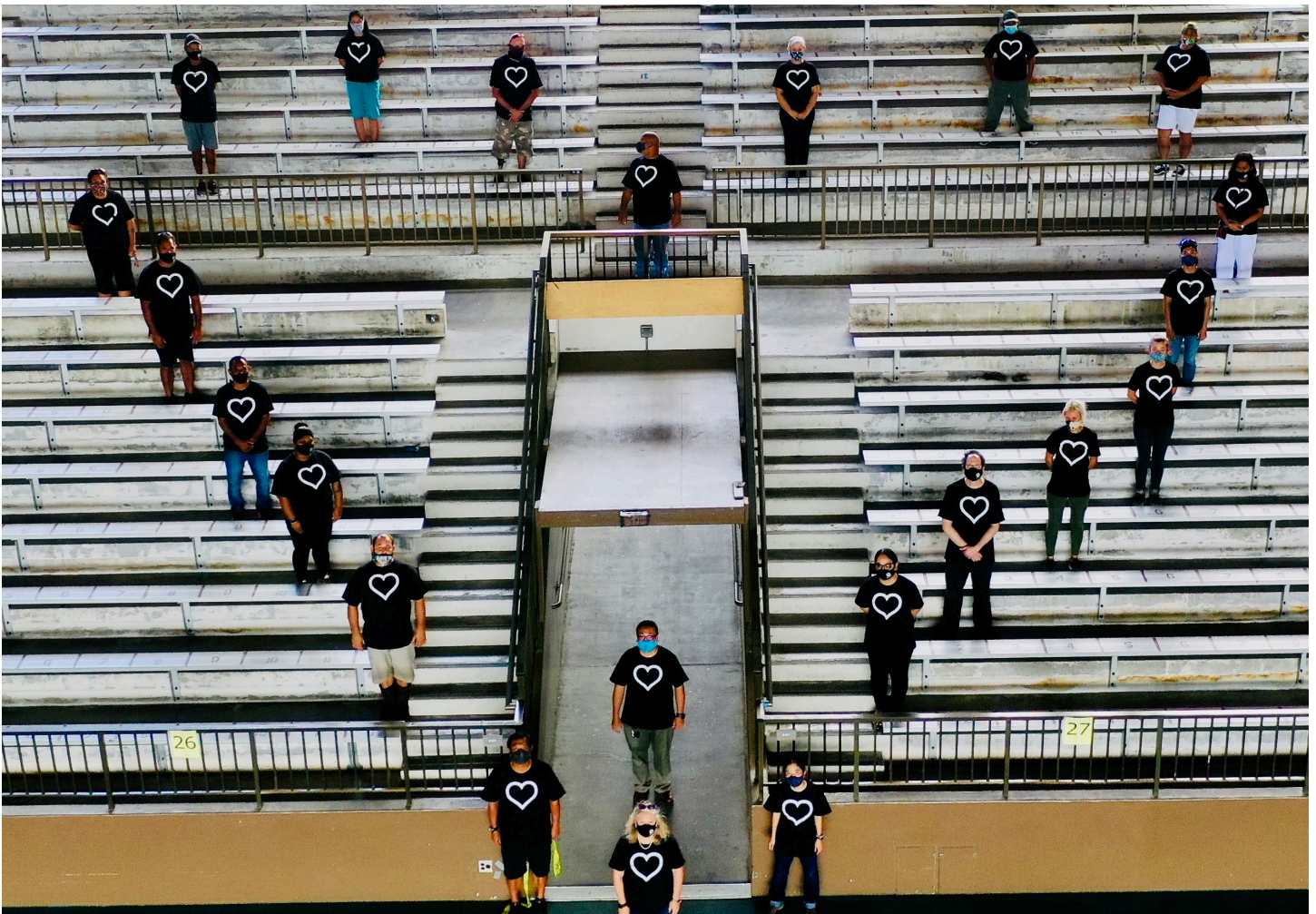
DO YOU HAVE PRIOR EXPERIENCE EATING A PLANT-BASED DIET?



COMMUNITY CONNECTION



Prior to beginning the survey, most of the participants showed that they feel a strong connection to their community and eat a healthy diet.



KEY FINDINGS

The Ho‘olaha Ka Hua project was a success on several fronts, which are presented in the following pages as “Self-reported dietary behavior,” “Biometrics,” and “Self-reported changes.” Key highlights are presented under each.

It should be noted that participation bias may play a role, as those who did not keep up a healthier diet may have been less likely to complete the six-month follow up survey. However, even if only a single study participant showed improved health behaviors, we consider that a win. As a trusted community partner, The Food Basket has given their staff a priceless opportunity to experience what a healthy diet can do, and prior studies have shown how powerful of a ripple effect that one person can have on the family and friends around them.

Self-reported dietary behavior

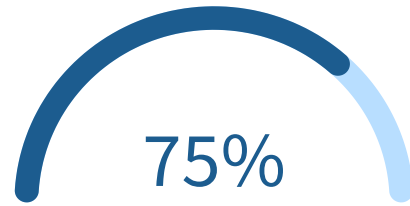
“I come from a family of meat-eaters. It is hard to get them to have any veggie other than a salad, or maybe a side of asparagus/beets. This program has helped me to expose them to new vegetables.”

“With my weekly produce I prepare salads, pasta, add more produce to meals that otherwise would have been mostly meat”

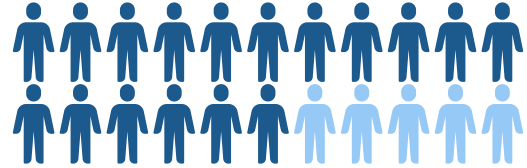
“Yes, I have managed to use and incorporate all vegetable that is provided through the DA Box program. I haven't done anything too fancy. It's either been a salad, sauteed, or stir-fry.”

“I am eating a much more balanced diet - when shopping I go to the produce section first instead of the meat department. Incorporating more produce in my diet, eating smaller portions of meat.”

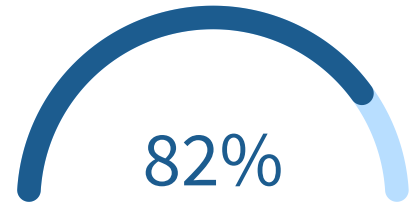
We may attribute the high rates of continued success to the fact that the Food Basket generously provided free boxes of fresh produce to participants once per week, thereby creating an incentive to eat more plant-based meals.



PARTICIPANTS WHO SAID THEIR DIET WAS STILL HEALTHIER 6 MONTHS LATER

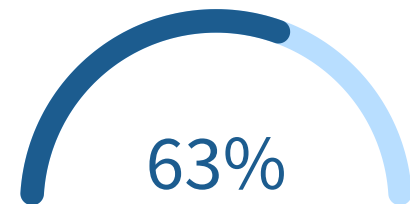


One of the most compelling things we saw in the study results was that nearly 3 in 4 participants who completed the study had continued their increased vegetable intake six months following the completion of the 10-day diet.



OF PARTICIPANTS REPORTED THAT THEY WERE WILLING TO CONTINUE EATING AT LEAST ONE PLANT-BASED MEAL PER DAY.

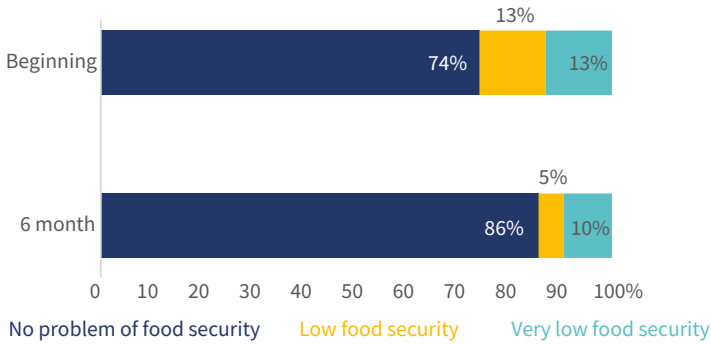
About half of the participants reported that making healthy changes was easy, which we might attribute to the fact that The Food Basket generously provided free boxes of fresh produce to participants once per week.



OF INDIVIDUALS REPORTED THAT ALTERING THEIR DIET WAS STILL “VERY EASY” OR “EASY” AFTER SIX MONTHS.

After six months, 63% of participants reported that making healthy changes was still easy for them. Although this number dropped from 85% immediately following the ten-day diet, it's still more than half of those who completed the study.

FOOD SECURITY (N = 22)



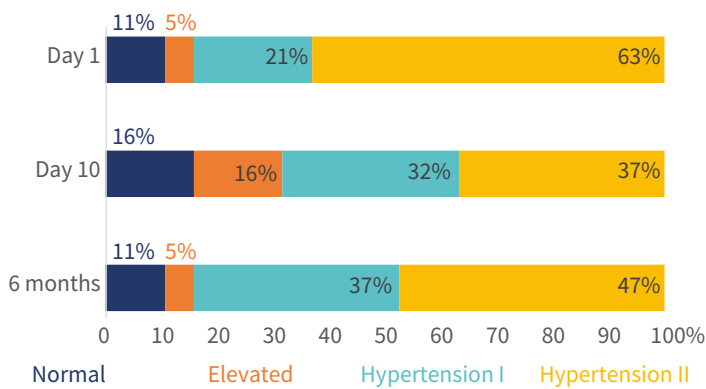
Food security, a measure of a household’s ability to consistently access enough food for a healthy life, jumped from 74% prior to the intervention to 86%.

Biometrics

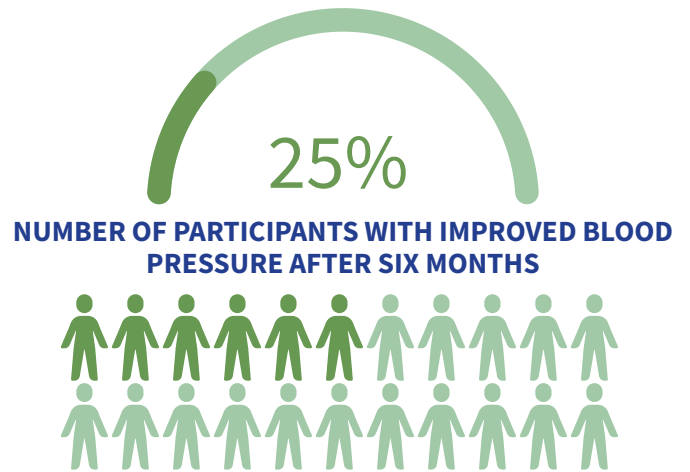
“The plant food diet helps me kick-start my diet program. I started to make my green salad (vegetables) my main meal with a smaller portion of protein like chicken, meat, pork, or fish... I have already lost 15 lbs. and feel much healthier and have more energy... I use all Da Box program produce and learned more on how to incorporate the vegetables into my meals ... I started to do some exercise daily. Since I'm losing weight, my clothes are feeling looser. I haven't had any problem with sleeping anymore.”



BLOOD PRESSURE (N=22)



After ten days of a plant-based diet, you can see that there was a dramatic decrease in the percentage of individuals that were classified as hypertensive. After six months, this number went up again slightly.



BLOOD PRESSURE

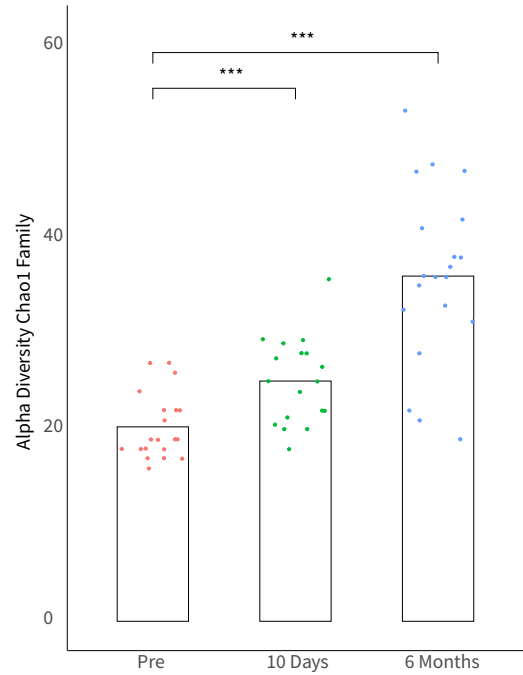
Approximately one in 4 individuals lowered their blood pressure through the course of the study, and were able to maintain those results after six months.

MICROBIOME

Intestinal health is important for the functioning of your whole body, as bacteria break down food and produce molecules that help your body function. Disrupting this balance—making it easy for some bacteria to grow and harder for others—can lead to devastating consequences.

The Food Basket study examined changes in what’s known as “alpha diversity,” a measure that quantifies how species live together in the gut. High alpha diversity values represent more diverse communities, and higher diversity is associated with improved health outcomes.

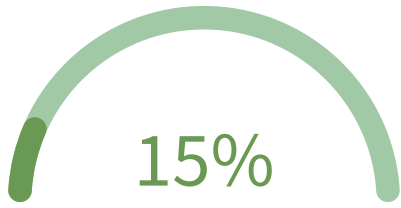
The graphic to the right shows the improvement in alpha diversity from baseline to six months. The improvement is noteworthy as baseline data indicated that higher alpha diversity correlated to lower BMI and A1c.



“My family has benefited health-wise from being more plant-based including lower cholesterol, blood pressure and weight.”



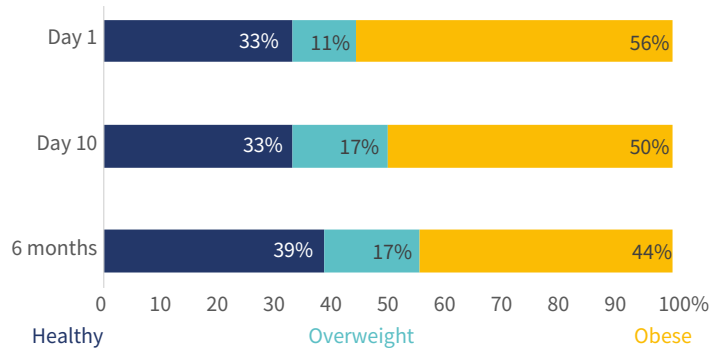
BODY MASS INDEX



PERCENTAGE OF FINAL SAMPLE THAT HAD A LOWER BMI AFTER SIX MONTHS

While 15% of individuals that completed the study lowered their BMI after six months, there were some participants who actually increased their BMI. The chart below shows the overall composition of the final sample at all three time points:

BMI (N=22)



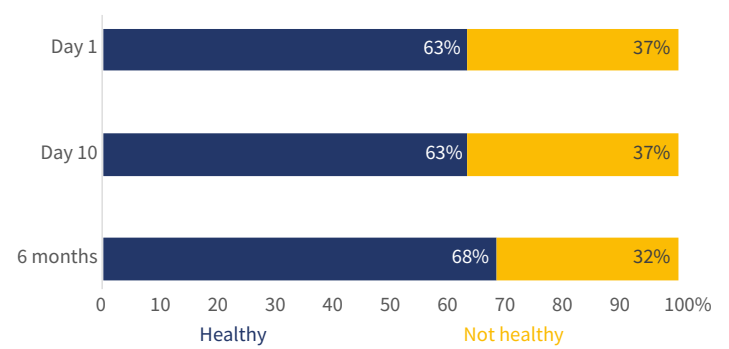
CHOLESTEROL



OF PARTICIPANTS SHOWED IMPROVED CHOLESTEROL LEVELS AFTER SIX MONTHS

After six months, 10% of participants showed improved blood cholesterol levels. However, as the graph below shows, some participants actually increased their cholesterol, resulting in an overall improvement of only five percent.

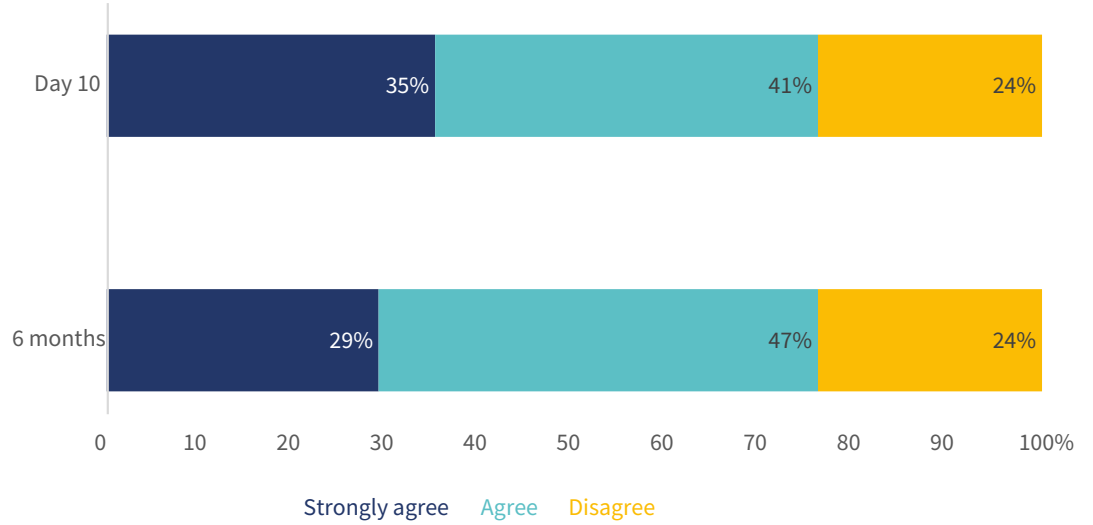
TOTAL CHOLESTEROL (N=22)



Self-reported Changes

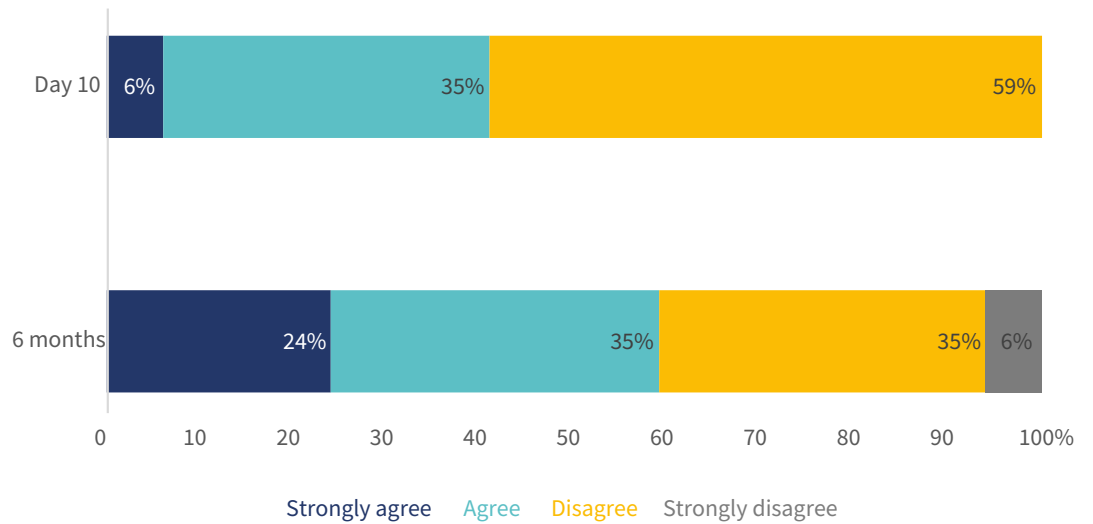
MOOD

More than 70% of the participants reported an improvement in how they feel



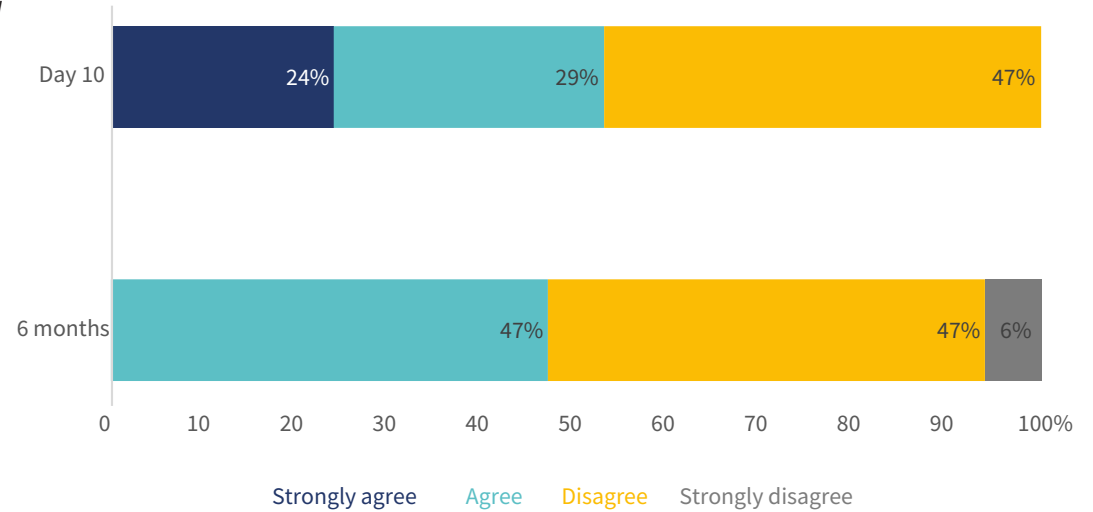
PHYSICAL APPEARANCE

Close to half of the participants reported a change in their appearance



SLEEP PATTERNS

50% of participants reported improved sleeping patterns



LOOKING AHEAD

The Food Basket understands that—as an emergency food provider—they are in a unique position to offer healthy food options and shape the dietary behaviors of some of the island’s most vulnerable populations.

The Ho’olaha Ka Hua project is revolutionary because it acknowledges something many traditional health-focused organizations often overlook: staff are also members of the community. First-hand experience with healthy habits—like a plant-based diet—can provide them with the confidence to share their experience with the people they serve.

Only 22 individuals provided data at all three timepoints—a number too small to adequately measure the true impact of the project. Going forward, recruiting more participants would allow us to see if there are significant impacts on not just staff, but also community members and clientele of the Food Basket.

Despite the small sample size, it is remarkable that—six months after completion of the diet—many of the staff and community members that participated still reported significant impacts in their health and their overall demeanor. Some participants reported feeling happier and more energized during the day, and others reported weight loss, lowered blood pressure, lowered cholesterol, lowered A1c levels and improved sleeping.



ABOUT THE EVALUATORS

HI’A is a Hawaii-based company that helps non-profit companies, community-based organizations, and other clients measure the impact of their programs and other initiatives throughout the state of Hawaii. Our services include, but are not limited to, the design of protocols for the effective and unbiased measurement of client-specified impacts, the micro and macro data collection from individuals and communities, data storage and management, and data integration and analysis, providing an interpretation of results to clients and the broader community. We have an unmatched caliber of scientific expertise and experience in the State of Hawaii, evaluating community- and education- projects and interacting with dozens of community-based organizations and programs, including several with an agriculture focus.

Our leadership team includes four PhD scientists and public health with complementary multidisciplinary expertise, from Economics and Social Sciences to Public Health and Education. Our leadership team has over 13 years of experience providing evaluations of education and non-education projects, including programs in the intersection of agriculture and education for federal and local funding agencies.

For more information please visit www.HIA.llc or contact info@hia.llc

SPONSORS

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