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Attitudes and Behaviors of Food Pantry Directors and Perceived Needs and Wants of Food
Pantry Clients

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Perceived Needs and Wants of Food Pantry Clients

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2015

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Abstract

Attitudes and Behaviors of Food Pantry Directors and Perceived Needs and Wants of Food Pantry Clients

By Caroline R. Cahill

Introduction: The Choosing Healthy Options Program (CHOP) is a simple food ranking tool that has recently been adopted by the Atlanta Community Food Bank (ACFB) to aid partner agencies (PA) in their ordering process. CHOP uses a simple algorithm that designates a 1 (choose frequently), 2 (moderately), or 3 (infrequently) to foods based on nutrient profiles. The objectives were two-fold: first, to quantitatively assess the nutritional quality of ACFB PA food orders before and after implementation of CHOP, and second, to understand the factors that influence PA food ordering process to meet client food preferences and needs.

Methods: Food orders of 402 PA in Atlanta and northwest Georgia were analyzed for the six weeks prior to and following CHOP implementation. Pounds of ordered food by CHOP category and subcategories (e.g., meat, canned vegetables) were analyzed using paired t-tests. Additionally, 9 PA participated in in-depth interviews. In-depth interviews were conducted and analyzed to further understand purchasing motivations, impact of CHOP, client feedback mechanisms, and perceptions of clients' needs

Results: Overall, agencies increased their percentage of CHOP 1 foods by nearly 14% during the study period. Consistent with PA interview data of clients requesting more meat, PAs increased their pounds of CHOP 1 Meat, though PAs also increased their pounds of CHOP 3 Meat. PAs indicated that CHOP was useful for deciding between food items of the same subcategory that had differing CHOP rankings (i.e., CHOP 2 canned vegetable vs. CHOP 3 canned vegetable). Additionally, only three PAs reported gathering client preference information.

Conclusions: Agencies found CHOP helpful in their ordering process; however, at the agency level, more communication is needed between the client and the provider to offer clients a more autonomous experience.

Key words: Food bank, food pantry, nutrition, food security, provider perceptions, client preferences

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Chapter 1: Introduction

Food insecurity, limited or uncertain access to nutritionally adequate, safe, and acceptable food, is a major concern to millions of household across the United States.¹⁻⁸ Nation-wide, approximately 33,500 food pantries, 4,500 soup kitchens, and 3,600 emergency shelters make up the network of private food assistance programs. Despite the assistance from the federal and private sectors (WIC, TANF, EBT), the need for nutritional assistance still exists. Recent estimates show that 14.5% of US households are food insecure.⁶ Hunger and food insecurity affect the physical and mental well-being of children, adults, families, and communities.⁸ Public health and anti-hunger advocates believe that these negative effects are preventable and should be of major public health concern to public health professionals.⁸

According to the 2014 Feeding America Study, 18.9% of Georgians are food insecure, which is higher than the national average.⁹ In the 2013-14 fiscal year, the Atlanta Community Food Bank (ACFB), distributed more than 51 million pounds of food and grocery products to more than 600 partner organizations around the Atlanta-Metro-area, such as food pantries, soup kitchens, and emergency assistance shelters.⁹ The beneficiaries of food banks, pantries, and soup kitchens are a subgroup of concern because they have limited resources to purchase food and rely heavily on the availability and quality of provided food.

Due to the rising concern of food quality available to the nutritionally vulnerable, the Greater Pittsburgh Community Food Bank developed Choosing Healthy Options Program (CHOP), which seeks to promote the acquisition, distribution, and consumption of healthier food. CHOP is a simple food ranking system that assigns foods a 1, 2, 3 or MC (minimal contribution and 1 being the highest rating a food can receive) based on the relative amount of healthy nutrients. Beginning in May 2014, ACFB incorporated CHOP into their food distribution process, additionally the CHOP

nutrition rankings were posted on ACFB's partner agency (PA) food ordering website (eHarvest.org) for their partner organizations to see when placing their food orders. Because ACFB's influence spans from the Atlanta metro area to northwest Georgia and the fact that these populations are diverse in demographics, ACFB hoped to gain insight on the food purchasing decisions of their partner agencies to assess their outreach education and nutrition ranking tools.

1.1 Purpose Statement

The purpose of this Masters' thesis is to document the change in ACFB partner agencies' food orders in response to the Choosing Healthy Options Program and to gather explanatory data on PA purchasing habits, motivations, and perceptions of their clients' needs and preferences.

1.2 Objectives

The specific objectives of this project are as follows:

1. To quantitatively assess the nutritional quality of ACFB's partner organizations' food orders by their average CHOP score before and after CHOP implementation.
2. To understand the factors that influence ACFB's partner organizations food ordering process.
3. To identify the modes of communication and feedback ACFB's partner organizations utilize to gather food preference data from their clientele.

1.3 Significance

More than 80,000 people each week are served by food security assistance organizations that receive their food from ACFB. This is a tremendous amount of people in the Atlanta and NW Georgia region. ACFB has the ability to positively or negatively affect these individuals' diet by the food they acquire and distribute, thus, monitoring the distribution patterns of ACFB, and understanding how partner agencies interpret and translate nutrition resources into their food acquisition process is needed for understanding the NW Georgian culture of health. The mission of

ACFB is to fight hunger by engaging, educating, and empowering its community; therefore, implementing a nutrition program centered on choice is a simple way to evaluate nutrition outreach education from ACFB to the community. Additionally, the food insecure populations of Georgia deserve healthy and nutritious food assistance that is culturally appropriate along with options that they enjoy eating.

Chapter 2: Comprehensive Review of Literature

2.1 Food Insecurity in the United States

2.1.1 Definitions of Food Insecurity

The World Health Organization (WHO) and the United States Department of Agriculture (USDA) differ slightly in their definitions and interpretations of food security. In 1996, the WHO at the World Food Summit defined food security as, “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”.¹⁰ In this definition, the WHO and the Food and Agriculture Organization (FAO) of the United Nations base food security on four pillars: 1) food availability, 2) food access, 3) food use, and 4) the stability of the previous three dimensions over time.¹⁰ While the WHO interpretation of food security takes into account individuals’ food preferences and both the need for physical and economic access to food, the USDA defines food security as “all people at all times to enough food for an active, healthy life. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies)”.⁶ The fundamental difference between the definitions is that the USDA aims to ensure food security without individuals and families seeking emergency food assistance. Unfortunately, millions of individuals and families in the US face food insecurity every year.⁶

2.1.2 Measurements of Food Insecurity

It was not until 1996 that the USDA began accumulating annual data on the state of “food access and adequacy, food spending and sources of food assistance.” This survey is presented as an 18-question supplement to the Current Population Survey (CPS) with questions presented as scenarios involving barriers to access food due to lack of money or other resources.⁶ Besides the USDA Economic Research Service (ERS), Feeding America also conducts research to learn more about the demographic profiles of those who are nutritionally disadvantaged.¹¹ Feeding America’s

(FA) estimates of food insecure individuals and families tend to be slightly higher than those of USDA because FA directly surveys clients of emergency food agencies and organizations.¹¹

Beyond personal and household characteristics, the USDA ERS also geospatially measures food access across the nation. Some cities and towns across the nation have been given the moniker of “food desert.” A food deserts are defined by the USDA ERS as, “low-income areas where a significant number or share of residents is far from a supermarket, where ‘far’ is more than 1 mile in urban areas and more than 10 miles in rural areas”.¹² In 2010, food access indicators using ½ - mile and 1-mile demarcations to the nearest supermarket for urban areas, 10- mile and 20-mile demarcations for rural areas, and vehicle availability estimates were mapped for all census tracts.¹³ According to the Food Access Research Atlas data, in 2010 low food access was high associated with low-income communities.¹³ Therefore, when designing food security initiatives among low-income populations, the social and geographical barriers to food access must be understood and considered.

2.1.3 Characteristics of the Food Insecure

To combat food insecurity in the United States, it is imperative to understand not only where households are located in relation to adequate food sources, but also the demographics of the households and individuals served by federal and private nutrition assistance programs. In the most recent CPS, conducted in December 2013 by the USDA ERS, of the 54,000 households surveyed, 42,147 households completed the food security supplement. Based on those results, an estimated 14.3% of all US households are food insecure, which is a not statistically significant decrease from 14.5% of households in 2012. There has been a statistically significant decline in household food insecurity since 2011 (14.9%) to 2013 (14.3%).⁶ Of households in the United States, 5.7% (6.8 million households) reported very low food security. The USDA defines very low food security as a household that is, “food insecure to the extent that eating patterns of one or more household

members were disrupted and their food intake reduced...because they could not afford enough food.⁶ Then when looking at households with children that percentage increases to 19.5%, and among households headed by single women the percentage increases again to 34.4%.⁶ North Dakota (8.7%), Virginia (9.5%), and New Hampshire (10.2%) had the lowest 3-year prevalence rates of food insecurity from 2011-2013, on the other hand, Arkansas (21.2%), Mississippi (21.1%), and Texas (18.0%) are the leading states for highest 3-year prevalence of food insecurity. While food insecurity may seem clustered in the southern states, food insecurity exists in every county of each state in America.⁶¹

Several factors influence why an individual or family may be or become food insecure. Because food insecurity is a condition that arises from lack of money and other resources to acquire food, the factors associated with food insecurity include: geographic location, unemployment, high housing costs, low wages, race, gender, education level, criminal background, poverty, lack of access to the Supplemental Nutrition Assistance Program (SNAP), formally known as food stamps, other federal nutrition assistance programs (the Special Supplemental Nutrition Assistance Program for Women, Infants, Children (WIC) and the National School Lunch Program), and medical or health costs.¹⁴

2.1.4 Health Outcomes of Food Insecurity

Over the last few decades, there has been a steep rise in obesity and obesity-related disorders among the nutritionally vulnerable.¹⁵ According to the USDA, this has been propagated due to not only the increase in affordability and availability of low-nutrient dense foods, but also the decrease in availability of low-cost fresh produce, lean meats, and whole grain-rich foods.¹³

Food insecurity is associated with a host of negative health outcomes throughout the course of life: obesity, psychological suffering, sociofamilial disturbances, loss of bone mass in young

¹ Summary characteristics of food insecure households can be seen in Figures 1 and 2.

males, and sociobehavioral development in children.¹⁶⁻²⁴ Additionally, Ivers and Cullen (2011), highlight the considerations that must be taken into account for food insecure women. Because women have been historically disadvantaged in society and carry the role of child bearers and caregivers, the implications of food insecurity on women are of special concern.²⁵ In the case of women, food insecurity is associated with obesity, anxiety, and depression, along with risky sexual behavior (low or variable condom use, transactional sex), poor coping strategies, such as withdrawing children from school, decrease intake of certain foods, selling assets to purchase food, and negative pregnancy outcomes. These very real and negative responses to food insecurity can have lasting impacts on health, such as acquiring HIV and other diseases, discontinuing school and education, and loss of economic power.²⁵ As previously mentioned, food security is multifaceted and when women have access to the same economic, educational, and societal opportunities as men, such as access to land, financial self-sufficiency, and self-empowerment, then it has been seen in practical experience that women can change their food security status.²⁵

2.2 Federal and State Nutrition Assistance Programs

2.2.1 The Supplemental Nutrition Assistance Program

In the United States, federal programs to address food security began in the late 1930s and continued until 1943, the Supplemental Nutrition Assistance Program began, to assist undernourished individuals and families. After 18 years without federal nutrition assistance for households, a pilot food stamp program was established in 1961, which led to the Food Stamp Act of 1964. Federal and state-level restrictions and policies regarding SNAP have changed over the decades and most recently in November of 2013, almost every household receiving SNAP experienced cutbacks to their benefits. Despite cutbacks, over 40 million individuals received SNAP in 2013 and has assisted these households in purchasing more food for themselves or their

families.²⁶ In response to the simultaneous increase in cost and demand for fresh produce among SNAP recipients, the USDA recently began a pilot program in grocery stores, which allows SNAP recipients to double their SNAP when purchasing fresh produce.²⁷ This program piloted in Michigan and there are hopes for expansion in other states among SNAP recipients.²⁷

As previously mentioned, individuals and families in the United States purchase food to be prepared and eaten at home, or purchase food at cafeterias, restaurants, fast-food places, or vending machines to be eaten outside the home. Some of these point of purchase locations accept SNAP, and some do not, additionally, when looking at diets of individuals dependent upon SNAP it is essential to know what foods and food items are SNAP or WIC eligible. SNAP eligible foods must be foods for the household to eat, such as: breads and cereals; fruits and vegetables; meats, fish, poultry; and dairy products, along with seeds and plants which produce food for the household to eat. Some restaurants can be authorized to accept SNAP benefits from elderly, homeless, or disabled people in exchange for low-cost meals. There are some restrictions; however, with SNAP benefits and the following items are not eligible to be purchased with SNAP: beer, wine, liquor, cigarettes or tobacco; vitamins and medicines; foods that can be eaten in the store; hot foods; and any nonhuman-food item, such as pet foods, soaps, paper products, and household supplies.²⁶

2.2.2 The Special Supplemental Nutrition Program for Women, Infants, and Children

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) began operating in 45 states in 1974 and targeted pregnant mothers and young children under the age of five who were suffering from malnutrition disorders, commonly associated with not receiving enough calories and nutrients²⁸. Because of the prevalence of food insecurity among pregnant women and young children, and health consequences of living chronically malnourished, WIC eligible foods tend to be more health-conscious than SNAP foods - focusing on foods low in sugar and high in whole grains, 100% fruit or vegetable juices, low-fat dairy products,

and low-sugar infant products.²⁹

2.2.3 The National School Lunch Program

For families and communities that need additional assistance, the National School Lunch Program (NSLP) was established through the National School Lunch Act of 1945, and further refined and expanded through the 1960s to include a school breakfast program and Summer Food Service Program in 1968. Depending on a family's household income, the children may be eligible for free or reduced lunches³⁰.

Depending on the program, federal nutrition assistance is either free or reduced for all eligible participants; however, some children have difficulty accessing or knowing about these free meals in the summer months or over school breaks. During the 2013 federal fiscal year, more than 21 million low-income children received free or reduced-price meals through the National School Lunch Program³¹; unfortunately, only 2.5 million children reported participating in the Summer Food Service Program, which would provide much needed free food when school is out during the summer months.³²

Because federal and state assistance programs do not meet all the food needs for those who participate, some families and children must rely on private assistance programs through food banks, food pantries, and other charitable organizations.⁶

2.2.4 State-Level Barriers to Federally Subsidized Food Assistance

The USDA-ERS survey found that 62% of food insecure households participated in at least one form of federal aid, while the Feeding America Study found that only 55% of Feeding America client households receive SNAP benefits. This is a noteworthy difference because the vast majority of Feeding America client households would be income eligible for SNAP.^{6,11} Additionally, the Food and Nutrition Service of the USDA found that of the estimated 51 million individuals eligible for SNAP benefits in an average month in fiscal year 2012, approximately 83%

participated. Among eligible elderly adults, the participation rate was only 42%.³³ Nearly 25% of FA clients with children report receiving WIC benefits. Because the FA survey did not ask about the presence of pregnant women or children under five who might be at risk nutritionally, FA was unable to determine an estimated percent of WIC eligible client households.^{6,11,33}

There are several reasons why an individual or household may not participate in federal assistance programs through state-sponsored health departments: the belief that they or their family is not eligible, difficulty applying, applied but were found ineligible.³⁴ Besides the difficulty of the first-time certification process for WIC or SNAP, there can also be difficulty in physically obtaining benefits. While SNAP benefits are available on an Electronic Benefits Transfer (EBT) card, WIC still uses vouchers and clients must pick up WIC vouchers at their local Department for Family and Child Services office. Moreover, in most states WIC recipients are required to attend health check-ups every 6-12 months, which is difficult for single or working parents.³⁵ Moreover, EBT cards are accepted at more places, such as farmers markets, while WIC vouchers are not always accepted.

In reality, some individuals and families may not be eligible to receive federal or state-only cash assistance called Temporary Assistance for Needy Families (TANF) or SNAP benefits. Following the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), also known as welfare reform, states set restrictions for benefits related to immigration status, length in the United States, and criminal record.³⁶ The PRWORA and later legislation set parameters for states' use of federal and state funding and increased states' authority in administering or restricting access to public benefit programs. This legislation and following provisions have created a complicated and often confusing application process and misunderstanding of eligibility rules, policies, and practices that vary across benefit programs and states.

As a result of the PRWORA, in participating states, two main groups of people have

become disenfranchised from public benefits and assistance programs, these groups include any individual or citizen who has been convicted of a drug felony since 1996 (individuals with any other felony conviction are not subject to such bans on public assistance programs) and unauthorized and undocumented immigrants to the United States. Unauthorized immigrants include: individuals in various immigration categories such as students, tourists, and documented asylum-seekers. Protected refugees and other protected immigrants are exempt from any such ban from welfare programs.

In the twelve states that enforce discriminatory justice measures that ban drug felons as opposed to murderers or rapists from receiving TANF, it is estimated that 180,100 women are affected due to their past drug felony convictions - the vast majority from states such as Georgia (56,100 women) and Texas (65,900 women). This number would be greatly increased if the researchers expanded their analysis to include the states with full or partial bans on SNAP benefits and included men.³⁷ Despite this study's limitations, this estimation is incredibly important for several reasons: women comprise the vast majority of recipients of both TANF and SNAP benefits, additionally, women are about twice as likely as men to receive SNAP benefits at some point in their lives. In 2009, 85.9% of adult TANF recipients were women.³⁷ TANF and SNAP bans can greatly affect children and a family, for example, if a single mother with two dependent children has a felony drug conviction the TANF or SNAP benefit will be reduced from a three-person household to that of two-person household. This reduction creates substantial and additional hardship on needy families.

Fully understanding the nuances between federal assistance and state-only funding is essential in combating food insecurity in all communities and states. Five-year bans, partial bans, and lifetime bans, along with confusion over welfare policies account for the disparities in the number of individuals who apply and are eligible for welfare nutrition assistance programs and the high numbers of individuals and families reliant on programs through private and charitable

nutrition assistance programs, such as partner organizations of the Feeding America Network.

2.3 The Private Food Assistance Network

Beginning in the 1980s, following Reagan-era cuts to food assistance programs, low-income individuals and households found themselves in a food shortage not seen to that degree since the Great Depression.^{1,2} Resulting from public concern, a national inquiry led to an expansion of federal food assistance programs, including food stamps and Women, Infants, and Children Food and Nutrition Service (WIC).¹ This expansion was not only seen at the federal level, but it was also paralleled in nongovernmental and charitable organizations to assist in narrowing the food gap among the low-income and vulnerable.^{1-3,7} Over the past four decades, the demand for charitable food assistance has increased exponentially.¹¹ For the over 40 million individuals who receive nutrition assistance through the federal government, charitable food assistance may serve as a complement to alleviating hunger. Additionally, charitable assistance may serve as the primary means of food assistance for individuals whose household income is above the threshold for state and federal nutrition assistance programs.¹¹ Nation-wide, approximately 33,500 food pantries, 4,500 soup kitchens, and 3,600 emergency shelters make up the network of private food assistance programs.¹¹ Food banks receive and purchase food in several different ways. One such way is through federal subsidies through The Emergency Food Assistance Program (TEFAP) and the Commodity Supplemental Foods Program (CSFP), which is targeted towards organizations that serve the elderly. Foods generally subsidized through TEFAP and CSFP are the following: frozen hams, frozen chickens, canned chicken, canned beef, corn flakes, orange juice, apple juice, dry pinto beans, creamed corn, corn kernels, figs, spaghetti noodles, dry milk, peanuts, pears, pineapples, dry potatoes, and canned salmon.³⁸

Moreover at the state level, state governments can choose subsidize foods for food banks

through the State Nutrition Assistance Program (SNAP). This funding varies among states. Additionally, there are strict guidelines for proof of need; clients must present one of the following documents to their assistance agency: TANF EBT Card, TANF eligibility letter from the Department of Family and Child Services, WIC card, Child care voucher, or Children's Health Insurance Program card. Some common foods available through SNAP are: tuna, peanut butter, frozen chicken quarters, canned beef ravioli, frozen lasagna, canned peaches, canned fruit salad, 100% fruit juice, frozen turkey, canned chicken noodle soup, and beef hotdogs.³⁹ Unfortunately, TEFAP and SNAP do not typically subsidize costs for or promote the acquisition of fresh fruits and fresh vegetables, which are full of needed micronutrients and minerals in a balanced diet for children and adults.

2.3.1 The Need for Nutritious Foods in the Feeding America Network

According to the Feeding America Hunger in America Report, in 2013, Feeding America Network food banks, food pantries, and other assistance centers distributed more than 3.2 billion meals to over 46 million individuals and 16 million.¹¹ Clients of US emergency assistance agencies tend to be food insecure or experience very low food security. Additionally, more than 63% of households surveyed planned to use charitable food assistance as part of their monthly budget.¹¹ The role of food pantries and food banks has changed over time from providing acute relief to the food insecure populations beginning in the 1970s to filling the increasing need of continuous food provisions for the present-day chronically food insecure populations in the United States.¹¹ Because the majority of FA households receive charitable assistance each month and 47.4% of households report having at least one household member in "fair" or "poor" health, it is important to recognize that the nutrient status of charitable foods is likely to vary based on donors, location, and price.

Literature pertaining to food pantry inventory and health profiles of food pantry users is

limited and tends to be dated or from Canada, which is a comparable country to the United States to a limited degree when assessing the intersection of public and private welfare programs; therefore, more studies based in the United States are necessary to fully understand the current role of emergency charitable assistance organizations.^{2,3,7,8,40-46} Additionally, food insecure clients of emergency nutrition assistance agencies, tend to be overweight or obese, consume diets lower in fruits, vegetables, and fiber as compared to food secure individuals.^{40,41,44-47} Additionally, among both US-based and Canadian charitable food assistance agencies, meals and bags of food provided tended to be inadequate to meet the adults' nutrient requirements, along with being low in fruits, vegetable, dairy, and fiber.⁴⁰⁻⁴³

While SNAP and WIC encourage fruits, vegetables, whole grain-rich, and low-sugar foods, charitable food available to food insecure household are not subject to any national, state, or county nutrition regulation. Prior to 2010, there was little overarching nutrition oversight or accountability across the FA network. Because the majority of food pantries heavily rely on acquiring food from their FA food bank, food pantries may not have had access to the healthiest of food options for their clients or have the financial abilities to purchase healthy foods outside of the food available through their local food bank. Therefore, prior to 2010 nutrition quality and quantity at food pantries tended to be low, concentrating on shelf-stable, “emergency” foods, without a focus on client preferences or nutrition needs.⁴⁸

2.3.2 Food Bank-Based Nutrition Initiatives

One food bank outlier that deserves recognition for an early and big step forward in nutrition policy and client preference research is the Food Bank of Central New York's “No Soda and No Candy” policy on donated foods, which began in 2004. This policy allowed the FBCNY to focus its' efforts on the procurement and distribution of healthier foods such as fruits and vegetables, which happen to be more difficult for their clients to access themselves.⁴⁹

Following the findings of poor diet quality among food pantry users from the 2010 *Hunger in America* report, Feeding America developed a partnership with the Academy of Nutrition and Dietetics, and the National Dairy Council to create a platform of healthy foods to encourage.⁴⁸ These include low-fat and fat-free dairy products, fruits, vegetables, whole grains, water, and lean proteins. This partnership was designed to develop nutrition guidelines for food banks to encourage acquiring and distributing healthy, nutritionally dense foods to provide food insecure individuals and families. Since 2010, there has been a push among food banks to offer incentives to their partner agency network to offer more nutritionally-dense foods and nutrition education workshops.⁴⁸⁻⁵³ Moreover, in recent years there has been a desire to employ nutrition educators by food banks to translate nutrition knowledge to soup kitchen and food pantry directors and donors.^{50,51,53,54}

At the food bank level, food banks in the FA network are provided with information and recipes on “foods to encourage” through the *Healthy Food Bank Hub* and a system of 22 food categories to sort their inventory (Baby Food/Formula, Beverages, Bread/Bakery, etc.).⁴⁸ Other food banks, within and outside of the FA network, have adopted a different nutrition-focused system: the *Choosing Healthy Options Program* (CHOP). Due to the rising concern of food quality available to the nutritionally vulnerable, in 2004 the Greater Pittsburgh Community Food Bank in collaboration with MAZON: A Jewish Response to Hunger, a national nonprofit organization that works to end hunger in the United States and Israel, developed Choosing Healthy Options Program (CHOP), which seeks to promote the acquisition, distribution, and consumption of healthier food.⁵² CHOP is still grounded in the idea that there are foods to encourage, though it uses a slightly different algorithm than FA to categorize foods into three main categories: 1) Foods to consume frequently, 2) foods to consume occasionally, and 3) foods to consume rarely (along with foods or items ranked as minimal contribution (MC), not food (NF), or not ranked (NR) if it does

not arrive with a food label). Each CHOP category is further subcategorized into 12 food groups.² Therefore, CHOP compares like food items (vegetables to vegetables, meats to meats, etc.) to allow users to easily choose a healthier option. These categories take into account the macro and micro nutrient contents, specific ingredients in each food item, and brand, including, but not limited to: sodium, fiber, sugar, presence of whole wheat/whole grains, and total fat.⁵² The Greater Pittsburgh Community Food Bank suggests that CHOP partner food banks aim to have 68% of their distributed food to be ranked 1 or 2 on the CHOP scale.⁵² As of 2014, CHOP is currently used in over one dozen food banks across the country to increase nutrition-related awareness and accountability in both the food acquisition and distribution processes to partner agencies of these food banks. While published literature pertaining specifically to CHOP is nonexistent, there is evidence supporting the positive effect of nutrition initiatives at food banks and food pantries, that show low-income households desire and - when given access and opportunity - choose fresh fruits and vegetables, healthier food options (diabetic foods, low-sodium choices), and less nutrient-poor foods, such as candy and soda.^{49,51,54}

2.3.3 Foods Available Through Food Pantries and Short-Term Nutrition Initiatives

Few food banks directly serve food insecure individuals; therefore, when trying to understand the food needs of the food insecure, it is imperative to learn about the agencies and pantries that work directly with individuals experiencing food insecurity.¹¹ Moreover, published literature focused on nutrition initiatives at specific food pantries is also limited; despite short follow-up duration, the successes include greater fruit and vegetable selections and interest in preparing healthier food options.^{51,54} In one such study that focused on increasing food security and self-sufficiency among Hartford, Connecticut-based pantry clients, food insecure individuals were randomly invited to participate in the Freshplace client choice, fresh food-based pantry. These

² See Appendix, Table 1

Freshplace clients were allowed to shop at Freshplace twice per month, centering their shopping experience on fresh, perishable foods, and were also offered a range of services provided onsite, such as motivational interviewing and a cooking class. Over the 1-year intervention, clients of Freshplace increased their self-sufficiency by 4.1 points and increased their fruits and vegetables by one serving per day compared to the individuals who were not selected to participate in the Freshplace intervention.⁵⁴

Another nutrition initiative was offered through the Rhode Island Community Food Bank. In this study, individuals were recruited from low-income housing sites and emergency food pantries to participate in a six-week cooking program of plant-based recipes, brown rice, and whole grains.⁴⁷ Participants were then contacted for follow-up after six months; among study participants, total fruit and vegetable intake increased, grocery receipts showed a decrease in meat purchases, along with desserts and snacks. Additionally, participants' food insecurity score decreased from baseline along with body mass index.⁵¹

Because the above nutrition initiatives are not the norm, it is important to understand the standard food pantry experience. Food pantries tend to stock shelf-stable, preserved foods, such as rice, pasta, dried or canned beans, canned fruits or vegetables, and infrequently refrigerated or dry milk.^{40,45-47,55} These individual items and bags on the whole tend to be low in calcium, fiber, whole grains, fruits, and dairy.^{40,41,45-47} Additionally, canned goods offered at food pantries tend to be low in vitamin C and potassium, and high in sodium.^{40,41} Many food pantries offer bags of food, either premade or client-choice, where clients can choose their items in a grocery store-like set up or choose their items from a list.¹¹ The variability in foods and meals offered by onsite feeding programs and food pantries can be high due to geographic location, different sources of foods from food banks, farms, retail store salvage, individual donations, and direct purchases.¹¹ Most food pantries and soup kitchens rely heavily on their county or state food bank, with the majority of

assistance agencies receiving over 60% of their inventory from a FA food bank.¹¹ Additionally, there is variability in food pantries in how long the donated bag of food is expected to last a family or individual. Some food pantries make bags to last individuals three days, other pantries make bags to last individuals for seven days, while others offer different sized bags or boxes depending on the family size.^{11,40,56} Furthermore, other food pantries have limits on how often individuals or families can use their charitable services, such as once a week, once a month, or every ninety days, while others impose zip code or county restrictions.^{11,56} Because of this variability, some individuals and families must go to several different food pantries each month to meet their nutritional needs.^{11,56}

As previously mentioned, many food pantries create premade food bags or boxes to last on average three days; however, many low-income households using food pantries need more assistance than a 3-day supply of food.^{40,57,58} Many low-income households using food pantries attempt to stretch their foods longer than the intended three days or parents may limit their food intake for their children to have adequate meals.^{11,55,56} Previous research has found that some pantries can offer premade bags that are nutritionally adequate in total energy (calories), protein, fat, carbohydrate, vitamins A and C, calcium, iron, and folate for three days.⁵⁷ Nevertheless, it must be noted, chronic diseases associated with malnutrition, such as micronutrient deficiencies, overweight and obesity, and diabetes, result from months and years of poor nutrition; therefore, food pantry bags that meet micro- and macronutrient recommendations for three days are not sufficient for households and individuals that continually struggle meeting daily recommendations for micro- and macronutrient intakes.¹⁶

Food Insecurity in the State of Georgia

Hunger and food insecurity rates are higher in Georgia than the national average of 14.3%.^{6,11,56} According to the 2014 Feeding America Study, 18.9% of Georgians are food insecure, additionally, Georgia is the sixth highest state for WIC eligible women and children and fourth

highest for SNAP eligible individuals.^{11,59-61} WIC coverage has been an ongoing problem for eligible women and children; in calendar year (CY) 2012, 571,367 individuals in Georgia were eligible for WIC assistance and only 58.2% participated in WIC, which is only a modest increase since CY 2009 when 56.2% of eligible individuals were covered.^{59,60} Just over 2 million individuals were eligible for SNAP in FY 2012; however, participation rates are much higher than WIC, with an estimated coverage rate of 89% (CI 85%, 94%).⁶¹ Despite the higher rates of estimated SNAP coverage, hunger and food insecurity is still very much a state-wide problem in which private food assistance organizations have striven to reduce and reverse.⁵⁶

2.4.1 Atlanta Community Food Bank's Response to Hunger

Private food assistance in Georgia is governed by the Georgia Food Bank Association, which is comprised of eight regional food banks who are part of the Feeding America network. Working through more than 2,600 partner agencies (PA) to alleviate hunger and food insecurity in Georgia.⁶² While food insecurity is a state-wide problem in Georgia, Atlanta is especially concerning. Atlanta, Georgia is the third-worst urban food desert in the country, following only New Orleans and Chicago.¹² To combat this problem, the Atlanta Community Food Bank (ACFB), in the 2013-2014 fiscal year, distributed more than 51 million pounds of food and grocery products to more than 600 partner organizations around the Atlanta-Metro-area, such as food pantries, soup kitchens, and emergency assistance shelters.⁵⁶

The clientele of Atlanta's food banks, pantries, and soup kitchens are a subgroup of concern because of the multilayered causes of hunger and low access to healthy food, such as Atlanta's long history of disenfranchising historically minority neighborhoods, poor public transportation system, and current high rate of gentrification and income gaps.¹² Moreover, Georgia is one the most restrictive states in terms of its legislative adherence to the Personal Responsibility and Worker Opportunity Act (PRWORA) for qualified immigrants, unqualified immigrants, and convicted

drug felons reentering society.³⁷ Therefore, Georgia's high rates of Latino immigrants and high rates of convicted drug felons, who may be dependent upon charitable nutrition assistance programs, are especially impacted by the nutrition status of food offered through ACFB. More than 80,000 individuals rely on food assistance from ACFB PA, thus, ACFB has the ability to positively or negatively affect these individuals' diet by the food they acquire and distribute, thus, monitoring the distribution patterns of ACFB, and understanding how partner agencies interpret and translate nutrition resources into their food acquisition process is needed for understanding the NW Georgian culture of health. The mission of ACFB is to fight hunger by engaging, educating, and empowering its community; therefore, implementing a nutrition program centered on choice is a simple way to evaluate nutrition outreach education from ACFB to the community. Additionally, the food insecure populations of Georgia deserve healthy and nutritious food assistance that is culturally appropriate along with options that they enjoy eating.

In Georgia, the Atlanta Community Food Bank receives subsidized foods through the federal government (TEFAP), which is available to all agencies that serve individuals who are TANF eligible, and the Georgia Nutrition Assistance Program (GNAP), which is available only to agencies that provide food assistance to a large percentage of TANF eligible clients with children (e.g. food pantries that serve primarily families with children, child care centers, and after-school programs).

All partner agencies of ACFB must order food and non-food items through eHarvest.org, ACFB's food ordering website. While PA do pay for some food and non-food items, this cost is based off of a shared maintenance fee – for operational and transportation costs - and not a price for food. This maintenance fee never exceeds \$0.16/pound. There are four subcategories of available items through ACFB's eHarvest: 1) food available at a very low cost to all agencies, 2) food available at a very low cost to agencies that are TEFAP eligible, 3) food available at a very low

cost to agencies that are GNAP eligible, and 4) food and non-food household and hygiene items available to all agencies at lower than the market price through the ACFB co-operative.

Once the partner agency selects their items and submits their order there are two options: 1) the PA will drive to ACFB and pick up their order at which time they will have access to the ACFB Grocery, where some produce and other items are free and all other items are priced at \$0.16/pound, or 2) they pay an additional \$25-fee to receive their order to their agency site and the agency has order 500 or more pounds of food and non-food items; however, these agencies are not privy to food available through the ACFB Grocery. Moreover, some PAs are categorized as “enabled agencies” and this allows PA to directly pick up items from local supermarkets or grocery stores. Depending on the agency, food orders are placed a few times a week to a few times a month according to the needs of their agency and their clients. Additionally, PAs who have a strong desire for fresh produce may pay a monetary sum upfront to ACFB with which ACFB will match that PA to a local farm or produce grower in Georgia to receive a corresponding amount of produce for the sum paid. This option is not available through eHarvest.org, but must be set up through an ACFB Agency Relations Representative.

2.4.2 ACFB’s Nutrition Initiative: The Choosing Healthy Options Program

Beginning in May 2014, ACFB incorporated CHOP into their food acquisition and distribution processes. To assist PA nutrition-related ordering the CHOP nutrition rankings are posted on ACFB’s food ordering website (eHarvest.org) for their partner organizations to see when placing their food orders. ACFB adopted CHOP to monitor and evaluate their food procurement and allotment process.

The objectives of this study were two-fold: first, to assess PA food ordering response to CHOP and, second, to explore food pantry directors’ attitudes and beliefs regarding their role in nutrition and food assistance, along with their perceptions of their clients needs and wants.

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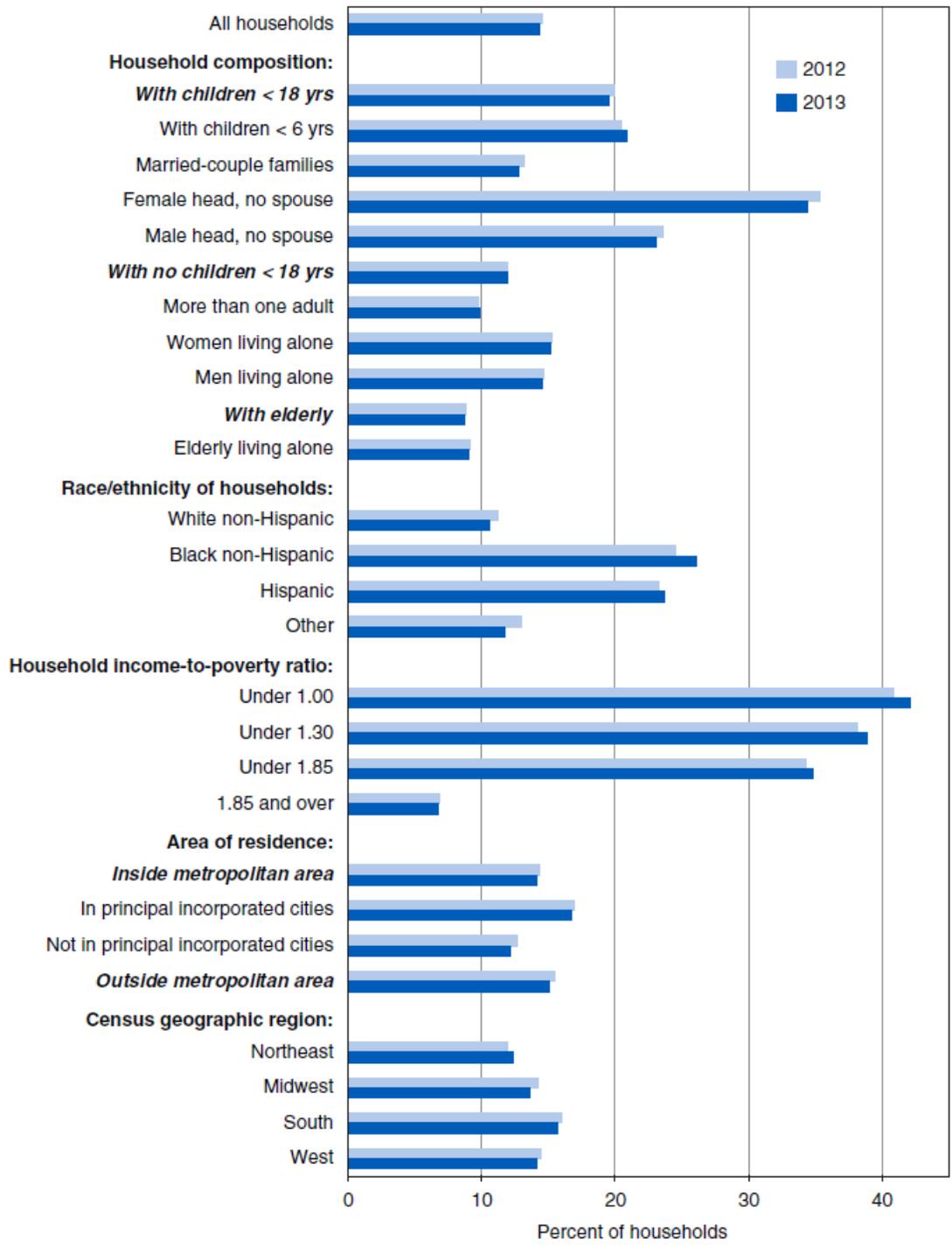
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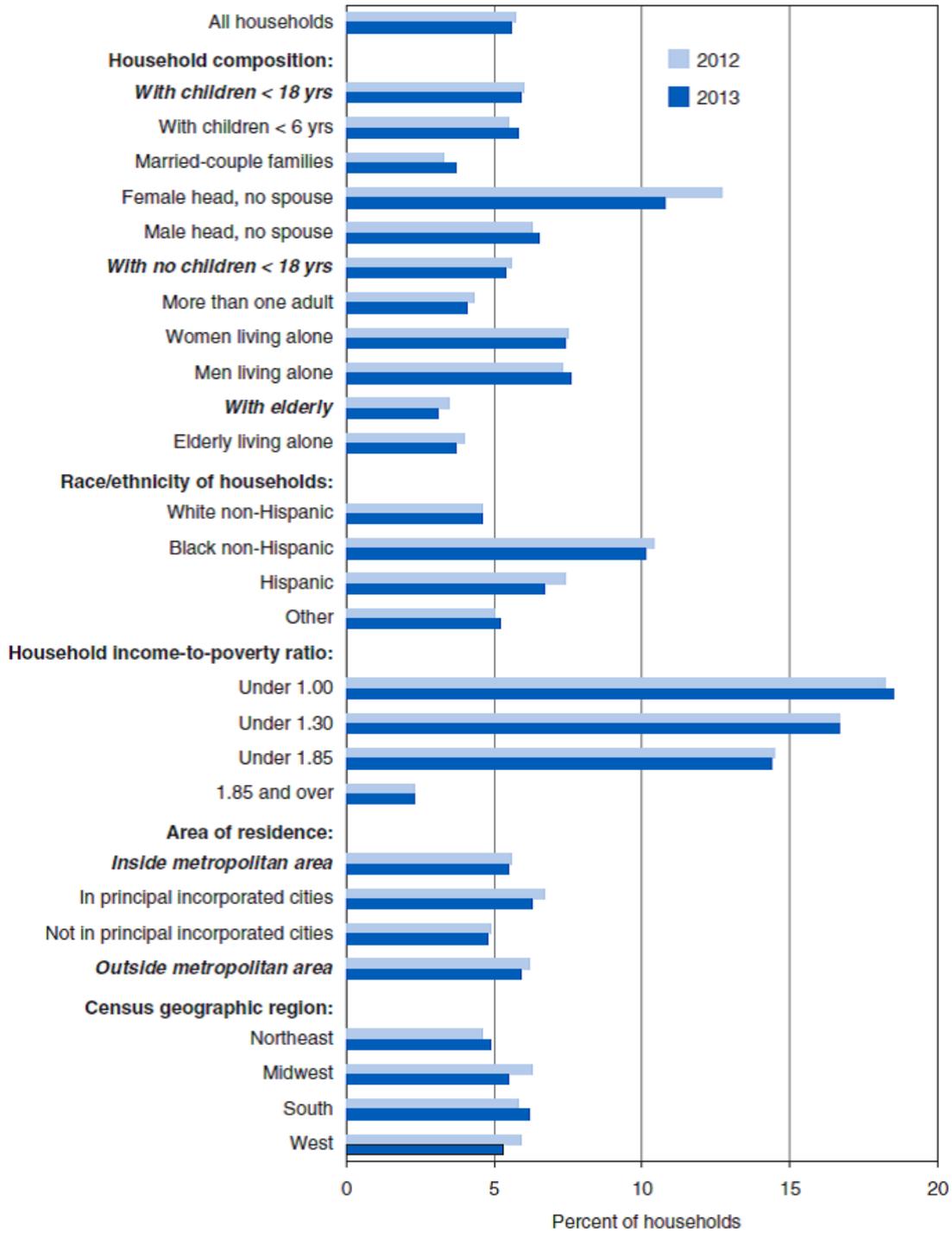
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Figure 1.
Prevalence of food insecurity, 2012 and 2013



Source: Calculated by USDA, Economic Research Service based on Current Population Survey Food Security Supplement.

Figure 2.
Prevalence of very low food security, 2012 and 2013



Source: Calculated by USDA, Economic Research Service based on Current Population Survey Food Security Supplement.

Chapter 3: Manuscript

*Attitudes and Behaviors of Food Pantry Directors and
Perceived Needs and Wants of Food Pantry Clients*

3.1 Contribution of Student

My contribution to this project began in November 2013 when I discussed interning at the Atlanta Community Food Bank with the Nutrition and Wellness Program Manager, Janice Giddens. From this meeting, Janice and I designed a research question and objectives of the project. Following my meeting with Janice, Amy Webb-Girard, my thesis committee chair, and I created specific aims for each objective. I worked with ACFB staff to receive data on partner agencies' orders. Additionally, I collected data through in-depth interviews with nine partner agencies of ACFB. I conducted all background research, data cleaning and transcription, statistical, and qualitative analyses for my thesis.

3.2 Abstract

The Choosing Healthy Options Program (CHOP) is a simple food ranking tool that has recently been adopted by the Atlanta Community Food Bank (ACFB) to aid partner agencies (PA) in their ordering process. 402 PA's food orders were analyzed using t-test prior to and following CHOP implementation. Nine PA participated in in-depth interviews to characterize the nuances of their ordering process, perceptions of nutritional quality ordered food, and perceptions of their clients' needs and preferences. Pounds of healthier meat options, 100% fruit juices, and canned/frozen vegetables increased following CHOP implementation. Many agencies described difficulties with storing fresh produce, which may explain the decrease in ordered produce. Agencies found CHOP helpful in their ordering process; however, at the agency-level, more communication is needed between the client and the provider to offer clients a more autonomous experience.

Key words: Food bank, food pantry, nutrition, food security, provider perceptions, client preferences

3.3 Introduction

Over the past four decades, the demand for charitable food assistance has increased exponentially.¹ Nation-wide, approximately 33,500 food pantries, 4,500 soup kitchens, and 3,600 emergency shelters make up the Feeding America network of private food assistance programs.¹ Despite the increasing assistance from the federal and private sectors, food insecurity persists in the US today. Food insecurity, limited or uncertain access to nutritionally adequate, safe, and acceptable food, is a major concern to millions of households across the United States.² Recent estimates show that 14.3% of US households are food insecure.² Hunger and food insecurity affect the well-being of children, adults, families, and communities. The negative effects of food insecurity have been well-documented and include issues such as physical impairments, obesity among women, psychological suffering, and social-familial disturbances.³⁻¹⁰

Hunger and food insecurity rates are higher in Georgia than the national average of 14.3%.² According to the 2014 Feeding America Study, 18.9% of Georgians are food insecure.¹¹ In the 2013-2014 fiscal year, the Atlanta Community Food Bank (ACFB), distributed more than 51 million pounds of food and grocery products to more than 500 partner organizations around the Atlanta-Metro-area, such as food pantries, soup kitchens, and emergency assistance shelters.¹¹

Food available through food pantries and food assistance programs tends to be characterized by long shelf-lives and an absence of fresh produce, fish, and meat, or ethnic foods.¹²⁻¹⁴ Due to the rising concern of food quality available to the nutritionally vulnerable, in 2004 the Greater Pittsburgh Community Food Bank in collaboration with MAZON: A Jewish Response to Hunger, a national nonprofit organization that works to end hunger in the United States and Israel, developed Choosing Healthy Options Program (CHOP), which seeks to

promote the acquisition, distribution, and consumption of healthier food. CHOP is a simple food ranking system that assigns foods a 1, 2, 3 (1 being the highest rating a food can receive based on the relative amount of healthy nutrients), along categorizing other items as minimal contribution (e.g., condiments), non-food (e.g., paper products), or not rated (e.g., a bulk item that does not have a nutrition label and is not produce). The Greater Pittsburgh Community Food Bank suggests that CHOP partner food banks aim to have 68% of their distributed food to be ranked 1 or 2 on the CHOP scale.¹⁵

Beginning in February 2014, ACFB internally incorporated CHOP into their food acquisition and distribution processes, additionally the CHOP nutrition rankings were posted on ACFB's food ordering website for their partner organizations to see when placing their food orders beginning in May 2014. ACFB adopted CHOP to monitor and evaluate their food procurement and allotment process. At ACFB, CHOP is further subcategorized into 22 food groups (Table 3). Therefore, CHOP compares like food items (vegetables to vegetables, meats to meats, etc.) to allow users to easily choose a healthier option. On a daily basis, ACFB aims to supply similar food items on eHarvest.org; however, some items, such as fresh produce and meats, vary greatly in their availability due to seasonal, donor, and local/global food systems fluctuations; therefore, depending upon the day and time a PA places their order, various items typically available through eHarvest.org may be out of stock. Moreover, it is important to note that not all agencies are eligible for the same food options. For example, only agencies that serve primarily children or families with children are eligible to select GNAP (Georgia Nutrition Assistance Program) foods and only agencies that serve primarily individuals who would be eligible for the state-sponsored TANF can receive TEFAP (The Emergency Food Assistance Program) foods.

There is a range in the ways PAs may receive food and non-food household/hygiene

items through ACFB, the purpose of this study was thus two-fold. We first sought to assess the nutritional value of food orders placed by ACFB's partner organizations on eHarvest.org prior to and following the May 2014 CHOP implementation. Secondly, we undertook qualitative research to understand factors that influence the food ordering process of ACFB's PA's and identify the modes of communication and feedback ACFB's partner organizations utilize to gather food preference data from their clients.

3.4 Methods

Mixed-methods (qualitative and quantitative) were used for this study understand purchasing habits of partner agencies of ACFB and client feedback communication mechanisms within a subset agency population.

To achieve our first objective of capturing the purchasing habits of partner agencies of ACFB, partner agencies' food orders were analyzed. Our analysis included 402 PA (172 agencies were excluded from quantitative analyses due to failure to order during both time periods). Food orders were summed and analyzed for the six weeks prior to CHOP scores available on the online ordering website eHarvest.org (Time 1) and for the six weeks following the publishing of associated CHOP scores with each food item on eHarvest.org (Time 2). *T*-tests were used to examine differences in pounds of food items from pre- and post-CHOP implementation for CHOP categories (1, 2, 3) within the 22 Feeding America food categories (SAS 9.4, SAS Institute, Cary, North Carolina). A post-hoc *t*-test analysis of produce orders through the ACFB Grocery Floor was also completed due to ACFB moving the majority of their produce inventory from eHarvest.org to the ACFB Grocery Floor during the study period.

To achieve our second objective, in-depth interviews were conducted to further understand purchasing motivations, client feedback mechanisms, and perceptions of clients' needs. Twenty-seven partner agencies were recruited by telephone calls and electronic

invitations to participate in the study. Inclusion criteria were: a partner agency of ACFB and ordered food from eHarvest.org during both time periods. Of the 27 recruited, a sample of nine Pas met the inclusion criteria, agreed to participate, and were interviewed for the study.

Given the lack of published research on this topic, the interview questions were open-ended, exploratory, and designed to garner responses about the role of CHOP and nutrition at their agency, their perceptions of their clients' nutritional needs and dietary preferences, the barriers they encounter as an agency to providing nutritious foods, and the modes of communication they employ to gather client feedback about the food available. Data were collected in-person from July-August 2014. All participants granted verbal consent and permission to record their conversation. Interviews ranged from 25-70 minutes and participants received a \$10 gift card. This study was funded by the Emory University Center for Ethics and was determined exempt from institutional review board approval by the Emory University, Institutional Review Board, Research Administration.

Interviews were transcribed verbatim, deidentified, and entered into MAXQDA 10 software (2010, VERBI, GmbH) for analysis. Thematic analysis was conducted and involved reading and annotating the data to identify inductive thematic issues. MAXQDA software was used to search the data by each theme, identify nuances, and conduct cross-case comparisons. This process revealed differences in nutrition practices and perceptions. Verbatim quotes from study participants are presented to illustrate key issues.

3.5 Results

PA demographics are summarized in Table 1 and an overview of CHOP availability on eHarvest.org is presented in Appendix 1, Table 2.

Objective 1: Quantitative Analysis of Food Orders

PA food order changes are summarized by CHOP category and food subcategory in Tables 3 and 4. Compared to Time 1, agencies ordered, on average, 1167.3 ± 7465.6 more pounds of food ($p=0.0018$) that had a CHOP nutrition score at Time 2. Significant increases were measured in each CHOP category: orders for CHOP 1 food items increased by 723.30 ± 3073.5 pounds ($p < 0.0001$), CHOP 2 orders increased by 196.40 ± 1761.90 pounds ($p=0.026$), and CHOP 3 increased by an average of 274.90 ± 1439.40 pounds ($p=0.0001$).

Prior to the implementation of CHOP, the largest share of agencies' orders were in the following three categories (Table 3):

1. Canned/Frozen Vegetables - 309,879 pounds (21.1% of total CHOP pounds),
2. Canned/Frozen Fruits - 202,017 pounds (13.7% of total CHOP pounds), and
3. Meat/Fish/Poultry - 186,191 pounds (12.6% of total CHOP pounds).

Following the CHOP implementation, the largest share of agencies' orders were in the following three categories (Table 3):

1. Meat/Fish/Poultry - 414,630 pounds (21.2% of total CHOP pounds),
2. Canned/Frozen Vegetables - 381,862 pounds (19.5% of total CHOP pounds), and
3. Meals/Entrees/Soups - 250,272 pounds (12.8% of total CHOP pounds).

CHOP 1

Within CHOP 1, significant increases in PA ordered pounds were observed in several subcategories of food: Meals/Entrees/Soups significantly increased by an average of 88.05 ± 604.90 pounds ($p=0.004$) from 1.78% of total CHOP pounds to 3.15% of total CHOP pounds; 100% Fruit Juices increased by an average of 227.20 ± 1011.30 pounds ($p < 0.001$) from 3.77% of total CHOP pounds to 7.52%; Meat/Fish/Poultry on average increased by 307.30 ± 1822.90 pounds ($p=0.001$) from 1.57% of total CHOP pounds to 7.51%. EHarvest.org produce orders significantly decreased by an average of 191.30 ± 1378.50 pounds ($p=0.006$)

from 6.32% of total CHOP pounds to 0.83%.

CHOP 2

Within CHOP 2, PAs significantly increased their pounds of Canned/Frozen Vegetables by an average of 188.00 ± 989.90 pounds ($p < 0.001$) from 9.09% of total CHOP pounds to 10.72% of total CHOP pounds. Additionally, PAs decreased their pounds of Meat/Fish/Poultry by an average of 81.21 ± 556.00 ($p = 0.004$) from 4.41% of total CHOP pounds to 1.65%.

CHOP 3

Between Time 1 and Time 2, PAs increased their pounds of Meals/Entrees/Soups by 108.80 ± 530.40 pounds ($p < 0.0001$) from 5.04% of total CHOP pounds to 6.04%, and Meat/Fish/Poultry by 342.20 ± 1775.90 pounds ($p = 0.0001$) from 6.65% of total CHOP pounds to 12.06%. However, PAs also on average decreased their ordered pounds of Canned/Frozen Vegetables by 66.96 ± 384.40 pounds ($p = 0.0005$) from 4.09% of total CHOP pounds to 2.02%.

ACFB Grocery Changes

As previously mentioned, because not all produce was available on eHarvest during the study period, the investigators were curious to measure PAs' produce orders through ACFB Grocery. During the study period, PAs decreased their picked-up free pounds of fresh produce by an average of 131.70 ± 1959.50 pounds ($p = 0.179$). Though this change is not statistically significant, it is concerning from a nutritional value point of view.

Objective 2: 3.5.2 Qualitative Agency Interviews

To further explain PA responses to the CHOP implementation and learn more about PA ordering processes and determinants, investigators interviewed nine PA of ACFB. Because the food assistance industry is client-based and nuanced by complexities of financial constraints, communication abilities, and unconscious provider preferences, interviewees'

responses did not necessarily fit distinctly into one subgroup or theme.

General description of interviewed agencies

While the majority of agencies rely on ACFB for $\geq 70\%$ of their food inventory, the agencies interviewed ordered from eHarvest ranging from a few times a week to twice a month depending on their storage accommodations, number of clients served, and partnerships with local supermarkets for donations. The number of clients served varied drastically from 50 people per week to over 600 people per week and was not dependent upon rural, suburban, or urban setting.

Client demographics were different depending on geographic location: agencies located in the metro-Atlanta area served primarily ($\geq 75\%$) African American and Black clients and the prevalence of individuals experiencing homelessness varied from agency to agency, for example, one agency's pantry catered to only individuals experiencing homelessness, while with other inner-city agencies it was only about 10%. Agencies located in counties northwest outside of the city served primarily Caucasian families, while agencies located in counties south and southwest of metro-Atlanta served about 60% African American and Black individuals and families and about 40% Caucasian individuals and families.

Most agencies, regardless of location, served primarily families with one or more children, with the exception of the pantry specifically for individuals experiencing homelessness. Additionally, individuals and families of all ages utilized food assistance organizations. Some agencies were located within walking distance to public transportation bus stops, which allowed clients to access their agency. Other clients carpoled or used their own vehicle. One agency resourcefully created a relationship with a public transportation bus driver to unofficially stop at their location on their day of operation.

Agency personnel perceptions about clients' health

Almost every interviewee mentioned their concern of diabetes and diet-related diseases among their clients. Prior to assisting a client with food, interviewees reported asking them if the client or anyone in their household is diabetic or has special diet restrictions due to a disease or health condition (e.g., low-salt diet for individuals with high blood pressure/hypertension). Other interviewees explained that some clients would arrive and let the food programs manager know about their diet restrictions during the initial client interview or their first time at that agency.

One interviewee remarked on her concern of obesity among her clients and clients' children, "It's not a healthy country; very, the children are – have obesity problems, you'll see many, many, many obese at the food pantry. I have watched people since I've been here, and I've been here 10 years, and I've watch them just gain weight, gain weight, gain weight and their children gain weight, gain weight, gain weight...It's going to be worse in 20 years with all the children who grow up to be Type 2 diabetics" (PA 3).

In terms of nutrition and health education, most agencies expressed their perception that their clients are in need of health and nutrition education. Several agencies mentioned that clients with diabetes or other health conditions were unsure of how to cook and pick healthy foods that also tasted good. As one interviewee stated, "I mean you can give them information, but some of them are just going do whatever they want to do. I think [nutrition education] is good to have and to show them because there is a lot – even if you're diabetic - there's still a lot of stuff that you can eat... but people just don't know that. They just have to be empowered and taught that" (PA 5).

Response to CHOP

Six of the agencies interviewed had known about the Choosing Healthy Options Program implementation. Of the agencies that knew about it, the agency directors or food

program managers had learned about CHOP through three different avenues: an agency-wide email, the annual agency conference, or by reading the “Attention Shoppers” section on the homepage on the PA food ordering website (eHarvest.org).

Those agencies were excited to use CHOP as a resource to inform their ordering process and liked CHOP because of the ease of knowing that what they were ordering was healthy for their clients. There was a general consensus that PA have a responsibility to provide nutritious foods to their clients, especially with the prevalence of diabetes and diet-related diseases along with the number of children they serve directly or indirectly.

Several agencies believed that CHOP was a valuable resource for nutrition information because of the simple 1-2-3 ranking system, interviewees mentioned how seeing the CHOP score made them more aware of what they were ordering for their clients. PA’s mentioned that on the food ordering website the only product information available to them is the product description (e.g., French Cut Green Beans), packing information (e.g., cans, packages, bulk), quantity available, price (if applicable) and Nutrition Measurement (CHOP 1, 2, 3). Therefore, being able to see the CHOP score has been useful in determining the product’s “healthiness” without having to wait to receive an item then individually looking at the nutrition labels.

Agencies used CHOP in their ordering process in two main ways: first, the healthier CHOP score was used as a deciding factor when agencies have the option for two different brands of the same item (e.g., Brand A sliced carrots vs. Brand B sliced carrots) when cost was not a contributing factor and; second, for agencies that operate as charitable co-ops with direct client feedback and choice during the food ordering process, CHOP scores were referenced as the deciding factor between two different items that may have received the same number of votes.

One interviewee mentioned the utility of CHOP during the ordering process, “In this

area you do have a large percentage of people who are hypertensive, who are diabetic... We're so glad to be seeing foods, especially canned foods with less salt and that kind of thing... [CHOP] really appeals because you got to try to do everything you can to help people who already have some challenges with their health” (PA 1).

Most interviewees were not surprised with how their usual foods ranked in CHOP. One interviewee remarked, “A lot of [CHOP] was self-explanatory, [CHOP] was easy to follow, easy to understand, but a lot of [the ranking] is common knowledge, I know beans are healthier than other items” (PA 7).

However, some interviewees did have further questions about how the rank is determined and how to explain the ranking to individuals in their organization or food cooperative; as one food program director stated, “I think just an understanding of what the criterion is based on per food group, like, meats, what's determining 1,2,3, sodium, fat, that sort of thing. That would be a better explanation for [clients] and understand the [rank] a little bit more” (PA 6).

PA planning and barriers

While CHOP was perceived as useful to agencies in ordering healthier food options, additional barriers prevent agencies from providing clients with healthier foods. The overwhelming barrier for interviewees to provide more nutritious, fresh food and produce to their clients was their lack of adequate refrigeration and freezer space at their agency. Some interviewees, but not all, would not order produce because of its short shelf-life and the agency's lack of adequate refrigeration equipment or their perception that their clients would not be interested in fresh produce. Some agencies utilized their refrigeration equipment for meats rather than produce, since meat items are widely requested by clients. Many agencies remarked on how the food stamp cutbacks have affected their clients' needs and, in turn, the

increased need for food and increased client-base. Some interviewees remarked that since the food stamp cut backs they have served either the same number or an increase in number of clients during their hours of operation – no interviewees reported a decline in number of people in need of food assistance.

Refrigeration space also goes hand-in-hand with the barrier of financing a renovation project that would allow for the current location to house commercial-grade refrigeration and freezer equipment. Many food pantries associated with religious organizations are operating out of a retrofitted closet, in which fitting a commercial-grade refrigerator or freezer would be nearly impossible. Eight of interviewed agencies operate with one to three household-sized refrigerator- freezers. One interviewed agency received a capacity building grant through ACFB and operates with one commercial-grade walk-in refrigerator and walk-in freezer, which has greatly increased their ability to meet the meat and fresh produce needs of their clients.

Similarly, some interviewees mentioned the good fortune to receive grants and create business plans for their organization. One interviewee reflected on the benefits of having a financial plan, “Since we began our partnership with the food bank, it’s allowed us to plan more...I just turned in a grant for...being able to provide more vegetables...We would love to have somebody going back and forth to Atlanta twice a week to pick up fresh produce and that, fresh fruit, but if we can’t do that...we’re trying to get in more frozen [fruits and vegetables] – we’ve written our grant for a refrigerated trailer to be able to transport cold and frozen food, and then in addition to that we’ve written it for a walk-in freezer” (PA 5).

While storage space is a main barrier for agencies serving their clients, several additional agency-related barriers exist. Seven of the interviewed agencies claimed to be faith-based in their mission; however, three interviewees have found due to client pride, desire for privacy, and personal religious affiliations that their agency might be able to serve more

individuals if their food pantry was not located within a house of worship. One interviewee remarked about the difficulty of being grateful to receive financial aid through the affiliated church, but also desiring to help individuals who may not feel comfortable receiving aid from a church, “Right now that's my prayer and vision I have: that we will be able to find even a place apart from the church because sometimes people are intimidated because it's a religious facility and I don't want them to think, ‘Oh the church, they're going to try to get me to join their church’, you know. So my prayers are that we can get a place apart from the church and be able to have more space and more budget, too. We'll never take care of all [the clients’] needs, [the need is] always going to be there, but at least we can take care of more [people]” (PA 1).

Additionally, one agency reported having to discontinue their mobile food pantry due to threats of police action from an elected county commissioner, though it is important to note that similar occurrences were not mentioned by other interviewees.

PA purchasing and ordering determinants

One interviewee who directs their agency’s food pantry and co-op detailed their ordering process, “On the weeks we don't have food distributions, I meet with a committee of co-op members and print out a shopping list for them and place a base order and they go through and choose what they like the most and they are through the ACFB co-op system, and go through the co-op system and rank 1-10 what you want the most. And I go through [after] and order, because [co-op items are] a little more expensive, [the clients] can rank and I go in and order and go off of that. I decide the food for the food pantry and it's the committee for the co-op” (PA 6).

For the agencies that are GNAP eligible, these agencies tend to try to load up their order with non-GNAP meats first for individuals or families without children, which can be a difficulty if non-GNAP meat quantities are low in ACFB’s inventory. As one interviewee

remarked, “Whatever meat you got, we’ll go straight there and get that first, and see what we can get. And a challenge I have, but I work it out, a lot of times your meats are GNAP so I’m careful...So more non-GNAP meats would be nice” (PA 9).

Other agencies order based upon client feedback data the agency has collected through written or oral communication. One-third of interviewed agencies use direct client feedback to inform their purchases for their co-op or food pantry. As previously mentioned, agencies also use CHOP as a guide to choose one item over another item.

Sticking to the “Basics”

In terms of new items or trying healthier options, interviewees remarked that they were tentative to order foods outside of what is considered “the basics” or “staples”, which include: pasta, tomato sauce, macaroni and cheese, canned meats or tuna, a canned vegetable (green beans, peas, corn, potatoes, or yams), soups, canned beans, canned fruit, and potentially cereal or bread. In terms of fresh produce, basic items would be apples, bananas, and oranges. Interviewees were unsure their clients would like new items, know how to prepare the items, or even be able to personally explain to clients how to prepare the items. For example, one interviewee remarked on trying new items with her clients, “And there are some special things like we get stuff, more like Hispanic type dish items...And there are some who knows what to do with it, you know, like the peppers. Or some will say, ‘What is this?...[S]ometimes we get lambs meat and everybody don’t know what lamb meat is and know how to cook it...Or ‘What is an eggplant?’ They didn’t know what an eggplant was. ‘What is eggplant?’ I guess they think egg plant...They think about scrambled egg in it – they couldn’t get it” (PA 5).

Others were unsure of certain kinds of produce, like mangoes and avocados, or items the interviewees did not grow up eating or learning how to cook. Additionally, interviewees remarked that some produce was hard to encourage to clients if it looked differently than the

clients are accustomed to seeing in the grocery store. For example, many agencies received lots of fresh carrots from ACFB in late spring, these carrots were available to PAs in the condition they were picked in; therefore, the carrots looked like carrots that had just been picked out of the ground with the carrot greens still attached. The clients at some of the interviewed agencies, were unsure of how to prepare carrots that looked like real carrots. Once the agencies removed the carrot greens, the clients were more receptive to taking them. One interviewee succinctly stated, “Things look so different when just picked than in the grocery store, if [clients] don't recognize them, they're skeptical. If [clients] don't grow up seeing a carrot out of the ground, they're not going to eat it” (PA 7).

One interviewee reported the difficulty of introducing new foods, “I know the area and I know the people, I'm not going to order avocados, I'm not going to order eggplants or asparagus, you know, because I know, first of all some of them don't even know what it is and they certainly not going to know how to prepare it. And they not into a lot of new stuff” (PA 1).

Many interviewees remarked that they were very conscious to provide all clients with the same items. However, some agencies recognized that their clients may have differing food preferences. Within these agencies, there seemed to be a perceived client openness to varying the orders from week to week, or purchasing “mixed boxes” through ACFB. Mixed boxes are a variety of non-perishable items ranging from snacks to canned goods to boxed meals that have been donated to ACFB by individuals through food drives. As one interviewee stated on the appreciation for mixed boxes, “[Mixed boxes] were really good because it's a variety of stuff and it's stuff that people bought. So, that means that it's stuff that they would eat themselves and that they donated. And [clients] love those. So, I get some of that. I can get that every week because they go a long ways and we just split them all up and everybody have like a little, you know, some different things rather than just the same thing over and over and over and over”

(PA 5). There is a great desire for fresh produce when the individual or family has the capacity to store it and the knowledge and time to prepare the item.

Interestingly, differing client opinions on produce occurred between clients of agencies within metro- Atlanta-and-southwest of the city versus clients of agencies in counties northwest of Atlanta. Individuals and families that had the capacity to store and prepare fresh produce in metro-Atlanta and counties south and southwest of the city frequently requested produce from their agencies or remarked on their desire for produce, “I’ve got to have at least 500 watermelons or I don’t want one because it is unbelievable. But you put a pallet of squash out there and everybody’s just happy and good, but everybody wants that watermelon... [Watermelons] bring out the ugliest!” (PA 2). Other agencies remarked on their clients’ preferences for fresh produce including tomatoes, potatoes, cantaloupes, and green beans.

The general sentiment in agencies in counties northwest of Atlanta and agencies that had a predominantly Caucasian clientele, was that the clients were more interested in “plain old food”. Interviewees remarked on the obstacle of clients not knowing about different types of fruits and vegetables, “[Clients] don’t know what to do with [blueberries]. Plain old food is what people want. And if it was peaches or frozen peaches we wouldn’t have enough to give away. But blueberries are just a step up from apples and oranges and peaches and things like that” (PA 3).

Meat

Across all interviewed agencies, interviewees perceived that meat is the most important food to their clients. As previously mentioned, all interviewees try to build their order around the meat available to create a “meal” for their clients. Interviewees reported that clients are very concerned about receiving meat over any other type of food. Most interviewed agencies order chicken pieces, whole chickens, or ground meat through ACFB because that is most often

available and requested by clients. Additionally, some agencies order hams because of their perception of ham as a comfort food. Interviewees reported that the meat options are the first foods clients ask for or notice in their bags. Moreover, two interviewees reported that new clients come to their agency because they have heard from neighbors or community members that their agency provides frozen and non-canned meat on a consistent basis.

One interviewee remarked on how their partnership with ACFB has allowed them to meet the meat needs of their clients, “When I have a client in here and they're signing up for the program, and I say, ‘You know the reason we work so hard to get partners with the ACFB is because we can get meat,’ and I said, ‘You know when you go to any other food pantry-‘ and [the clients] always - 100% of them time - finish my sentence and say, ‘You don't get meat’.100% of the time [clients] do not get meat from any other, in [this] County, anyway, I don't know about other counties, but [the clients] say, ‘You don't get meat.’” (PA 8).

Many interviewees were surprised at their clients’ desire for fresh or frozen meat products and voiced their concern about clients having time or the means to prepare raw and unprocessed meat. This was due to the coexisting desires from clients for quick meal items, such as instant ramen and macaroni and cheese. One agency that allowed clients to pick any twenty items from a list remarked on their surprise of how individuals would choose, “[Clients want] hamburger meat or any kind of meat...things that are filling, things that have substance to them...And people from the food bank couldn't believe it when [clients] would use one of their 20 things on ramen noodles, why would you do that when ramen noodles are so cheap, why wouldn't ask for something more expensive. [It] showed the power and importance of that one food. [Ramen] was exactly what people wanted. It's something you can make fast, and it's light and can transport it home” (PA 7).

Sweet treats

Differing opinions exist surrounding the availability of sweet, not nutritious food items, such as snacks, candy, and soda in the food assistance community. A spectrum of thoughts surrounding sweet foods was present in interviewee responses – none of which are uncommon. Agency responses varied among this food group: from believing providing clients with sheet cakes or sweets was a nice gesture because the provider enjoys sweet foods to agencies believing their purpose was not to provide non-essential, low nutrition foods. One such interviewee offered their views on providing foods with low nutritional value with the following response, “So, Lord bless Publix... Publix is really good to us, they give us all their day-old stuff on Thursdays, and sometimes they load us up so heavy we just beg people to take them. They just - they're very good. We have as much as 14 gold sheet cakes, and oh man, we look real nice sometimes giving people big cakes, because they're \$20 apiece having them at the store... We give them half a bag of staples, you know, regular stuff, and then the rest of the bag with cookies, cakes, doughnuts, you know we give them all kinds of sweet stuff. We sweeten them up every week or mostly all weeks. It might just be because of me, I love sweets” (PA 4).

While some agencies found the utility in offering sweet foods to combat addiction cravings, “What are our thoughts on salty, sweet, snack foods? A lot of our clients are suffering from addiction and when you have something sweet, you tend to not consume much to substance abuse, it takes the edge off” (PA 7).

Lastly, other agencies believed that their purpose was to provide basic, healthy necessities – not candy or sodas that tend to be less expensive and nearly universally available to all of their clients from corner or convenience stores. One interviewee remarked on her order for the past week, “We got a tote today full of Oreo cookies and things like that. We do have a dessert table every week. And we do give out bread. And I just told [assistant’s name], ‘These are the desserts this week.’ We are not hauling in all of these huge sheet cakes and

all of that stuff. That's ridiculous" (PA 2). Which was similarly echoed in another interviewee's response, "I probably would never provide soda or anything like that...I don't - to me, I always look at the things that are a necessity, and soda is not a necessity" (PA 8).

Some agencies that received sweet or sugary items (e.g., day-old bakery items, sugary cereals) through donations reported feeling guilty or their perception that the agency directors needed to let their donors and clients know that the agency did not spend their limited budget on unhealthy items. These agencies tended to be more health-conscious and recognize from their clients' feedback and general nutrition knowledge that sugary items are not the clients' main importance. While this sentiment was not common among all agencies, one agency believed that if they provided sugary and sweet foods to their clients, then their clients might not spend their money on non-nutritious foods at a grocery or convenience stores, though this hope was not based upon conversations with clients about client purchasing habits.

Non-food needs

Nearly all agencies voiced their concerns about the increase in non-food needs and non-food requests from clients ranging from personal hygiene products, to household cleaners, to paper products. This is a pertinent gap in public and private assistance and the need continues to grow. While ACFB offers some personal hygiene and paper products, they are not available at no cost – those products are available through the co-op and available for ordering, which may or may not be within a PA financial abilities. As one interviewee remarked, "Even if a person is on food stamps, they cannot get [non-food items] and I think that is something that needs to be dealt with in another area...I noticed the laundry detergent - once there was a great big influx - [ACFB] had the [bleach-based cleaner], the [anti-microbial cleaning spray], for the first time my clients were saying, 'I'm going to get to clean my bathroom.' You know, [the clients] want to do better, but they just sometimes can't afford to do better. So, yes, [more non-

food items] would be helpful. And I noticed that some [cleaners and non-food items] seem to be coming. But with the budgetary limit, on our budget, it's so hard for us to say, 'Let's get the toilet paper' (PA 1).

Other agencies remarked on how if clients spend their money on cleaning supplies and non-food items, then they use food pantries as a means to receive food assistance; however, some clients may receive SNAP benefits and spend their SNAP and disposable income on food, then the client might utilize an assistance center in the hope of finding diapers, cleaning products, or other household items, like toilet paper, that cannot be purchased with SNAP benefits. Another interviewee touched on their agency's need for non-food items from ACFB, "You ask what I need, and it's the hygiene items. When you give toilet paper and [the clients] tear up, it's real heartwarming to see that, it makes you remember. I'd never be able to live without toilet paper, you know, you can't buy those with food stamps" (PA 9).

One interviewee remarked on her commitment to providing school supplies for the children of needy families in her county, "I just love doing the school supplies and I love getting kids off to the right start and getting them excited about it. Any positive thing you can put around school for kids, you know. I've done it every year, the first year we did, believe it or not, we did 300 kids" (PA 8).

Client feedback and provider-receiver communication

Four interviewed agencies used formal, documented or oral modes of determining client preferences: two agencies used verbal discussion in the food decision process for their co-ops, while two other agencies used a paper form for clients to choose their food preferences and write down food items the clients would like to see and receive more often. This process was reported by one interviewee, "We give folks a choice when they come in, so we give them that freedom to choose what they need...we have that opportunity to speak with them and if

they don't have something, if we give them something they don't like, they can ask for something else...we also have a line, couple of lines, on the list that they can put other items they would like us to have, they fill out different lists every time they come in” (PA 7).

The remaining agencies used informal client-provider conversations to gauge client preferences and needs, along with learning about the clients’ capabilities to prepare items (i.e., kitchen equipment and time), and if the previous visit’s items were in good, eatable condition.

The informal feedback mechanisms generally aligned with the following process as described by one interviewee, “Yes and no, we don't have an official way, but I have people come in every day and say, ‘I don't need any more peanut butter’, or ‘I need peanut butter’. And yes, I usually ask, ‘Do you have any special needs or is there anything you really like?’ And I'll see if I got it. And I ask if they're diabetics, of course, I ask if anyone in the home is diabetic, or if there's children, what the ages of children are so I can kind of cater to that, so informally, yes, not formally” (PA 9).

3.6 Discussion, Limitations, and Conclusions

3.6.1 Discussion. The purpose of this study was to assess the nutritional value of food orders placed by ACFB’s partner organizations on eHarvest.org prior to and following the May 2014 CHOP implementation and to understand PA food ordering process, PA perceptions of clients nutritional needs, and perceived client food preferences. Thus, this study provides current information on food bank PA quantitative purchasing habits and exploratory research on a sample of 9 PAs in the ACFB network.

While total ordered pounds of food increased from Time 1 to Time 2, the greatest increase in CHOP groups occurred in CHOP 1. Additionally, notable increases were measured in food subgroups, such as Meals/Entrees/Soups, Meat/Fish/Poultry, Canned/Frozen Fruits and

Vegetables, and 100% Juices. These increases can be compared to similar PA ordering preferences described during the in-depth interviews. The interviews give context to PA purchasing motivations and provider beliefs, such as financial constraints, food storage limitations, and personal relationships with PA clients and their communities.

Literature on food bank partner agencies and food pantry clients is not extensive, and much is dated, from specific regions of the United States or Canada, and may not focus on client food preferences. Additionally, an evaluation of CHOP has not been previously published. While CHOP was designed to aid food banks in their food procurement and acquisition process, ACFB implemented CHOP initially as a nutrition education tool for their PA to use during their food ordering process.

This study is different in design to previous studies that have focused on implementing a nutrition standard at a food bank, such as restricting donations to “no candy, no soda” at the Food Bank of Central New York, or offering pantry clients a healthier menu of food items in Connecticut.^{16,17} This study is mostly exploratory in PA response to a subtle nutrition tool. Although, based on previous literature of more robust nutrition guidelines and standards at food banks, it is hypothesized that if ACFB did implement a strong nutrition policy geared towards procuring healthier food – fresh and shelf-stable – food pantries and food insecure clients would eat healthier foods, perceive themselves to be more food secure, and decrease food waste.¹⁶⁻²⁰

Previous literature has reported that having a nutrition policy is a controversial issue among food assistance agencies because many food banks and donors are still of the thought that any food is better than no food.^{14,16,20} At the food bank level, CHOP is useful for comparing similar food groups and food items; however, there are some nutritional concerns with how CHOP categorizes some food items. For example, CHOP ranks 100% fruit juices “1”, while there is contention among the American College of Nutrition and the Academy of

Nutrition and Dietetics on the healthfulness of 100% juice in regards to high levels of sugar and absence of fiber.²¹

Most agencies – who were aware of CHOP – agreed that knowing that there is a range of food available (CHOP 1, 2, 3) is helpful in making the right choice for their agency, whether that choice is grounded in nutritional value, cost, or shelf-stability. Data from this study also suggest that more information regarding nutrition, healthy recipes, and diabetic-friendly food items provided by ACFB would be well-received by the agencies that are interested in meeting the nutritional needs (rather than simply food needs) of their clients. Moreover, data from this study could potentially inform ACFB on their food acquiring process and meeting the preferences of the food insecure of Atlanta and Northwest Georgia.

3.6.2 Limitations. Currently, with this study, data has been collected on nine PAs' perceived needs of their clients. More research and information is greatly needed on actual client preference data and PA capacities in meeting those needs. This could be done by expanding the current study to include more than nine PAs and also to interview and/or survey clients of food assistance organizations in Atlanta and Northwest Georgia.

Furthermore, in terms of the data pertaining to the quantitative arm: not all items (food and non-food) received a CHOP ranking during both time periods. This left a gap in about 10% of ordered items due to not knowing the associated CHOP nutritional ranking and this 10% was not included in analyses. Moreover, the same food items are not available every week through eHarvest.org or ACFB Grocery and most of the inventory is dependent upon donations or subsidized foods, which may influence how PAs order from week to week or month to month. Additionally, this study took place during the summer months, which may have influenced PA ordering and ACFB and PA site storage abilities of fresh produce, which may explain why pounds of produce decreased during the study period. Lastly, some agencies were

not aware of CHOP or misunderstood the ranking system, which may have influenced orders.

3.6.3 Conclusions. Because the face of food insecurity in the United States is changing and the greatest needs are for nutritionally adequate foods, future research can inform ACFB on their nutrition-related policies and if ACFB decides to take a firm stance on the quality of food that is purchased and accepted from donations. CHOP seems to be a step in the right direction and should be commended, though monitoring inventory and PA ordering habits has little utility without targeted nutrition guidelines and plan for reform.

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Tables and Figures

Table 1. ACFB partner agencies' demographics.

	N	Percent
Total	574	100
Included in analysis	402	70.03
Counties	29	100
Rural	12	2.99
Urban	390	97.01

Table 2. Overview of CHOP Availability on eHarvest.

	n	Percent
Total Items Available	108.93	100.00
Items with CHOP Score	97.52	89.73
Items missing CHOP Score	11.41	10.27
CHOP 1	46.38	47.56
CHOP 2	17.62	18.07
$\Sigma(\text{CHOP1}+\text{CHOP2})$	64.00	65.63
CHOP 3	19.10	19.59
Not Rated	3.22	3.30
Minimal Contribution	5.73	5.88
Not Food	5.46	5.60

Table 3. Overview of Partner Agencies' eHarvest orders by CHOP Food Category From Time 1 to Time 2.

	Time 1: April 1 - May 10							Time 2: May 11 - June 20						
	Total CHOP (lbs)	CHOP1 (lbs)	%	CHOP2 (lbs)	%	CHOP3 (lbs)	%	Total CHOP (lbs)	CHOP1 (lbs)	%	CHOP2 (lbs)	%	CHOP3 (lbs)	%
Overall	1,473,596	690,178	46.84	357,781	24.28	425,637	28.88	1,953,836	980,956	50.21	436,723	22.35	536,157	27.44
Food Category														
<i>F02-Baby Food/Formula</i>	9,078	9,078	100.00	0	0.00	0	0.00	5,744	5,744	100.00	0	0.00	0	0.00
<i>F03-Beverages</i>	15,848	9,520	60.07	0	0.00	6,328	39.93	4,018	0	0.00	0	0.00	4,018	100.00
<i>F04-Bread & Bakery</i>	14,135	0	0.00	13,991	98.98	144	1.02	27,683	0	0.00	22,565	81.51	5,118	18.49
<i>F05-Cereal</i>	52,726	52,480	99.53	246	0.47	0	0.00	59,701	59,701	100	0	0	0	0.00
<i>F06-Meals/Entrees/Soups</i>	161,626	26,258	16.25	61,046	37.77	74,322	45.98	250,272	61,653	24.63	70,553	28.19	118,066	47.18
<i>F07-Dairy Products</i>	46,575	44,278	95.07	108	0.23	2,189	4.70	49,463	43,323	87.59	0	0.00	6,140	12.41
<i>F08-Desserts*</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>F09-Dressings*</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>F10-Fruits (Canned/Frozen)</i>	202,017	30,854	15.27	35,393	17.52	135,770	67.21	209,266	34,941	16.70	58,885	28.14	115,440	55.16
<i>F11-Grains</i>	31,280	31,280	100.00	0	0.00	0	0.00	93,904	93,904	100.00	0	0.00	0	0.00
<i>F14-Juices</i>	77,717	55,584	71.52	11,818	15.21	10,315	13.27	161,234	146,936	91.13	12,950	8.03	1,348	0.84
<i>F15-Meat/Fish/Poultry</i>	186,191	23,206	12.46	64,957	34.89	98,028	52.65	414,630	146,742	35.39	32,311	7.79	235,577	56.82
<i>F18-Nutritional Aids</i>	10,864	10,864	100.00	0	0.00	0	0.00	30,456	30,456	100.00	0	0.00	0	0.00
<i>F21-Pasta</i>	70,181	45,296	64.54	24,885	35.46	0	0.00	67,585	42,316	62.61	25,269	37.39	0	0.00
<i>F23-Non-meat protein</i>	98,350	98,350	100.00	0	0.00	0	0.00	98,627	98,627	100.00	0	0.00	0	0.00
<i>F24-Rice</i>	49,432	36,407	73.65	4,850	9.81	8,175	16.54	67,662	56,387	83.34	1,775	2.62	9,500	14.04
<i>F25-Snack foods/cookies</i>	34,992	6,740	19.26	26,031	74.39	2,221	6.35	9,991	2,221	22.23	368	3.68	7,402	74.09
<i>F26-Condiments</i>	11,850	1,300	10.97	6,500	54.85	4,050	34.18	5,562	2,912	52.36	2,470	44.41	180	3.24
<i>F27-Vegetables (Canned/Frozen)</i>	309,879	115,607	37.31	133,987	43.24	60,285	19.45	381,862	138,917	36.38	209,577	54.88	33,368	8.74
<i>F28-Produce</i>	93,076	93,076	100.00	0	0.00	0	0.00	16,176	16,176	100.00	0	0.00	0	0.00
<i>Grocery Produce (Grocery Pick-up)**</i>	380,185	380,185	100.00	0	0.00	0	0.00	343,473	343,473	100	0	0.00	0	0.00

*No data available

** Grocery pick-ups are not ordered through eHarvest

Table 5. Interviewed Agencies' Demographics

	n
Total	9
<i>Rural</i>	1
<i>Urban</i>	8
<i>Secular</i>	2
<i>Faith-based</i>	7
<i>Paid Food Director</i>	5

Chapter 4: Conclusions and Recommendations

Conclusion

Literature on food bank partner agencies and food pantry clients is not extensive, and much is dated, from specific regions of the United States or Canada, and may not focus on client food preferences. Additionally, an evaluation of CHOP has not been previously published. While CHOP was designed to aid food banks in their food procurement and acquisition process, ACFB implemented CHOP initially as a nutrition education tool for their PA to use during their food ordering process.

This study is different in design to previous studies that have focused on implementing a nutrition standard at a food bank, such as restricting donations to “no candy, no soda” at the Food Bank of Central New York, or offering pantry clients a healthier menu of food items in Connecticut.^{1,2} This study is mostly exploratory in PA response to a subtle nutrition tool. Although, based on previous literature of more robust nutrition guidelines and standards at food banks, it is hypothesized that if ACFB did implement a strong nutrition policy geared towards procuring healthier food – fresh and shelf-stable – food pantries and food insecure clients would eat healthier foods, perceive themselves to be more food secure, and decrease food waste.¹⁻⁵

Previous literature has reported that having a nutrition policy is a controversial issue among food assistance agencies because many food banks and donors are still of the thought that any food is better than no food.^{1,5,6} This may explain why ACFB has not firmly implemented a nutrition standard for procuring food and receiving food donations. Additionally, at the food bank level CHOP is useful for comparing similar food groups and food items; however, there are some nutritional concerns with how CHOP categorizes some food items. For example, CHOP ranks 100% fruit juices “1”, while there is contention among the American College of Nutrition and the Academy of Nutrition and Dietetics on the healthfulness of 100% juice in regards to high

levels of sugar and absence of fiber.⁷

Most agencies – who were aware of CHOP – agreed that knowing that there is a range of food available (CHOP 1, 2, 3) is helpful in making the right choice for their agency, whether that choice is grounded in nutritional value, cost, or shelf-stability. Data from this study also suggest that more information regarding nutrition, healthy recipes, and diabetic-friendly food items provided by ACFB would be well-received by the agencies that are interested in meeting the nutritional needs (rather than simply food needs) of their clients. Moreover, data from this study could potentially inform ACFB on their food acquiring process and meeting the preferences of the food insecure of Atlanta and Northwest Georgia.

Limitations

Currently, with this study, data has been collected from nine PAs' perceived needs of their clients. More research and information is greatly needed on actual client preference data and PA capacities in meeting those needs. This could be done by expanding the current study to include more than nine PAs and also to interview and/or survey clients of food assistance organizations in Atlanta and Northwest Georgia.

Furthermore, in terms of the data pertaining to the quantitative arm: not all items (food and non-food) received a CHOP ranking during both time periods. This left a gap in about 10% of ordered items due to not knowing the associated CHOP nutritional ranking and this 10% was not included in analyses. Moreover, the same food items are not available every week through eHarvest.org or ACFB Grocery and most of the inventory is dependent upon donations or subsidized foods, which may influence how PAs order from week to week or month to month. Additionally, this study took place during the summer months, which may have influenced PA ordering and storage abilities of fresh produce, which may explain why pounds of produce

decreased during the study period. Lastly, some agencies were not aware of CHOP or misunderstood the ranking system, which may have influenced orders.

Recommendations

Because the face of food insecurity in the United States is changing and the greatest needs are for nutritionally adequate foods, I suggest the following recommendations: first, ACFB create nutrition-centered policies for the quality of food distributed to their PA and, seconds, ACFB should take a firm stance on the quality of food that they purchase for their agencies. CHOP seems to be a step in the right direction and should be commended, though monitoring inventory and PA ordering habits has little utility without targeted nutrition guidelines and plan for reform.

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Appendix 1: Sample eHarvest Shopping List

Product Category	Item#	Description	Pkg. Info	Storage	Qty Avail.	Price	Nutrition Measurement
Baking Products	SK02865	TEFAP bakery mix low fat	6/5 lb bags (U) (54cs)	DR	693	2.48	2
Beverages	001490	summer fruits flavored water e	12/33.8 oz bottles per cs	DR	229	2.24	3
Condiments	005007	Cheddar cheese sauce	6/6 lb 10 oz cans	DR	43	3.60	
	005048	Cheddar Cheese Sauce	6-6 lb. 10 oz. cans	DR	22	7.20	3
	01446	Kroger trad pasta sauce	12/24 oz jars (66cs)	DR	996	4.48	
	68339	Queso Cheese Sauce	6/6 lb 8 oz cans per cs	DR	432	3.52	3
	87557	Glazed Donut Frosting	8/16 oz cans per cs	DR	83	1.44	MC
	PP32109	Purch Jellied Cranberry Sauce	24/14oz cans	DR	633	4.00	3
	SK10000	TEFAP Vegetable Oil	9/48 oz bottles per cs	DR	874	4.48	MC
Cookies/Cracker	42056	Organic cinn graham crackers	12/14.4 oz pkgs	DR	2	2.08	
Dairy Products	061400	Vanilla soy milk	12/32 oz cartons per cs	DR	20	4.48	1
	101111	ORANGE CREAM MILK ENHANCER	12/48 ML PKGS PER CS	DR	754	0.16	MC
	68681	peel a pop vanilla grape	6/ 12.9 oz packs oer cs	FR	123	0.40	
Desserts	356530	Unsweetened Apple Sauce	12/24 oz bottles per cs	DR	623	4.16	2
Fruits/Vegtbls	44158	Organic Sliced Beets	24/15 oz cans per cs	DR	105	4.00	
	75500	Diced Tomatoes	12/28 oz cans	DR	845	3.84	
	80235	Kroger cut green beans	24/14.5 oz cans per case (85)	DR	1940	4.16	3
	PP53282	Purch Stewed Tomatoes	6/28oz cans (160cs)	DR	3397	0.96	1
	SK02352	TEFAP Tomato Sauce	24-15 oz. cans {102 cs.plt.}	DR	974	4.16	1
Juices	SK09422	TEFAP grape juice	8/64 oz bottles (60cs)	DR	7	0.00	2
	SK09423	TEFAP Orange Juice	8/64 oz bottles (60cs)	DR	587	1.48	2
	SK12071	TEFAP apple juice w/ vitamin C	8/64 oz bottles (60cs)	DR	271	3.04	1
	SK12088	TEFAP Cranberry Apple juice	8/64 oz bottles (50cs)	DR	1168	3.04	2
	SK66707	TEFAP Apple Cherry Juice	8/64 oz units (50/60cs)	DR	788	3.04	1
Meats/Fish/Poul	SK00988	TEFAP Chicken Leg quarters	4/10 lbs pkgs (50cs)	FR	3733	3.36	3

Protein	028300	Corn Flavor Roasted Peanuts	8/32-0.81 oz bags	DR	33	2.56	2
	SK01011	TEFAP peanut butter	12-18 oz. jars (120cs)	DR	20	2.56	3
Rice/Pasta/Grns	040003	Spaghetti	30/1 lb (U)	DR	105	5.12	
	60788	Organic Long Grain Rice	12/2 LB pkg	DR	6	3.84	1
	73573	Rotini Pasta	1/20 lb box per cs	DR	144	3.36	1
	SK00008	TEFAP Spaghetti Pasta	20/16 oz boxes per cs (U)	DR	2228	3.52	2
Snacks	001831	Pumpkin Spice Mallows	16/8 oz bags per cs	DR	57	1.60	
	36855	Werther's Caramel Popcorn	12/1.5 oz bags	DR	2412	0.32	
	488040	Habanero Chex Mix	12/8 oz bags per cs	DR	1025	0.48	
	48805	Sweet & Spicy Chex Mix	12/8 oz bags per cs	DR	374	1.28	3
Soups/Stews	SK04192	TEFAP Cream Of Mushroom Soup	12/22 oz pkgs per cs (90cs)	DR	4714	1.52	3
	SK04193	TEFAP Cream of Chicken Soup	12/22 oz pkgs per cs (105cs)	DR	2592	3.04	3
Co-op	CP00010	Regal Natural Brown Rice	24/1 lb bags (Co-Op)	DR	1	11.00	1
	CP00034	Peanut Butter, Creamy	12/18 oz jars (Co-Op)	DR	100	15.00	1
	CP19904	Borden Skim Milk, Shelf Stable	12/32oz Units (Co-Op)	DR	298	14.04	1
	CP222511	All Star Fabric Softener	4/1gal (Co-Op)	DR	121	8.40	NF
	CP22265	2x Concentr Laundry Detergent	8/50oz (45cs/plt)	DR	61	8.96	NF
	CP23694	Borden 1% Kid's Milk Boxes	27/8 oz Milk Boxes (Co-Op)	DR	235	11.70	1
	CP2416	Pampa Peach Slices in LS	12/15cs (187 cs)	DR	232	8.45	3
	CP248	Green Heritage Bathroom Tissue	96 rolls/case(15cs) (Co-Op)	DR	74	24.96	NF
	CP49022	Gentle Bar Soap	48/4oz (Co-Op) 180cs	DR	197	14.00	NF
	CP72273	Hospitality Toasted Oats O's	12/14 oz boxes (co-op)	DR	180	17.70	1
	CP72940	Spaghetti Sauce Low Sodium	24/15 oz cans (COOP)	DR	649	12.22	2
	CP80102	West Star Pinto Beans, Dry	24/1 lb bags (Co-Op)	DR	4	17.75	1
	CP88120	Macaroni & Cheese Dinners	24/7.25 oz pkgs (Co-Op)	DR	408	9.94	2
	CP90010	Southgate Red Beans and Rice	12/15 oz cans (192cs)	DR	786	9.96	