

NUTRITION EDUCATION PRACTICES ARE ASSOCIATED WITH
SELECTED OPERATIONAL CHARACTERISTICS IN A SAMPLE OF
NORTHWEST NORTH CAROLINA FOOD PANTRIES

A Thesis
By
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Abstract

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Introduction: According to the United States Department of Agriculture (USDA), 26% of food insecure households used a food pantry on a regular basis in 2017. Food pantries are typically private organizations that provide emergency food access to low-income, food-insecure clients. A substantial number of individuals and families served by food pantries are impacted by chronic disease. While nutrition education is important in preventing and treating chronic disease, little is known regarding nutrition education services provided by food pantries.

Methods: This survey research was conducted among 231 food pantries located in the 18-county service area of the Second Harvest Food Bank of Northwest North Carolina. Stratified random sampling was used to identify pantries for survey distribution. Completed surveys were obtained from 59 pantries (26% response rate). Each of the 18 counties was represented by at least one survey. Annual food budget, population size as indicated by number of households served, rural-urban continuum code (RUCC), and fresh vegetable

availability were compared to selected nutrition education indicators using bivariate correlation and linear regression tests.

Results: There were significant positive associations between annual food budget and provision of written nutrition education materials, number of volunteer hours in full-time equivalents (FTEs), and combined number of hours of volunteer and paid staff in FTEs ($p < 0.05$, $p < 0.01$, $p < 0.01$ respectively). Significant associations were found between the Rural Urban Continuum Code of each pantry and provision of nutrition classes ($p < 0.05$). Fresh vegetable availability was associated with the use of written nutrition guidelines such as the Dietary Guidelines for Americans ($p < 0.01$), and the presence of a nutrition professional was associated with the number of days per week the pantry provides services ($p < 0.05$).

Conclusions: This research suggests that operational characteristics such as food budget, staff availability, rurality/urbanity, the use of written nutrition guidelines, and the number of days open per week may impact the type and availability of nutrition education resources offered to clients by food pantries.

Keywords: Food pantry, food bank, food insecurity

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Dedication

This thesis is dedicated to my family and friends. Their endless love and support mean the world to me.

I also dedicate this thesis to my four younger siblings; Sophia, Sasha, Stella, and Simon. The love and appreciation I have for them is infinite. They inspire me to be the best version of myself and to always work towards creating a better future for them and the next generations to come.

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Foreword

Chapter 2 of this thesis is prepared for submission to *Public Health Nutrition*, a peer-reviewed journal published by Cambridge University Press; it has been formatted according to the style guide for that journal.

CHAPTER 1: INTRODUCTION

According to the United States Department of Agriculture (USDA), 26% of food insecure households used a food pantry on a regular basis in 2017.¹ Food pantries, also known as food resource centers (FRCs) are local, non-governmental, non-profit organizations that have been organized by a variety of groups throughout the nation to aid those who cannot afford and/or access food.¹ Most FRCs re-distribute food that has been donated by individuals, grocery stores, and restaurants.¹ As a result, the food quality may be low in terms of nutrient density per calorie provided.²

Food pantries serve communities that have high rates of chronic nutrition-related diseases.³ In 2019, Wetherill et al. found that among a sample of food pantry clients, 72.9% were overweight or obese, 36% reported hypertension, and 8.5% reported a diabetes diagnosis.³ Nutrition education may benefit food pantry clients by providing them with tools to make healthier choices in their diet and reduce their risk for chronic diseases.⁴

Access to nutrition education may be difficult for typical food pantry populations. A lack of nutrition education may contribute to high rates of chronic diseases, since major chronic diseases including hypertension, diabetes, and obesity are highly associated with individuals' nutrition status and habitual nutrition practices.⁴ Barone analyzed nutrition education needs and perceived barriers to nutrition education within food pantries.⁵ The most common barriers included lack of personnel with nutrition expertise, and lack of necessary funding. Even though there were multiple barriers, Barone found that a majority of the food pantry coordinators/directors expressed a desire to provide nutrition education.⁵

Wetherill et al. surveyed 100 food pantries to describe, among other characteristics, the readiness of the pantries to provide nutrition education for chronic disease prevention and

management.³ The survey assessed current nutrition-related practices, personnel perceptions of the value of nutrition education, and personnel perceptions of clients' attitudes toward nutrition education. Wetherill et al. also addressed the availability and adequacy of healthier food choices within the pantries. The investigators found that 58.9% of personnel reported their perception that clients were unaware of the health risks associated with poor nutrition, and 63.1% thought that clients would be uninterested in changing their eating habits. However, 80.5% of personnel agreed that the majority of clients would select fruits and vegetables if they were offered at the food pantry.³

Food offerings provided by food pantries may influence clients' perceptions, knowledge, and choices surrounding health-promoting foods. In 2018, Nikolaus et al. developed and analyzed a Nutrition Environment Food Pantry Assessment Tool (NEFPAT).⁶ This tool was used to assess the consumer nutrition environment of food pantries. The investigators identified six best practices for promoting healthful foods in food pantries, including implementation of client choice, encouragement of healthy foods, fruit and vegetable form diversity (i.e. canned, dried, frozen, fresh), fruit and vegetable type diversity, promoting other food resources, and accommodating all eating habits. Nutrition education can play a role in facilitating the implementation of all six best practices among food pantry clients. The investigators concluded that the NEFPAT was an effective tool that could be used to assess the consumer nutrition environment and provide baseline data and intervention strategies, including nutrition education to implement client choice and encourage healthful eating habits.⁶

In 2017, Byker conducted a systematic review of the nutritional quality of food distributed by food pantries.² The researcher found that a majority of foods provided were

nonperishable items like canned foods and packaged crackers, cookies, or chips. The nutritional quality of food distributed increased between 2006, 2010, and 2011, but in general the food items provided did not support a healthful diet.² Byker stated that nutrition professionals, by providing appropriate nutrition education and promoting healthful food supplies and environments in food pantries, have a key role to play in impacting client food choices that support health.

Food pantry clients that could benefit from nutrition education include those diagnosed with chronic diseases, including Type 2 diabetes. Unfortunately, Type 2 diabetes has become an epidemic in the US, especially for individuals of lower socioeconomic status.⁴ Many food pantries are making efforts to provide healthier food options, but this can be difficult when most of the food is donated.⁷ Hossley found that nutrition education is a crucial component in the treatment and management of Type 2 diabetes.⁸ Persons with Type 2 diabetes benefit from possessing skills to utilize food exchanges and carbohydrate counting in order to manage their disease state. If a person with diabetes must obtain resources for a significant number of their meals from a food pantry, then that person should be educated on the types of available foods most likely to support health goals. Informational handouts or brochures on diabetes management, along with diabetes-specific food bags or boxes, could be effective strategies for positively impacting diabetes outcomes. Targeted food boxes could be convenient and helpful for food pantry clients.⁸

Yao et al. studied the food insecurity - obesity paradox in relation to the use of food pantries.⁹ Food insecurity, poor nutrition, and increased risk for health problems have frequently been associated in the research literature. Foods provided in food pantries tend to be high in energy - especially in simple carbohydrates - and low in nutrients, thus increasing

risk for obesity and many other chronic diseases. Yao's study was designed to enhance food pantry clients' perceptions of consumption of whole grain foods and to promote self-efficacy in choosing and preparing foods rich in whole grains. During the study, food pantry clients were offered a sample of a whole-grain dish with a recipe card.⁹ Volunteers taught the clients how to prepare the dish and showed them whole-grain options within the pantry. As a result of the educational intervention, 78% of the study participants reported that their families were trying to increase their whole-grain food consumption.⁹ Hands-on nutrition interventions may be an effective educational option for food pantries to help inspire their clients to eat more healthful foods.^{9,5}

In 2015, Muchiri, Gericke, and Rheeder conducted a randomized controlled trial among a group of resource-limited adults with Type 2 diabetes in South Africa.⁴ The control group received written nutrition education materials and the intervention group received the same written materials and participated in an eight-week nutrition education program. The education sessions included group meetings, hands-on activities, and presentations on diabetes management. As a result, mean glycosylated hemoglobin values and starchy-food intake among intervention participants decreased in comparison to the control group, although both groups saw benefits. The researchers concluded that nutrition education utilizing group settings and hands-on activities may result in more robust benefits than using written materials alone.^{4,5}

In 2018, Thompson et al. used a survey developed at the University of Oklahoma and descriptive statistics to assess food pantry capabilities and design resource maps as part of a pilot study.¹⁰ This study was completed in collaboration with the Second Harvest Food Bank of Northwest North Carolina (SHFB NWNC) and the U.S. Department of Agriculture,

Southeast Regional Office Food and Nutrition Service leadership team (SERO USDA FNS). This study addressed the question: “What is the capability of food pantries to deliver services to specific geographic regions that address root causes of hunger and support nutrition needs and self-efficacy of the population served?”. The researchers sought to identify criteria to develop a Food Pantry Capability Index (FPCI) to quantify the ability of food pantries to carry out every day operations and tasks, and to allow food banks to use the FPCI to work with constituent food pantries to optimize resources and enhance effectiveness.^{3,10} This study used a cross-sectional survey design. While this was a pilot study with a small sample size of 7 food pantries, the results suggested that utilization of nutrition policies and the provision of nutrition education may be important measures of food pantry capability.^{3,10} Thompson et al. provided the template for the research methods used in this thesis research.

The purpose of the proposed study was to identify what nutrition education resources are available, to describe the types of nutrition interventions used, and to initiate the process of defining best practices for nutrition education based on data analysis among a sample of food pantries located with the 18-county service area of the Second Harvest Food Bank of Northwest North Carolina. In conducting the research, the investigators established the following hypotheses to be evaluated via statistical analysis:

1. The presence of nutrition education offerings (including Healthy Food Bank Hub resources, dietary guidelines, nutrition education materials, interactive nutrition workshops, or nutrition professionals) in food pantries is associated with the annual budgets of the food pantries
2. The presence of nutrition education offerings (including Healthy Food Bank Hub resources, dietary guidelines, nutrition education materials, interactive nutrition

workshops, or nutrition professionals) in food pantries is associated with the increasing size of the client population served.

3. The presence of nutrition education offerings (including Healthy Food Bank Hub resources, dietary guidelines, nutrition education materials, interactive nutrition workshops, or nutrition professionals) in food pantries is associated with the degree of rurality or urbanity of food pantries.

4. The presence of nutrition education offerings (including Healthy Food Bank Hub resources, dietary guidelines, nutrition education materials, interactive nutrition workshops, or nutrition professionals) in food pantries is associated with consistent fresh fruit and vegetable availability in food pantries.

To conduct the research, a 165-question survey developed and validated by researchers at the University of Oklahoma was used by permission.³ The faculty investigator for this study was trained in the use of the survey by the University of Oklahoma researchers. During the data gathering phase of the study, the survey was electronically through Qualtrics, over the phone, and in person. The survey consists of eleven parts, including 1) organizational information, 2) structure, governance, and staffing, 3) facilities and operations, 4) technology, 5) food procurement, inventory, and ordering, 6) dry storage, cold storage, and transportation, 7) funding and financing, 8) additional complementary services and assistance related to health services or skills for self-sufficiency, 9) data collection and planning, 10) nutrition practices, and 11) tobacco policies and referrals.³ The nutrition practices section has twelve questions. The survey is focused on information about pantry operations and does not collect demographic data or other data on participants other

than the usual number of individuals and households served by the pantry. The survey is found in Appendix A. Questions # 10.1 – 10.12 were analyzed for this study.

Nutrition education provides knowledge that is a key component of living a healthful lifestyle and preventing chronic disease. Disease-related nutrition knowledge is crucial for those managing chronic diseases. Food pantries provide food resources for many low-income individuals and families who are at heightened risk for chronic disease. If clients were provided comprehensive nutrition education at food pantries and food banks, then they would have an increased opportunity to make healthier choices for their specific disease states. Comprehensive nutrition education includes instruction in basic cooking skills, resources to promote healthy eating on a budget, and tailored education for specific disease states. Nutrition education can be conducted in group settings or one-on-one with a trained nutrition professional and may reduce the prevalence of chronic diseases such as diabetes, cardiovascular disease, and obesity among low-income, target populations utilizing food pantry services.⁴ Nutrition education initiatives may help to build the evidence base supporting the inclusion of such education in usual food pantry processes.

CHAPTER 2: ARTICLE

NUTRITION EDUCATION PRACTICES ARE ASSOCIATED WITH SELECTED OPERATIONAL CHARACTERISTICS IN A SAMPLE OF NORTHWEST NORTH CAROLINA FOOD PANTRIES

ABSTRACT

Introduction: According to the United States Department of Agriculture (USDA), 26% of food insecure households used a food pantry on a regular basis in 2017. Food pantries are typically private organizations that provide emergency food access to low-income, food-insecure clients. A substantial number of individuals and families served by food pantries are impacted by chronic disease. While nutrition education is important in preventing and treating chronic disease, little is known regarding nutrition education services provided by food pantries.

Methods: This survey research was conducted among 231 food pantries located in the 18-county service area of the Second Harvest Food Bank of Northwest North Carolina.

Stratified random sampling was used to identify pantries for survey distribution. Completed surveys were obtained from 59 pantries (26% response rate). Each of the 18 counties was represented by at least one survey. Annual food budget, population size as indicated by number of households served, rural-urban continuum code (RUCC), and fresh vegetable availability were compared to selected nutrition education indicators using bivariate correlation and linear regression tests.

Results: There were significant positive associations between annual food budget and provision of written nutrition education materials, number of volunteer hours in full-time equivalents (FTEs), and combined number of hours of volunteer and paid staff in FTEs ($p <$

0.05, $p < 0.01$, $p < 0.01$ respectively). Significant associations were found between the Rural Urban Continuum Code of each pantry and provision of nutrition classes ($p < 0.05$). Fresh vegetable availability was associated with the use of written nutrition guidelines such as the Dietary Guidelines for Americans ($p < 0.01$), and the presence of a nutrition professional was associated with the number of days per week the pantry provides services ($p < 0.05$).

Conclusions: This research suggests that operational characteristics such as food budget, staff availability, rurality/urbanity, the use of written nutrition guidelines, and the number of days open per week may impact the type and availability of nutrition education resources offered to clients by food pantries.

Keywords: Food pantry, food bank, food insecurity

NUTRITION EDUCATION PRACTICES AND THEIR ASSOCIATIONS WITH SELECTED OPERATIONAL CHARACTERISTICS IN A SAMPLE OF NORTHWEST NORTH CAROLINA FOOD PANTRIES

A common definition of food insecurity is: “uncertain availability of nutritionally adequate and safe foods, or limited ability to acquire acceptable foods in socially acceptable ways.”⁹ According to the United States Department of Agriculture (USDA), 26% of food insecure households used a food pantry on a regular basis in 2017.¹ Food pantries, also known as food resource centers (FRCs) are local, non-governmental, non-profit organizations that have been organized by a variety of groups throughout the nation to provide emergency food resources to those who cannot afford and/or access food.¹ Food pantries may also facilitate client connections with public assistance programs including the Supplemental Nutrition Assistance Program (SNAP) and/or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and other necessary resources such as housing, employment, physical and mental health providers, and economic resources such as job training.²

Low-income, food-insecure clients are at increased risk for chronic diseases. A lack of nutrition education could contribute to high rates of chronic disease, and access to nutrition education may be difficult in low-income areas, including rural regions.⁵ Nutrition education may benefit food pantry clients by providing them with tools to make healthier dietary choices to prevent or manage chronic diseases.⁴

Barone et al., in 2016 analyzed perceived barriers and needs for nutrition education within food pantries and found that the most common barriers included lack of personnel with nutrition expertise to provide nutrition education, and lack of necessary funding. Even

though Barone et al. identified multiple barriers, the researchers found that a majority of the food pantry coordinators expressed a desire to provide nutrition education.^{10, 5}

In 2018, Nikolaus et al. developed and analyzed a Nutrition Environment Food Pantry Assessment Tool (NEFPAT).⁶ This tool is used to assess the consumer nutrition environment of food pantries. NEFPAT was developed and evaluated in five steps: 1) A literature review; 2) Pilot-testing the first draft of the tool; 3) Peer-review of the tool; 4) Assessment of interrater reliability; and 5), initial use of the completed tool within food pantry environments. Nikolaus et al. found that six practices promoted healthy dietary choices within food pantries. The six practices included: 1) increasing client choice; 2) encouraging healthy foods; 3) fruit and vegetable form diversity; 4), fruit and vegetable type diversity; 5) promoting other resources; and 6) accommodating a variety of eating habits. Overall, the authors of this study agreed that the NEFPAT is an effective tool that can be used to assess the consumer nutrition environment and provide baseline data and intervention strategies, including nutrition education to implement client choice and encourage healthful eating habits.⁶

In 2017, Simmet et al. conducted a systematic review on the nutritional quality of food provided in food pantries⁷. This review followed the reporting guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Included studies had to provide information on activities that provide food and resources through take-home boxes/bags or in combination with other services. Included studies also had to provide original data on the nutritional quality of the food they were distributing. The researchers found that more than half the food distributed consisted of nonperishable items like canned foods and packaged crackers, cookies, or chips. In general, the food items

provided did not support a healthful diet⁹. Simmet et al. suggest that nutrition education may contribute to increased overall quality of the food available in food pantries.⁷

In a 2013 study, Yao et al. examined the food insecurity - obesity paradox in relation to the use of food pantries.⁹ The study was designed to increase food pantry clients' consumption of whole grain foods, and self-efficacy in choosing and preparing foods rich in whole grains. The authors designed a food pantry intervention during which clients were offered a sample of a whole-grain dish with a recipe card.⁹ Volunteers taught the clients how to prepare the dish and helped them identify whole-grain options within the pantry. Post-intervention, 78% of the clients reported that their families were attempting to increase their whole-grain consumption.⁹ Barone et al. suggested that hands-on nutritional interventions may be an effective option for food pantries to promote healthful food choices.^{9,5}

In 2015, Muchiri et al. conducted a randomized controlled trial among low-income adults with Type 2 diabetes in South Africa. The control group received written nutrition education materials. The intervention group received identical nutrition education materials, along with eight weekly face-to-face nutrition education sessions provided over an eight-week period. The sessions included group meetings, hands-on activities, and presentations from experts on diabetes management. As a result, hemoglobin A1c ($p = 0.15$ to $p = 0.16$) and starchy-food intake ($p = 0.005$ to $p = 0.017$) decreased in the intervention group compared with the control group. Overall, nutrition education through handouts was beneficial, but providing education in group settings with hands-on activities appeared to result in more robust benefits.^{4,5}

In 2019, Wetherill et al. developed a 165-question survey aimed at assessing the operational characteristics of food pantries, including nutrition education practices.³ This study included 100 food pantries from rural and urban environments. The survey assessed current nutrition-related practices, personnel perceptions of whether nutrition education should be included in pantry programming, and interest of clients into nutrition-focused services. The survey also addressed the availability and adequacy of healthier foods within the food pantry. The study found that 58.9% of personnel believed that the clients were unaware of the health risks associated with poor nutrition and 63.1% thought that clients would be uninterested in changing their eating habits. However, 80.5% of personnel agreed that the majority of clients would select fruits and vegetables if they were offered at the food pantry.³ The investigators concluded that food pantries serve communities that have high rates of nutrition-related disease, so nutrition education and increased availability of fresh fruits and vegetables in food pantries could have a positive impact on the client population.³

In 2019, Thompson et al. used a survey developed at the University of Oklahoma and descriptive statistics to survey food pantries and design resource maps.¹⁰ This pilot study completed in partnership with the Second Harvest Food Bank of Northwest North Carolina (SHFB NWNC) surveyed the operational characteristics of seven local food pantries. The objectives of the study were to assess the operational capabilities of the sample pantries, to develop regional food pantry resource maps, and to complete the groundwork for developing a Food Pantry Capability Index tool (FPCI) to quantify the ability of food pantries to carry out everyday operations and tasks.³ The study was also intended to develop and refine the methodology for a larger study.³ The study demonstrated the feasibility of surveying food pantries to identify operational characteristics, including nutrition education practices. The

researchers also identified several criteria that may be used to quantify the operational capabilities of food pantries.

Although a small but growing body of literature has examined nutrition education in food pantries, little is known about the extent to which food pantries educate clients on the use of provided foods in order to maximize nutrient density. Most food resource centers redistribute food that has been donated by individuals, grocery stores, and restaurants.¹ As a result, the food quality may be low in terms of nutrient density per calories provided.² Appropriate nutrition education may promote the ability to identify and choose the best options available in a given food pantry.

Nutrition education may be especially crucial for individuals with chronic diseases that are common in low-income populations; these include Type 2 diabetes, cardiovascular disease, obesity, and irritable bowel syndrome. Unfortunately, food pantry clients do not always have access to a licensed dietitian for nutrition therapy, or adequate nutrition education regarding their individual conditions.² As a result, persons living with food insecurity and chronic disease lack the ability to engage in nutrition education which could ameliorate the effects of chronic disease. Evidence indicates that nutrition education may be a key component of chronic disease prevention and treatment and may alleviate food insecurity.² The purpose of this research was 1) to determine what proportion of participating food pantries offer nutrition education and what is the nature of any education provided, and 2) to examine associations among types of nutrition education provided and selected food pantry characteristics.

Methods

This study utilized a cross-sectional survey design to describe nutrition education practices in a sample of food pantries in northwest North Carolina. Information on food pantry operational characteristics and information on nutrition education practices were obtained using responses to the survey questionnaire. The study was deemed exempt from institutional IRB oversight as it was not considered human subjects research. The research was supported by an Appalachian State University Research Council grant, #000517.

Participating organizations

This study was conducted in partnership with the Second Harvest Food Bank of Northwestern North Carolina (SHFB NWNC). The food bank's service area encompasses 231 constituent food pantries and includes 18 northwest North Carolina counties: Alamance, Alleghany, Alexander, Caldwell, Davidson, Forsyth, Guilford, Iredell, Stokes, Wilkes, Forsyth, Caswell, Davie, Randolph, Rockingham, Watauga, Stokes, and Yadkin. SHFB NWNC assisted in facilitating contacts with food pantries.

Study survey

The 165-question survey was originally developed by researchers at the University of Oklahoma and was used by permission.³ The faculty investigator for this study was trained in the use of the survey by the University of Oklahoma researchers. The survey was administered via three methods at the preference of the food pantry respondent: 1) electronically through Qualtrics survey software; 2) by phone; and 3) in person.¹¹ The survey consists of eleven parts, including:

- 1) organizational information
- 2) structure and governance

- 3) paid and volunteer staffing
- 4) facilities and operations
- 5) use of technology
- 6) food procurement, inventory, and ordering
- 7) dry storage, cold storage, and food transportation
- 8) funding and financing
- 9) data collection and strategic planning
- 10) nutrition practices, including nutrition education practices
- 11) tobacco policies and referrals

The survey is focused on food pantry operations and did not collect demographic data or other data on participants other than the usual number of individuals and households served by the pantry. The survey is found in **Appendix A**. Questions # 10.1 – 10.12 were utilized for this study.

The investigators sought to obtain a minimum 20% response rate (at least 47 participating pantries) to the survey, with each county represented by at least one survey. The survey was provided to the individual or individuals in charge of the food pantry, whether that be the director, volunteer coordinator, pastor, or other designated person.

Study procedures

In order to alert their constituents to the coming survey, SHFB NWNC contacted the 231 food pantries served in their 18-county group prior to the initial survey distribution. All 231 pantries received the survey in one of four survey distributions, with each distribution determined by stratified random sampling. The distributions were planned in order to achieve the desired sample of $\geq 20\%$ of eligible pantries, and all four planned distributions

were required to attain the participation goal. Each distribution was sent through a group email using Qualtrics, although respondents could opt for a phone or in-person survey administration.

The group email included a general statement about the nature of the survey and the rationale for completing it. Contact information for the principal investigators was included in the emails in the event any of the participants had questions or technical issues regarding the survey. A link to the survey was included in the email so participants could access the survey quickly. Each distribution period lasted for five weeks. During each distribution, four weekly survey reminders were sent to participants via Qualtrics.

In order to assist food pantry directors in completing the survey, respondents with unfinished surveys were contacted during the second and third weeks of each survey distribution. Scripts were used to conduct these contacts. Trained graduate assistants followed up with respondents to assist them in completing the survey per the respondent's preference of using phone or scheduling an in-person visit.

Data Analysis

The statistical package for the social sciences (IBM SPSS Version 25) was used for data analysis.¹² Data were compiled, cleaned, and coded for analysis. Descriptive statistics were generated. Comparisons were made between selected operational characteristics and six pantry indicators: 1) annual food budget; 2) population size served as measured by number of unique households served per month; 3) the number of weekly volunteer hours, full-time/part-time staff hours, and combined volunteer and full-time/part-time staff hours in full-time equivalents (FTEs); 4) the rural-urban continuum code (RUCC) of the pantry's address; 5) the number of days per week the pantry is open for service; and 6) the usual level

of fresh vegetable availability.¹³ Each of the six indicators were compared to selected operational characteristics including the presence of written nutrition education materials, availability of nutrition education classes including cooking classes, presence of a pantry-specific written nutrition policy, presence of or consultation with nutrition professionals (registered dietitians or registered dietetic technicians) in regards to pantry nutrition practices, and use of the Healthy Foodbank Hub or other nutrition guidelines such as MyPlate. A bivariate correlation test and a linear regression test were performed for each comparison. The level of statistical significance was set at $p < 0.05$.

Results

Complete or nearly complete surveys were returned by 59 food pantries (26%). About 85% of pantries completed the online survey, while the remainder were completed with the assistance of trained graduate students by either phone or in-person visits. Descriptive statistics indicated large differences between some mean and median values due to the presence of several large pantries in the sample; for this reason, both mean and median values are reported. Selected descriptive statistics are found in **Table 1** and **Table 2**. Results of statistical comparisons are found in **Table 3**.

Discussion

This research suggests that in regards to food pantry operations, and particularly in regards to the provision of nutrition education, *resources matter*. More generous food budgets were associated with a greater likelihood that pantries would offer written nutrition education materials, nutrition education, and cooking classes. Higher food budgets were also associated with increased staffing, larger client populations, and a greater number of days open for service, thus providing additional resources and opportunities for nutrition

education. Number of days per week open was associated with increased availability of a nutrition professional to provide nutrition education or consultation.

The investigators chose to use each pantry's annual food budget as an indicator of operational capability in regard to the provision and integration of nutrition education into food pantry processes. The investigators reasoned that the food budget could have a closer alignment with nutrition matters than the overall operating budget, which often included funding for a variety of non-food-related initiatives. A business's budget dictates how much inventory, labor, and services can be provided to clients. If a business or food pantry has an inadequate budget, then it becomes difficult to access certain resources like transportation or education. Usually, a food pantry budget includes grants and donations.³ The overall food budget can vary depending on how many food donations are received and is pertinent to a food pantry's success and sustainability.

There was a significant association between the presence of nutrition education materials and the annual food budget among the responding food pantries. A more generous budget may indicate that a pantry has funds for purchasing nutrition education materials such as brochures, posters, handouts, and even interactive games and props. Less generous budgets may preclude the acquisition of such items.

There was a significant association between number of volunteer hours, in full-time equivalents (FTE), and annual food budget. Food budgets are associated with food inventory. If there is a large food inventory, then there is more food that needs to be delivered, packaged, organized, and distributed. Thus, there is a higher demand for labor. Food pantries usually rely heavily on volunteer staff. Increased food inventory means

increased volunteer staff hours. A similar significant association was observed between combined volunteer and paid full/part-time staff in FTEs and annual food budget.

There was a significant association between the number of days per week a pantry is open and the size of the client population. This relationship may have been found because the need and demand for food increases along with the population. There was a significant positive association between the presence of a nutrition professional and number of days open. This association may be due to the fact that if there are more opportunities for nutrition professionals to visit or work at a food pantry, then there is a greater likelihood that such persons will be present in the pantry. The number of days per week that a pantry is open for service may be a surrogate indicator of pantry resources in general. By increasing the number of days, the pantry is open to clients, the aforementioned opportunities for nutrition professionals may increase as well.

There was a significant association between a pantry's degree of rurality as indicated by the RUCC code and the provision of nutrition education classes including cooking classes. A possible reason for this association could be that food pantries located in urban locations have greater access to resources to support nutrition education classes. Rural pantries and their clients may be impacted by situations based in rurality, including transportation difficulties for clients, more challenging supply chain issues, and difficulty accessing qualified professionals to provide classes. This does not mean that all rural food pantries do not provide nutrition classes, but that urban food pantries are more likely to due to better access to resources.

About half of food pantries utilized, whether formally or informally, standard nutrition guidelines such as MyPlate, the Dietary Guidelines for Americans, and/or the North

Carolina Food Hub. Use of nutrition guidelines was associated with fresh vegetables being available “always” or “almost always”. This association may have been based on a greater awareness of best nutrition practices among clients and pantry personnel, greater interest by directors in promoting healthful nutrition. The majority of nutrition guidelines encourage the intake of whole foods, including fresh fruits and vegetables. If a food pantry accepts and/or purchases food based on an awareness of nutrition guidelines, they may be more likely to gravitate toward providing fresh fruits and vegetables. Nutritionally informed pantry staff may seek out community relationships, like local grocery stores and farmers markets, for the purpose of increasing their fruit and vegetable inventory.

Conclusions

This study found that the presence of nutrition education offerings in food pantries was associated with a variety of pantry indicators, including the annual food budget, the size of the population served, the availability of paid/volunteer staff, the degree of rurality/urbanity, the presence of a nutrition professional in the food pantry, and fresh fruit and vegetable availability.

The low-income, food-insecure populations served by food pantries are at increased risk for nutrition-related chronic diseases. Thus, efforts to increase food pantry capacity to provide nutrition education and healthful foods by focusing on optimization and development of current and future financial, human, and nutrition guidance resources are vital to improve health outcomes in pantry client populations. *Food banks are uniquely positioned to guide and promote capacity-building efforts among their constituent food pantries.* Resources matter, and the associations among pantry resource indicators and nutrition education practices suggest directions for effective nutrition initiatives.

Further research is needed to determine the effects of nutrition education within food pantries on chronic disease prevalence in client populations. Future efforts need to be directed towards food pantries to increase resourcing throughout the community and state. A study focused in the capabilities of food pantries to provide appropriate nutrition education to their populations may result in a greater understanding of current practices, and ultimately may lead to the provision of effective nutrition education for the prevention and amelioration of chronic disease within food pantry settings.

Tables

Table 1. Descriptive characteristics of a sample of food pantries from 18 northwest North Carolina food pantries (n = 59)

Pantry characteristic	Mean value (SD)	Median value
Time pantry has been in operation (in years)	12.90 (8.95)	10
Client population in number of unique households served (per month)	465.16 (650.02)	255
Amount of food distributed annually (in pounds) ¹	173,699.33 (209438.08)	72,000
Number of volunteer hours per week (in FTEs)	6.83 (16.67)	1.13
Number of combined full-time/part-time employee and volunteer hours per week (in FTEs)	1.61 (2.17)	0.75
Distance traveled by clients to reach the pantry (in miles)	7.78 (4.5)	5
Annual operating budget (in U.S. dollars)	176,609.63 (240718.9)	60,000
Annual food budget (in U.S. dollars)	78,235.22 (162660)	14,700
Number of days per week open for service	2.9 (1.69)	3

1. Based on (47%) of pantries; the remaining pantries measured used alternate measures, such as bags or boxes, to assess the amount of food distributed.

Table 2. Proportional descriptive characteristics of a sample of food pantries (n = 59) from 18 northwest North Carolina food pantries

Data Collected	Number of Pantries/Total	Percent
Provides written nutrition education materials	31/59	52.5%
Offers nutrition education classes, including cooking classes	14/59	23.7%
Respondent Role in pantry governance:		
Director	37/59	62.7%
Pastor	3/59	5.1%
Coordinator	6/59	10.2%
Manager	1/59	1.7%
Volunteer	3/59	5.1%
Founder/President	1/59	1.7%
Patient Navigator	1/59	1.7%
Mobile pantry utilized for some food distribution	4/59	6.8%
Non-food items offered when available	43/59	72.9%
Has a pantry-specific written nutrition policy	8/59	13.6%
Uses nutrition guidelines other than a pantry-specific policy	29/59	49.2%
Fresh vegetables “always” or “almost always” available	18/59	30.5%
Utilizes the services of a nutrition professional for nutrition guidance	13/59	22%
Is located in a county with a RUCC* ≥ 5	7/59	11.9%

**Rural-urban continuum codes (RUCCs) were developed by the United States Department of Agriculture to classify counties based on population size and adjacency to a metro area, with a code of “1” being most urban and “9” most rural.¹³

Table 3. Statistically significant associations among food pantry indicators and operational characteristics among a sample of food pantries (n = 59) located in an 18-county area of northwest North Carolina

Pantry Indicator	Operational characteristic	Level of significance	F-value
Annual food budget	Provides written nutrition education materials	$p = 0.023^*$	F(1,30) = 5.78
	Number of volunteer hours per week (in FTEs)	$p = 0.001^{**}$	F(1,23) = 14.33
	Number of combined full-time/part-time employee and volunteer hours per week (in FTEs)	$p = 0.001^{**}$	F(1,23) = 14.33
	Number of days per week open for service	$p = 0.026^*$	F(1,26) = 5.57
	Offers nutrition education classes, including cooking classes	$p = 0.055^a$	F(1,30) = 0.09
Client population in number of unique households served (per month)	Number of days per week open for service	$p = 0.013^*$	F(1,44) = 6.67
Number of days per week open for service	Utilizes the services of a nutrition professional for nutrition guidance	$p = 0.047^*$	F(1,36) = 4.21
Is located in a county with a RUCC ^b ≥ 5	Less likely to offer nutrition education classes, including cooking classes	$p = 0.015^*$	F(1,45) = 6.34
Fresh vegetables available “always/almost always” or “most of the time” available	Uses nutrition guidelines other than a pantry-specific policy	$p = 0.000^{***}$	F(1,31) = 18.82

* $p < .05$; ** $p < .01$; *** $p < .001$

^aMarginally significant

^bRural-urban continuum codes (RUCCs) were developed by the United States Department of Agriculture to classify counties based on population size and adjacency to a metro area, with a code of “1” being most urban and “9” most rural.¹³

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APPENDICES

Appendix A

Test Food Pantry Survey

Start of Block: Part I: Organizational Information

Q2 Appalachian State University, Beaver College of Health Sciences
Second Harvest Food Bank of NW NC
Margaret Barth, PhD, MPH
Kyle Thompson, DCN,RDN

Dear Organizational Representative:

We are inviting your participation on a survey that is part of a research study conducted by Appalachian State University (ASU) in collaboration with Second Harvest Food Bank of Northwest North Carolina. [Second Harvest Food Bank has sent a previous email notifying you of this survey.](#)

The purpose of this study is to assess the capacity of food pantries and food resource centers throughout North Carolina as it relates to their prioritization, ability, and readiness to deliver services that support the food and health needs of their clientele. **This information will allow Second Harvest Food Bank and the researchers to evaluate and identify successful strategies within food pantries and food resource centers. This information may be helpful to other food pantries in North Carolina, and potentially the nation.**

If your organization agrees to participate, you will answer a series of questions from a survey provided. The link to the online survey is provided in this email. The questions inquire about your organization's structure, facilities, technology, inventory, ordering, financing, services provided, data collection practices, and policies. By agreeing to participate, your organization also grants permission to SHFB NWNC to share your organization's past ordering history with the researchers. Your ordering history will be combined with your survey responses as part of the study. This survey should take about 60-90 minutes to complete.

Research studies involve only those organizations who choose to participate. You will be asked to answer questions on a survey on behalf of your food pantry/grocery assistance program. While the name of your organization will be included on the survey, no personal information will be collected. There is no benefit or risk to you or your organization for participating in this study. Taking part in this study will not cost you anything. In order to keep your answers confidential, your name will not appear on the survey and you will not be identifiable by name in any reports or publications; however, we cannot guarantee absolute confidentiality.

Taking part in this survey is voluntary. Your organization may choose not to take part. Your status as a food bank partner agency will not be affected in any way by your choice to participate in the survey or not. In compensation for your organization's time you will receive a **\$20** credit toward a future food bank purchase.

If you have questions about this study, please contact the Principal Investigators, Dr. Margaret Barth at 828-262-2661 or Dr. Kyle Thompson at 828-262-2631.

Thank you,

By clicking "agree", you are agreeing to participate in this research study under the conditions described. You have not given up any of your legal rights or released any individual or entity from liability for negligence.

I agree to participate in this study on behalf of my organization:

Yes (1)

No (2)

Q3 Agency Name

Q4 Agency Address

Q5 Respondent Role in Organization:

Member, Board of Directors (1)

Food Pantry Program Director or Manager (2)

Pastor (3)

Executive Director (4)

Volunteer Coordinator (5)

Volunteer (6)

Other (7) _____

Q6 How many years has the food pantry/resource center been in operation? (Number of years)

Q7 What is your peer group size? (1,2,3,4 etc)

Q8 How many years has the food pantry/resource center partnered with SHFB NWNC? (Number in years)

Q9 Please give a monthly estimate of the number of unduplicated households served by your food pantry/resource center? (Number of unduplicated households)

Q10 What is your affiliated food bank?

- Second Harvest Food Bank NWNC (1)
- Other resource center (2)

Q11 How often do you communicate with a representative/staff from your affiliated food bank? (This could include phone calls, emails, ordering food, etc.)

- Daily (1)
 - Weekly (2)
 - A few times a month (3)
 - A few times a year (4)
 - Never (5)
-

Q12 What is the average distance, in miles, that clients travel to reach your food pantry?

Q13 Which cities or counties does your pantry serve?

End of Block: Part I: Organizational Information

Start of Block: Part 2: Structure/Governance/Staffing

Q14 In this organization, who has the decision making authority regarding food pantry policies and procedures, such as food selection and pantry procedures? (Select all that apply)

- Board of Directors (1)
 - Food Pantry Program Manager or Director (2)
 - Pastor (3)
 - Executive Director (4)
 - Volunteers (5)
 - Other (6) _____
-

Q15 In this organization, who manages the day-to-day pantry activities, such as client intake, food ordering, and food stocking? (Select all that apply)

- Board of Directors (1)
 - Food Pantry Program Manager or Director (2)
 - Pastor (3)
 - Executive Director (4)
 - Assistant Director (5)
 - Intake Counselor (6)
 - Warehouse Coordinator (7)
 - Operations Manager (8)
 - Volunteers (9)
 - Other (10) _____
-

Q16 Is this organization affiliated with a religious organization?

- Yes (1)
 - No (2)
-

Q17 If applicable, what is this organization's religious affiliation?

- Baptist (1)
 - Methodist (2)
 - Nondenominational Christian (3)
 - Catholic (4)
 - Pentecostal (5)
 - Churches of Christ (6)
 - Unitarian (7)
 - Jewish (8)
 - Muslim (9)
 - Ecumenical or Ministerial Alliance (10)
 - Other (11) _____
-

Q18 Is this organization a member/partner of the United Way?

Q19 If applicable, what year did the organization become a United Way partner agency?

Q20 Please provide the mission of your charitable feeding program. If your charitable feeding program does not have a separate mission from that of your organization, please provide your organization's mission statement:

Q21 Please indicate the total number of paid full-time staff in your organization.

Q22 Please indicate the number of Full-Time Equivalents (FTEs) for all full-time staff.

Note: 1 FTE= 40 hours per week. For example, if you have 2 full-time employees, one who works 40 hours per week (1 FTE) and another who works 32 hours per week (0.8 FTE), enter 1.8 FTE.

Q23 Please indicate the average number of volunteers working weekly in your organization.

Q24 Please indicate the number of Full-Time Equivalents (FTEs) for volunteers.

Note: 1 FTE= 40 hours per week. For example, if you have 2 volunteers, one who works 28 hours per week (0.7 FTE) and another who works 12 hours per week (0.3 FTE), enter 1.0 FTE.

End of Block: Part 2: Structure/Governance/Staffing

Start of Block: Part 3: Facilities and Operations

Q25 Is the facility your food pantry/resource center owned by the organization uses....?

- Owned by the organization (1)
 - Leased, month-to-month (2)
 - Leased, for a specified period time (3)
 - Other (4) _____
-

Q26 If leased for a specified period of time, please indicate how long:

Q27 Is the space available to your food pantry/resource center in your facility sufficient?

- Yes (1)
 - No (2)
-

Q28 Is your pantry/resource center open to provide food assistance to clients at least once per week?

- Yes (1)
 - No (2)
-

Q29 Monday

- Open (1)
- Closed (2)

Q30 Enter the time your pantry opens on Mondays (specify am or pm)

Q31 Enter the time your pantry closes on Mondays (specify am or pm)

Q32 Tuesday

Open (1)

Closed (2)

Q33 Enter the time your pantry opens on Tuesdays (specify am or pm)

Q34 Enter the time your pantry closes on Tuesdays (specify am or pm)

Q35 Wednesday

Open (1)

Closed (2)

Q36 Enter the time your pantry opens on Wednesday (specify am or pm)

Q37 Enter the time your pantry closes on Wednesday (specify am or pm)

Q38 Thursday

Open (1)

Closed (2)

Q39 Enter the time your pantry opens on Thursday (specify am or pm)

Q40 Enter the time your pantry closes on Thursday (specify am or pm)

Q41 Friday

Open (1)

Closed (2)

Q42 Enter the time your pantry opens on Friday (specify am or pm)

Q43 Enter the time your pantry closes on Friday (specify am or pm)

Q44 Saturday

Open (1)

Closed (2)

Q45 Enter the time your pantry opens on Saturday (specify am or pm)

Q46 Enter the time your pantry closes on Saturday (specify am or pm)

Q47 Sunday

Open (1)

Closed (2)

Q48 Enter the time your pantry opens on Sunday (specify am or pm)

Q49 Enter the time your pantry closes on Sunday (specify am or pm)

Q50 In the space below, please describe any special exceptions to the times reported above. For example, if your organization is open on a particular day based on the week of the month, please specify in your response. For example: 3rd Saturday of the month 9 am - Noon; 2nd and 4th Thursdays of the month 9 am - 3 pm.

Q51 Some pantries are called "client choice" because they allow clients to select some or all foods or food groups they can take, as opposed to traditional pantries where groceries are pre-packaged in boxes or bags? How could you best describe your food pantry/resource center program?

- Clients receive a pre-determined selection of groceries (traditional) (1)
- Clients receive a selection of groceries based on reported preferences (semi-choice) (2)
- Clients are allowed to make their own grocery selections (full choice) (3)

Q52 How long has your pantry been using the "client choice" distribution model?

- Less than one year (1)
- 1-3 years (2)
- 4-5 years (3)
- 6-10 years (4)
- 10+ years (5)
- Don't know (6)

End of Block: Part 3: Facilities and Operations

Start of Block: Part 4: Technology

Q53 Does your food pantry have Internet access?

- Yes (1)
 - No (2)
-

Q54 Is Wifi internet available?

- Yes (1)
 - No (2)
-

Q55 Who is allowed to use the organization's Wifi? (Select all that apply)

- Employees (1)
 - Volunteers (2)
 - Clients (3)
 - Other Authorized Guests (4)
-

Q56 Does your organization use computers in any part of its operations?

- Yes (1)
 - No (2)
-

Q57 What types of computers are used? (Select all that apply)

- Desktop Computers (1)
 - Laptops (2)
 - iPads or other tablet devices (3)
-

Q58 How does your food pantry use computers as part of its operations? (Select all that apply)

- Keep track of inventory (1)
- Order food from the food bank (2)
- Order food from other sources, not including the food bank (3)
- Collecting client demographic data (4)
- Collecting client service data (e.g., date of each visit) (5)
- Online newsletters (6)
- Email communication (7)
- Volunteer sign in and tracking (8)
- Tracking food received from retail program (9)
- Food bank reporting (10)
- Other (11) _____

End of Block: Part 4: Technology

Start of Block: Part 5: Food Procurement/Inventory/Ordering

Q59

When your food pantry was open in the last month, how often was each type of fruit available

to customers? Note: If your pantry/resource center does NOT distribute any item in a listed category, please select "Never/almost never" on that row

	Never/almost never (0-10%) (1)	Sometimes (11-39%) (2)	Around half of the time (40-59%) (3)	Most of the time (60-90%) (4)	Always/almost always (90-100%) (5)
Canned fruits in light or heavy syrup (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Canned fruits with low or no added sugar, including 100% fruit juice (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh fruit (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frozen fruits (do not count frozen fruit juice from concentrate) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dried Fruits (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q60 Of all the fruit your organization distributes, which of the following do you distribute the most often?

- Canned fruits in light or heavy syrup (1)
 - Canned fruits with low or no added sugar, often? including 100% fruit juice (2)
 - Fresh fruits (3)
 - Frozen fruits (do not count frozen fruit juice from concentrate) (4)
 - Dried fruit (5)
-

Q61 Of all the fruit your organization distributes, which of the following do you distribute the second most often?

- Canned fruits in light or heavy syrup (1)
 - Canned fruits with low or no added sugar, including 100% fruit juice (2)
 - Fresh fruits (3)
 - Frozen fruits (do not count frozen fruit juice from concentrate) (4)
 - Dried fruit (5)
 - N/a (6)
-

Q62 Of all the fruit your organization distributes which of the following do you distribute the third most often?

- Canned fruits in light or heavy syrup (1)
- Canned fruits with low or no added sugar, most often? including 100% fruit juice (2)
- Fresh fruits (3)
- Frozen fruits (do not count frozen fruit juice from concentrate) (4)
- Dried fruit (5)
- n/a (6)

Q63 How difficult is it for your organization to procure each of the following?

	Very difficult (1)	Difficult (2)	Easy (3)	Very Easy (4)
Canned fruits in light or heavy syrup (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Canned fruits with low or no added sugar, including 100% fruit juice (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh fruits (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frozen fruits (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dried fruit (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q64 When your food pantry was open in the last month, how often was each type of vegetable available to customers? Note: If your pantry/resource center does NOT distribute any items in a listed category, please select "Never/almost never" on that row.

	Never/almost never (0 - 10%) (1)	Sometimes 11 - 39% (2)	Around half of the time (40 - 59%) (3)	Most of the time (60 - 89%) (4)	Always/almost always (90 - 100%) (5)
Canned vegetables with added salt (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Canned vegetables with low or no added salt (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh vegetables (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frozen vegetables (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dried vegetables (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q65 Of all the vegetables your organization distributes, which of the following do you distribute the most often?

- Canned vegetables with added salt (1)
- Canned vegetables with low or no added salt (2)
- Fresh vegetables (3)
- Frozen vegetables (4)
- Dried vegetables (5)

Q66 Of all the vegetables your organization distributes, which of the following do the second most often?

- Canned vegetables with added salt (1)
 - Canned vegetables with low or no added salt (2)
 - Fresh vegetables (3)
 - Frozen vegetables (4)
 - Dried vegetables (5)
 - n/a (6)
-

Q67 Of all the vegetables your organization distributes, which of the following do you distribute the third most often?

- Canned vegetables with added salt (1)
 - Canned vegetables with low or no added salt (2)
 - Fresh vegetables (3)
 - Frozen vegetables (4)
 - Dried vegetables (5)
 - n/a (6)
-

Q68 How difficult is it for your organization to procure each of the following?

	Very Difficult (1)	Difficult (2)	Easy (3)	Very Easy (4)
Canned vegetables with regular amounts of salt (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Canned vegetables with low or no added salt (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh vegetables (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frozen vegetables (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dried vegetables (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q69 Of all the grain products your food pantry program distributed in the last month including enriched and whole grains, such as cereal, bread pasta, and rice, what approximate proportion is 100% whole grain?

- None/almost none (0-10%) (1)
- Some (11-39%) (2)
- About half (40-59%) (3)
- Most (60-89%) (4)
- All/Almost all (90-100%) (5)

Q70 Of all the fluid REFRIGERATED milk products your food pantry distributed in the last month including whole, 2% fat, 1% fat, and skim, what approximate proportion is unflavored 1%, skim, or non-fat?

- None/almost none (0-10%) (1)
 - Some (11-39%) (2)
 - About half (40-59%) (3)
 - Most (60-89%) (4)
 - All/Almost all (90-100%) (5)
-

Q71 Of all the fluid SHELF-STABLE milk products your food pantry distributed in the last month including whole, 2% fat, 1% fat, and skim, what approximate proportion is unflavored 1%, skim, or non-fat?

- None/almost none (0-10%) (1)
 - Some (11-39%) (2)
 - About half (40-59%) (3)
 - Most (60-89%) (4)
 - All/Almost all (90-100%) (5)
-

Q72 Of all the yogurt products your food pantry distributed in the last month including full fat, reduced fat, and fat-free, what approximate proportion is low-fat or fat-free yogurt?

- None/almost none (0-10%) (1)
 - Some (11-39%) (2)
 - About half (40-59%) (3)
 - Most (60-89%) (4)
 - All/Almost all (90-100%) (5)
-

Q73 Does your food pantry ever distribute any ready-to-drink beverages? (see next question)

- Yes (1)
 - No (2)
-

Q74 When your food pantry was open in the last month, how often was each type of ready-to-drink beverage

available to customers? Note: If your pantry/resource center does NOT distribute any item in a listed category, please select "never/almost never" on that row.

	Never/almost never (0-10%) (1)	Sometimes (11-39%) (2)	Around half of the time (40-59%) (3)	Most of the time (60-90%) (4)	Always/almost always (90-100%) (5)
Water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calorie-free flavored waters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
100% juice (ready to drink or frozen concentrate)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other sweetened drinks, such as gatorade and other sports drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diet soda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regular soda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sweetened tea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unsweetened tea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify) (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q75 Of all the beverages your organization distributes, which of the following do you distribute the most often?

- Water (1)
 - Calorie-free flavored waters (2)
 - 100% juice (ready to drink or frozen concentrate) (3)
 - Other fruit beverages such as fruit punch and lemonade that are not 100% pure fruit juice (4)
 - Other sweet drinks, such as gatorade and other sports drinks (5)
 - Diet soda (6)
 - Regular soda (7)
 - Sweetened tea (8)
 - Unsweetened tea (9)
 - Other (10) _____
-

Q76 Of all the beverages your organization distributes, which of the following do you distribute the second most often?

- Water (1)
 - Calorie-free flavored waters (2)
 - 100% juice (ready to drink or frozen concentrate) (3)
 - Other fruit beverages such as punch and lemonade that are not 100% pure fruit juice (4)
 - Other sweetened drinks, such as gatorade and other sports drinks (5)
 - Diet soda (6)
 - Regular soda (7)
 - Sweetened tea (8)
 - Unsweetened tea (9)
 - Other (10) _____
-

Q77 Of all the beverages your organization distributes, which of the following do you distribute the third most often?

- Water (1)
 - Calorie-free flavored waters (2)
 - 100% juice (ready to drink or frozen concentrate) (3)
 - Other fruit beverages such as punch and lemonade that are not 100% pure fruit juice (4)
 - Other sweetened drinks, such as gatorade and other sports drinks (5)
 - Diet soda (6)
 - Regular soda (7)
 - Sweetened tea (8)
 - Unsweetened tea (9)
 - Other (10) _____
-

Q78 How difficult is it for your organization to procure each of the following?

	Very Difficult (1)	Difficult (2)	Easy (3)	Very Easy (4)
Water (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calorie-free flavored waters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
100% juice (ready to drink or frozen concentrate) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other fruit beverages such as punch and lemonade that are not 100% pure fruit juice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other sweetened drinks, such as gatorade and other sports drinks (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diet soda (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regular soda (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sweetened tea (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unsweetened tea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q79 What percentage of the time does your pantry/resource center offer eggs for clients?

Note: If your pantry/center never offers eggs, please select "Never/almost never".

- Never/almost never (0-10%) (1)
- Sometimes (11-39%) (2)
- Around half of the time (40-59%) (3)
- Most of the time (60-90%) (4)
- Always/almost always (90-100%) (5)

Q80 What percentage of the time does your pantry/resource center offer unsalted or plain nuts or seeds? Note: If your pantry/center never offers unsalted nuts or seeds, please select "Never/almost never".

- Never/almost never (0-10%) (1)
- Sometimes (11-39%) (2)
- Around half of the time (40-59%) (3)
- Most of the time (60-90%) (4)
- Always/almost always (90-100%) (5)

Q81

What percentage of the time does your pantry/resource center offer dry beans or lentils?

Note: If your pantry/center never offers dry beans/lentils, please select "Never/almost never"

- Never/almost never (0-10%) (1)
 - Sometimes (11-39%) (2)
 - Around half of the time (40-59%) (3)
 - Most of the time (60-90%) (4)
 - Always/almost always(90-100%) (5)
-

Q82 What percentage of the time does your pantry/resource center offer unsweetened milkalternatives, such as soy milk or almond milk? Note: If your pantry/center never offers unsweetened milkalternatives, please select "Never/almost never".

- Never/almost never (0-10%) (1)
 - Sometimes (11-39%) (2)
 - Around half of the time (40-59%) (3)
 - Most of the time (60-90%) (4)
 - Always/almost always (90-100%) (5)
-

Q83

For the near future (within the next 6 months), would your pantry like to receive more, about the same, or less of the following food groups?

	More (1)	About the same (2)	Less (3)
Whole Grains (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh Fruit (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh Vegetables (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eggs (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nuts/seeds (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lean animal protein (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dry beans/ lentils (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dairy (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Milk Alternative (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q84 If other, please specify what you would like to receive more of

Q85 How often does your food pantry/resource center receive rural delivery from the food bank?

- Never (1)
 - Less than 1 time per month (2)
 - About once per month (3)
 - About twice per month (4)
 - About three times per month (5)
 - Every week or usually every week (6)
 - More than one time per week (7)
-

Q86 How does your food pantry/resource center acquire food from the food bank?

- Orders picked up from the main food bank (1)
 - Orders picked up from food bank delivery site (2)
 - Orders delivered to my organization from the food bank (3)
-

Q87 For emergency purposes, how many weeks of reserve inventory does your food pantry/resource center keep on hand?

Q88 How often do you access product direct from the Food Bank Warehouse?

- Never (1)
 - Less than 1 time per month (2)
 - About once per month (3)
 - About twice per month (4)
 - About three times per month (5)
 - Every week or usually every week (6)
 - More than one time per week (7)
-

Q89 Do you have dry storage?

- Yes (1)
 - No (2)
-

Q90 Is your dry storage at or near maximum capacity?

- Yes (1)
 - No (2)
-

Q91 Is your dry storage adequate for client needs?

- Yes (1)
 - No (2)
-

Q92 Could you accommodate more dry storage?

Yes (1)

No (2)

Q93 Do you have refrigerated storage?

Yes (1)

No (2)

Q94 Is your refrigerator storage near or at maximum capacity?

Yes (1)

No (2)

Q95 Is your refrigerator storage adequate for client needs?

Yes (1)

No (2)

Q96 Could you accommodate additional refrigerator storage?

Yes (1)

No (2)

Q97 Do you have freezer storage?

Yes (1)

No (2)

Q98 Is your freezer storage near or at maximum capacity?

Yes (1)

No (2)

Q99 Is your freezer storage adequate for client needs?

Yes (1)

No (2)

Q100 Could you accommodate additional freezer storage?

Yes (1)

No (2)

Q101 How does your organization transport items to and from the food pantry/resource center? (Select all that apply)

- Agency owned vehicle(s) (1)
 - Rented vehicle(s) (2)
 - Volunteered transportation (3)
 - Staff personal vehicles (4)
 - Other (please specify) (5)
-

Q102 How often does your food pantry/resource center make trips to pick up donations from grocery stores?

- Never (1)
 - Less than 1 time per month (2)
 - About once per month (3)
 - About twice per month (4)
 - About three times per month (5)
 - Every week or usually every week (6)
 - More than one time per week (7)
-

Q103 How often does your food pantry/resource center make trips to deliver products to clients?

- Never (1)
 - Less than 1 time per month (2)
 - About once per month (3)
 - About twice per month (4)
 - About three times per month (5)
 - Every week or usually every week (6)
 - More than one time per week (7)
-

Q104 How does your food pantry/resource center transport refrigerated/frozen items?
(Select all that apply)

- Never (we do not store/distribute refrigerated/frozen items) (1)
 - Refrigerated truck (2)
 - Cooler (3)
 - Thermal blanket (4)
 - Cardboard box (5)
 - Other (please specify) (6)
-

Q105 Describe your organization's current distribution of fresh fruits and vegetables as part of its overall charitable food assistance program. We have regularly:

- Distributed fresh fruits and vegetables to clients for more than 6 months. (1)
- Distributed fresh fruits and vegetables to clients for less than 6 months. (2)
- Not distributed fresh fruits and vegetables to clients, but we are planning to start in the next 30 days. (3)
- Not distributed fresh fruits and vegetables to clients but we are planning to start in the next 6 months. (4)
- Not distributed fresh fruits and vegetables to clients and we don't plan to start in the next 6 months. (5)

Q106 What is your food pantry/resource center's annual operating budget, including all financial resources required for your food assistance operations such as staff salaries, food purchases, rent, maintenance, and associated fundraising costs?

Q107 What is your food pantry/resource center's annual food budget, including costs related to food bank handling fees and food purchases made outside of the food banking system?

Q108 What approximate percentage of your food pantry/resource center's annual operating budget comes from each of the following? Note: If your organization does NOT receive funds

from one or more of the categories below, please select 'none' on that line(s). The total of all percentages should add up to 100%.

	None/almost none (0-10%) (1)	Some (11-39%) (2)	About half (40-59%) (3)	Most (60-89%) (4)	All/Almost all (90-100%) (5)
Private donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foundations or charitable grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fundraisers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
United Way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church Donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q109 How difficult is it for your organization to get funding from each of the following sources?

	Very Difficult (1)	Somewhat Difficult (2)	Somewhat Easy (3)	Very Easy (4)
Private donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foundations or charitable grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fundraisers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
United Way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q110 What is the approximate percentage of your organization's food inventory that is obtained through the following mechanisms? Note: If your organization does NOT receive food from one or more of the sources below, please select "None (0-10%)". The total of all percentages should add up to approximately 100%. What is the approximate percentage of your organization's food inventory that is obtained through the following mechanisms? Note:

If your organization does NOT receive food from one or more of the sources below, please select "None (0-10)". The total of all percentages should add up to approximately 100%.

	None/almost none (0-10%) (1)	Some (11-39%) (2)	About half (40-59%) (3)	Most (60-89%) (4)	Purchased	All/Almost all (90-100%) (6)
Second Harvest Food Bank	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food Drives or Food Donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retail Recovery Program Donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q111 In the past year, of all the food distributed at your food pantry, what estimated percentage came from SHFB (as opposed to purchases or donations from other sources)? Enter value between 0-100%

Q112 Please estimate the total hours in an average week all staff/volunteers combined spend on serving clients. Enter time in hours:

Q113 Please estimate the total hours in an average week all staff/volunteers combined spend on soliciting monetary donations. Enter time in hours:

Q114 Please estimate the total hours in an average week all staff/volunteers combined spend on organizing fundraisers. Enter time in hours:

Q115 Please estimate the total hours in an average week all staff/volunteers combined spend on soliciting food donations. Enter time in hours:

Q116 Please estimate the total hours in an average week all staff/volunteers combined spend on picking up food donations from grocery stores. Enter time in hours:

Q117 Please estimate the total hours in an average week all staff/volunteers combined spend on purchasing foods at grocery stores. Enter time in hours:

Q118 Please estimate the total hours in an average week all staff/volunteers combined spend on ordering and retrieving food from food banks. Enter time in hours:

Q119 Please estimate the total hours in an average week all staff/volunteers combined spend on managing inventory (stocking shelves, sorting produce tracking inventory levels): Enter time in hours

Q120 Please estimate the total hours in an average week all staff/volunteers combined spend on administering non-food programs: Enter time in hours

Q121 Please estimate the total hours in an average week all staff/volunteers combined spend on promoting, coordinating, and maintaining strategic relationships: Enter time in hours

Q122

Which of the following staff activities is the most important to the success of your organization?

- Serving clients (1)
 - Soliciting monetary donations (2)
 - Organizing fundraisers (3)
 - Soliciting food donations (4)
 - Picking up food donations from grocery stores (5)
 - Purchasing foods at grocery stores (6)
 - Ordering and retrieving food from the food bank (7)
 - Managing inventory (stocking shelves, sorting produce, tracking inventory levels) (8)
 - Administering non-food programs (9)
 - coordinating and maintaining strategic relationships (10)
 - Other (please specify) (11)
-

Q123 Which of the following staff activities is second most important to the success of your organization?

- Serving clients (1)
 - Soliciting monetary donations (2)
 - Organizing fundraisers (3)
 - Soliciting food donations (4)
 - Picking up food donations from grocery stores (5)
 - Purchasing foods at grocery stores (6)
 - Ordering and retrieving food from the food bank (7)
 - Managing inventory (stocking shelves, sorting produce, tracking inventory levels) (8)
 - Administering non-food programs (9)
 - Coordinating and maintaining strategic relationships (10)
 - Other (please specify) (11)
-

Q124 Which of the following staff activities is third most important to the success of your organization?

- Serving clients (1)
 - Soliciting monetary donations (2)
 - Organizing fundraisers (3)
 - Soliciting food donations (4)
 - Picking up food donations from grocery stores (5)
 - Ordering and retrieving food from the food bank (6)
 - Managing inventory (stocking shelves, sorting produce, tracking inventory levels) (7)
 - Administering non-food programs (8)
 - Coordinating and maintaining strategic relationships (9)
 - Other (please specify) (10)
-

End of Block: Part 5: Food Procurement/Inventory/Ordering

Start of Block: Part 6: Dry Storage/Cold Storage/Transportation

Q152 Click to write the question text

- Click to write Choice 1 (1)
- Click to write Choice 2 (2)
- Click to write Choice 3 (3)

End of Block: Part 6: Dry Storage/Cold Storage/Transportation

Start of Block: Part 7: Funding/Financing

Start of Block: Part 8: Additional Services and Assistance

Q125 Does your organization maintain or partner with another organization to support a community garden?

Yes (1)

No (2)

Q126 When people come to your food pantry/resource center, they may seek other types of assistance besides food. What other types of assistance does your organization provide?

Please indicate whether your organization primarily provides the form of assistance onsite, primarily refers clients to another provider, or does not routinely this form of assistance.

	We primarily provide assistance onsite (1)	We primarily refer clients to another provider (2)	We do not routinely provide or refer for this type of assistance (3)
Rental or mortgage assistance (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utility assistance (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assistance with temporary housing (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial assistance (not including housing or utilities) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation assistance (bus tokens, taxi vouchers, gas cards, car rides) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vocational rehab, job training, or job placement (If so, please describe type and partner agency) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SNAP/Food Stamp (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Earned income tax credit assistance/volunteer income tax assistance (VITA) (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Case Management (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental Health (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Medical clinic (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dental clinic (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Addictions (Tobacco, drugs, other) (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutrition Education/Cooking Classes (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Literacy Classes (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal Aid (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco Cessation (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YMCA or other Physical Activity Programs (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q127 Does your food pantry/resource center provide clients with non-food items, such as toiletries and cleaning items?

Yes (1)

No (2)

Q128 What non-food items does your organization offer?(Select all that apply)

- Household cleaning supplies (1)
 - Personal hygiene items (2)
 - Light bulbs (3)
 - Fans or Window air conditioner units (4)
 - Coats (5)
 - Other (please specify) (6)
-

Q129 Approximately, what percentage of your clients select non-food items?

- None/almost none (0-10%) (1)
 - Some (11-39%) (2)
 - Around half (40-59%) (3)
 - Most (60-90%) (4)
 - All/almost all (90-100%) (5)
-

Q130 How difficult is it to obtain non-food items?

- Not Difficult (1)
 - Somewhat (2)
 - Very (3)
-

Q131 Is your agency working with another agency or community partner on skill building or training programs to enhance employability for living wage jobs?

Yes (1)

No (2)

End of Block: Part 8: Additional Services and Assistance

Start of Block: Block 9: Data Collection and Planning

Q132 What client data does your food pantry/resource center routinely collect? (Select all that apply)

- Age (1)
- Number in households (2)
- Race/ethnicity (3)
- Income (4)
- Residence, such as zip code or county (5)
- Veteran Status (6)
- Income (7)
- Housing status(e.g, stable, unstable, homeless) (8)
- Use of other food pantries (9)
- Bags of food distributed (10)
- Pounds of food distributed (11)
- Number of meals provided (meal equivalent) (12)
- Client weight (13)
- Health-related data, such as self-reported diabetes, hypertension, or kidney disease (14)
- Food allergies or intolerance (15)
- Tobacco use history (16)
- Exposure to secondhand smoke (17)

- Tobacco use of household members (18)
 - Physical activity level of client (19)
 - Physical activity level of household member (20)
-

Q133 How does your organization use the data it collects? (Select all that apply)

- Reporting to funders (1)
 - Reporting to food bank (2)
 - Financial decisions (3)
 - Ordering changes (4)
 - Services offered/changes (5)
 - Other (please specify) (6)
-

Q134 What is your organization's biggest strategic priority for its food assistance program(s) over the next 3-5 years?

Q135 If applicable, what is your organization's biggest strategic priority for its non-food assistance programs or partnerships?

End of Block: Block 9: Data Collection and Planning

Start of Block: Block 10: Nutrition Practices

Q136

How often does your pantry/resource center access resources or materials on www.healthyfoodbankhub.org or www.hungernwnc.org/agencies/nutrition-services-portal.html ?

- Daily (1)
 - Weekly (2)
 - Monthly (3)
 - Annually (4)
 - Never (5)
 - I have never heard of this website (6)
-

Q137 What specific Healthy Food Bank Hub resources does your food pantry/resource center use? (Select all that apply)

- Healthy recipes (1)
 - Curriculum (e.g., nutrition education, physical, activity, program development, cooking) (2)
 - Research reports/Executive Summaries (3)
 - Nutrition Education Handouts (4)
 - Posters (5)
 - Videos (6)
 - General nutrition and health/chronic disease education materials (7)
 - Assessment and Evaluation tools (8)
 - Food safety materials (9)
 - Quarterly Digest sign-up (10)
 - Training webinars (11)
 - Hub Widget for your organization's website (12)
 - Nudge strategy materials (13)
 - Point of service strategy materials (e.g., cooking demonstration) (14)
 - Other (please specify) (15)
-

Q138 Does your pantry/resource center follow any published or reference guidelines or rules related to the nutritional quality of foods distributed?

Yes (1)

No (2)

Q139 What nutrition guidelines does your pantry/resource center use? (Select all that apply)

MyPlate (1)

Foods to Encourage (2)

Rules about re-distributing expired or damaged packages (3)

Other (please specify) (4)

Q140 Does your pantry/resource center have a written nutrition policy, which guides food procurement for clients?

Yes (1)

No (2)

Q141 Please provide a copy of your written nutrition policy.

Q142 Does your pantry/resource center distribute any nutrition education materials to clients?

Yes (1)

No (2)

Q143 Please describe what kinds of educational materials:

Q144 Does your pantry/resource center offer any interactive nutrition workshops, such as cooking or healthy food budgeting classes?

Yes (1)

No (2)

Q145 Does your pantry/resource center currently employ or collaborate with any nutrition professionals, such as registered dietitians or dietetic students interns?

Yes (1)

No (2)

Q146 Based on your observation, how would you describe client interest in receiving more healthy foodoptions at your food pantry/resource center?

- Very Interested (1)
 - Indifferent (2)
 - Not Interested (3)
-

Q147 Based on your organization's observation, how would your organization describe client interest in receiving advice on healthy eating?

- Very Interested (1)
- Indifferent (2)
- Not Interested (3)

End of Block: Block 10: Nutrition Practices

Start of Block: Part 11: Tobacco Policies and Referrals

Q148 Does your pantry/resource center have a tobacco-free policy on its premises?

- Yes (1)
 - No (2)
-

Q149 Does your pantry/resource center enforce its tobacco-free policy on its premises?

- Never (1)
 - Rarely (2)
 - Sometimes (3)
 - Often (4)
 - Always (5)
-

Q150 Does your organization display the "SmokeFree NC" tobacco free signs?

- Yes (1)
 - No (2)
-

Q151 If a client expresses an interest in quitting smoking, what referral options does your pantry/resource center have? (Select all that apply)

- Refer clients to local smoking cessation program/clinic (1)
 - Suggest clients call the QuitLineNC 800-QUIT-NOW (1-800-784-8669)] (2)
 - Allow clients to call the QuitLineNC with a food pantry phone when they don't have a phone (3)
 - Refer clients to the QuitLineNC Helpline [800-QUIT-NOW (1-800-784-8669)] by fax referral (4)
 - Other (please specify) (5)
-

End of Block: Part 11: Tobacco Policies and Referrals

Appendix B

Nutrition Section of Full Survey

Q136

How often does your pantry/resource center access resources or materials on www.healthyfoodbankhub.org or www.hungernwnc.org/agencies/nutrition-services-portal.html ?

- Daily (1)
 - Weekly (2)
 - Monthly (3)
 - Annually (4)
 - Never (5)
 - I have never heard of this website (6)
-

Q137 What specific Healthy Food Bank Hub resources does your food pantry/resource center use? (Select all that apply)

- Healthy recipes (1)
 - Curriculum (e.g., nutrition education, physical, activity, program development, cooking) (2)
 - Research reports/Executive Summaries (3)
 - Nutrition Education Handouts (4)
 - Posters (5)
 - Videos (6)
 - General nutrition and health/chronic disease education materials (7)
 - Assessment and Evaluation tools (8)
 - Food safety materials (9)
 - Quarterly Digest sign-up (10)
 - Training webinars (11)
 - Hub Widget for your organization's website (12)
 - Nudge strategy materials (13)
 - Point of service strategy materials (e.g., cooking demonstration) (14)
 - Other (please specify) (15)
-

Q138 Does your pantry/resource center follow any published or reference guidelines or rules related to the nutritional quality of foods distributed?

Yes (1)

No (2)

Q139 What nutrition guidelines does your pantry/resource center use? (Select all that apply)

MyPlate (1)

Foods to Encourage (2)

Rules about re-distributing expired or damaged packages (3)

Other (please specify) (4)

Q140 Does your pantry/resource center have a written nutrition policy, which guides food procurement for clients?

Yes (1)

No (2)

Q141 Please provide a copy of your written nutrition policy.

Q142 Does your pantry/resource center distribute any nutrition education materials to clients?

Yes (1)

No (2)

Q143 Please describe what kinds of educational materials:

Q144 Does your pantry/resource center offer any interactive nutrition workshops, such as cooking or healthy food budgeting classes?

Yes (1)

No (2)

Q145 Does your pantry/resource center currently employ or collaborate with any nutrition professionals, such as registered dietitians or dietetic students interns?

Yes (1)

No (2)

Q146 Based on your observation, how would you describe client interest in receiving more healthy foodoptions at your food pantry/resource center?

- Very Interested (1)
 - Indifferent (2)
 - Not Interested (3)
-

Q147 Based on your organization's observation, how would your organization describe client interest in receiving advice on healthy eating?

- Very Interested (1)
- Indifferent (2)
- Not Interested (3)

Vita

Sarah Olivia McMahan was born in Asheville, NC, to Lori Frommer and James Wood. She graduated from McDowell High School in June 2014. The following autumn, she entered Appalachian State University to study Nutrition; and in May 2018, she was awarded the Bachelor of Science in Nutrition and Foods. In the spring of 2018, she was accepted into Appalachian State University's combined MS and DI program for Nutrition and Dietetics. Sarah earned her Master of Science in Nutrition and Dietetics in May 2020. She will pursue a career as a Registered Dietitian.