

Addressing Food Insecurity in the African Community in Worcester

Cape Town Project Center 2020



Abstract

In Worcester, Massachusetts, food insecurity is rising among the African community due to socioeconomic barriers and ineligibility for food assistance. There is a need for food pantries that cater to the cultural, linguistic and health needs of Africans. To address this issue, we developed a plan for a long-term food pantry to be run by the Massachusetts Organization of African Descendants. We conducted semi-structured interviews with local food pantries and a food bank, developed a survey to gather information about the targeted community, and designed informational products about the importance of healthy eating. Project outcomes included a website to facilitate visibility for the food pantry and a business plan that outlines how to establish and maintain the pantry.

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Executive Summary

Food insecurity is a serious health issue experienced by millions of people around the world. According to the United States Department of Agriculture (USDA, 2020), food insecurity is a "household-level economic and social condition of limited or uncertain access to adequate food." The prevalence of food insecurity is exceptionally high in countries with a high rate of inequality, ranging from 8 to 20% of the population (Smith, El Obeid & Jensen, 2000). This number is so high because of the inability of people to access food due to poverty. Feeding America states that COVID-19 could push the number of food insecure Americans to 54 million by the end of 2020, which is 17 million more than before the pandemic.

Although food insecurity can impact anybody, Black people and immigrants are more affected. In the United States, Black individuals experienced rates of food insecurity that are substantially higher (21.5%) than those of non-black communities in 2015 (Myers & Painter, 2017). Moreover, immigrant families are known to be at higher risk of food insecurity compared to non-immigrant families since a majority are ineligible for the Supplemental Nutrition Assistance Program (SNAP) (Bovell-Ammon et al., 2019). In Worcester specifically, there are nearly 20,000 African-born immigrants living in the region, with about 30% within 200% of the poverty line (ACE, 2020). In 2018, according to the Greater Worcester Community Health Assessment (Central MA Regional Public Alliance, 2018) 1 in 11 people were food insecure in the region.

SNAP is the most widely used government assistance program that provides financial support to help Americans struggling with hunger. Others include the Special

Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the Emergency Food Assistance Program (Feeding America, 2020). The USDA also offers educational resources, such as MyPlate, a nutrition guide for creating a healthier eating style. Lastly, private food assistance agencies, such as food pantries, are used as another approach in reducing the food security gaps in the United States (Feeding America, 2012). Food pantries in Worcester receive a great portion of their food from the Worcester County Food Bank, an organization that partners with food distribution programs in Worcester County.

Even though many food pantries already operate in Worcester, there are no food distribution programs that cater to the cultural, linguistic, and health needs of the African community. The Massachusetts Organization of African Descendants (MOAD), a coalition of members from diverse African nations living in Worcester, has taken the lead to address systemic socioeconomic issues impacting the African community, with food insecurity being one of them. MOAD has been working with organizations, such as UMass Memorial Medical Center, to establish two food pantries: a church-based pilot location and a longer-term community-based main pantry.

The goal of this project was to develop a plan for a successful long-term food pantry for the African community in Worcester that will enable MOAD to inform the targeted community about the food pantry and healthy eating options, and work towards achieving food security. **The team addressed the following objectives:** obtain information on the impact of food insecurity in the African community in Worcester; determine a convenient area for the location of the food pantry; increase access to information on healthy eating and the food pantry; and

educate MOAD on food pantry processes, use of its space, and number of human resources needed.

Key project outcomes included:

1. Web-based survey through Qualtrics: developed to collect data on food insecurity in the African community in Worcester. Our team piloted the survey to identify challenges with sharing and getting enough participants and left a plan for MOAD to continue distribution. We also developed a flyer that includes the QR code for the survey.



Figure ES1: Survey flyer.

2. Map in Google Maps: included the location of key African places in Worcester, using a list of African-owned business given to us by our sponsor. We also included the location of already established food pantries in the area

served by the Worcester County Food Bank. By analyzing these locations, we were able to determine initial areas to be considered by MOAD for the community-based food pantry.

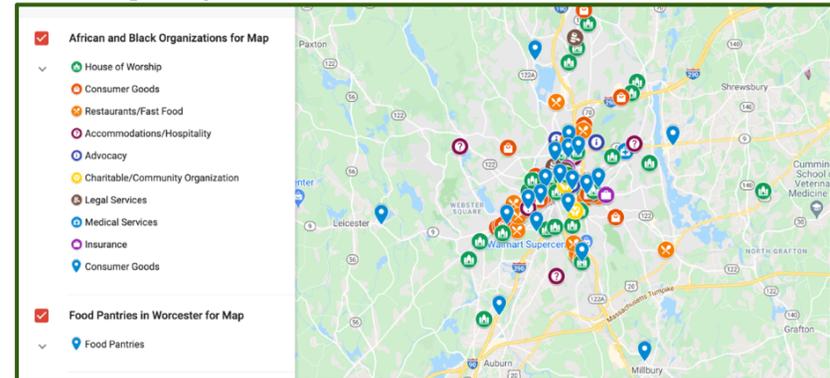


Figure ES2: Map of African business and food pantries in Worcester.

3. Products to provide information about healthy eating and promote MOAD and the food pantry.
 - a. MOAD Website: created to increase access to information for the African community and facilitate visibility and fundraising for the organization and the food pantry. We included information about MOAD, such as their sub-committees and members, the Ubuntu Food Pantry, and resources, such as job opportunities, healthy eating options, and the map of key African places.



Figure ES3: MOAD's website.

- b. Food pantry wish list: developed to aid potential partners in identifying the culturally based food products the food pantry is accepting. The food products include were divided into the 5 categories seen in MyPlate.
- c. The healthy eating options pamphlet: designed to provide guidance on the food items to avoid for people with health conditions the African community commonly struggles with.
4. Ubuntu Food Pantry Business Plan: based on information obtained from background research and semi-structured interviews with food pantries and the food bank. Detailed information on communication with food programs, knowing your target audience, location and space, regulations and licenses needed, volunteers and board of directors, raising money and forming partnerships, stocking shelves, spreading the word about the pantry, and daily operations and policy was included in the plan.

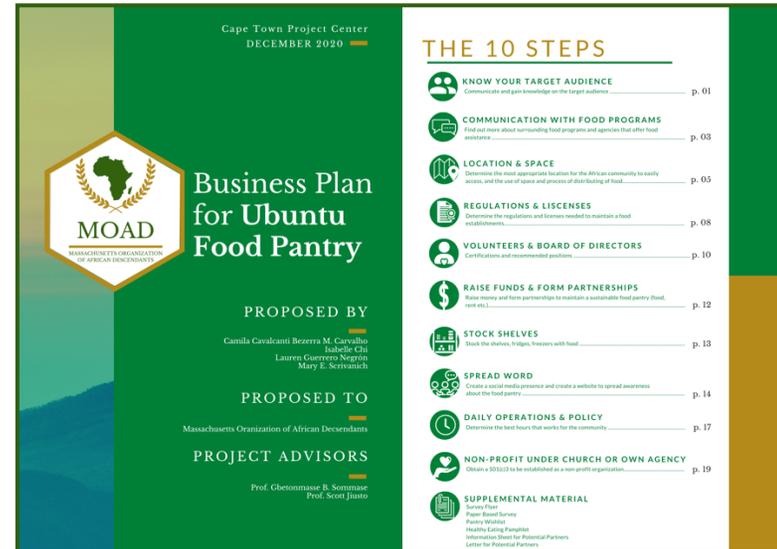


Figure ES4: Business plan.

Finally, we encourage MOAD to take these next steps to establish a successful and sustainable food pantry: including translations in Ubuntu Food Pantry operations to reach more people in the African community; holding food drives in local churches and schools and collecting monetary donations to stock shelves; collecting data from food pantry users to apply for grants; creating other forms of social media, such as Instagram and LinkedIn; and having multiple ways of receiving donations, such as Venmo and PayPal.

Background

Understanding Food Insecurity

Food insecurity is a complex problem that affects the health and nutrition of millions of people around the world. With the COVID-19 pandemic, the issue has worsened in response to significant loss of household income. In the United States, there are programs in place to help individuals address this problem, but the programs focus mainly on U.S. citizens and do not take into consideration cultural and linguistic differences of immigrants. This background section discusses our targeted community, the countries they come from, and the common health disparities they experience. Then, we expand on programs that battle food insecurity to evaluate what is beneficial for our sponsor. Finally, we analyze the steps to start a food pantry and considerations when launching one for the African community. By establishing a food pantry that is culturally sensitive, MOAD will successfully work towards achieving food security and promoting healthy eating in the targeted community.

Food Insecurity in the African Community in Worcester

Worcester has been converting into a melting pot of cultures. According to the City of Worcester's Database, in 2015 Worcester's population consisted of 70% White, 21% Hispanic/Latino, 14% Black/African American, and 7% Asian. In Worcester, 30% of foreign-born residents were from Latin America, followed by Asia (29%), Africa (22%), Europe (18%) and North America (1%) (City of Worcester, 2018). In 2016, the number one country of origin of foreign-born residents in Worcester was Ghana, with 4,019 people (City of Worcester, 2018). From research that our team

performed on nearby markets and restaurants, the most prominent influence was Ghanaian food and culture. Our review of the literature from the African Community Education found that members of the African population living in Worcester emigrated from Burundi, Cameroon, Central African Republic, Côte d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Ghana, Kenya, Liberia, Nigeria, Rwanda, Somalia, South Sudan, and Tanzania (ACE, 2020). Therefore, the pantry will be catered to African immigrants and refugees from those countries.

Assimilating in a new culture presents many challenges, such as limited or no access to a sustainable income, language barriers, and lack of access to information. This may lead to families becoming at risk of experiencing hunger. Hunger, coupled with other health disparities, may exacerbate health issues. Additionally,



Figure 1: African countries represented in Worcester.

African immigrants' financial situation has worsened due to the COVID-19 pandemic. Even with affordable non-African and African based foods, lack of income, social stigma and language barriers make it difficult for the African community to seek any type of assistance, resulting in them not receiving assistance from government food programs.

Health Disparities that Affect the African Community

Certain chronic health conditions are commonly experienced by people in the African community. These

health disparities include diabetes, heart disease, obesity in children and adults, and cancer, which can cause individual dietary restrictions (Pruitt et al., 2016). According to Harvard's School of Public Health (Williams, 2016), Africans have higher rates of diabetes, hypertension, and heart disease than other groups, and Black children have a 500% higher death rate from asthma compared to white children (Williams, 2016). Black adults are much less likely to survive prostate, breast and lung cancer than white adults (Williams, 2016).

Africans may also struggle with health issues that arise from being food insecure. The "nutrition quality gap" caused by food insecurity is mainly due to nutrient-dense foods, such as fruits and vegetables, being more expensive and less accessible in lower-income neighborhoods. The intake of nutritionally poor foods is linked to decreased diet quality and increased risk of chronic disease over time. Food insecurity is associated with diet sensitive chronic diseases in low-income adults, including cardiovascular disease, type 2 diabetes, gestational diabetes, overweight, and obesity (Leung et al., 2014, 1943). Children tend to deal with cognitive and behavioral problems, aggression and anxiety, depression, and suicide ideation, as they are still in their development stage (Gundersen & Ziliak, 2015, p. 1835).

Existing Methods to Address Food Insecurity

Several government and non-government programs are in place to help alleviate the persistent presence of food insecurity. Food and nutrition assistance programs play a vital role in meeting the basic needs of low-income households, by assisting families to obtain nutritionally adequate diets and avoid hunger. Through services such as financial support, educational resources, and food supply,

these programs cover responsibilities such as aiding mothers and children, fostering nutrition, targeting senior hunger, and supplying food banks. While these assistance programs have helped improve food security in the United States, they have not yet completely resolved this issue. Changes to make food assistance programs more effective are continually contemplated by policy makers to expand and adapt such programs to fit the needs of low-income households (Gundersen, 2015, 91).

Financial Support Programs

Numerous government assistance programs provide financial support to help Americans struggling with hunger, including the Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children, the Emergency Food Assistance Program, and many more (Feeding America, 2020). This extensive list of programs falls under the United States Department of Agriculture and aim to increase food security and reduce hunger through economic assistance. The most widely used and applicable program to the project is SNAP.

The Supplemental Nutrition Assistance Program, first established as the Food Stamp Program, is a national food assistance program available in all counties, and is the largest program working to fight hunger in the United States. The program focuses on providing families with their basic nutritional needs to aid them through temporarily difficult times. Through the monthly delivery of the electronic benefits transfer (EBT), used to purchase groceries at over 238,000 authorized retailers nationwide, SNAP provides targeted benefits to people in need to improve access to nutritious foods. These SNAP benefits can be used to purchase a wide variety of items, including breads, cereals,

fruits, vegetables, meat, fish, and dairy products. Unfortunately, there are restrictions that cut certain lawfully residing immigrants out of the assistance program, depending on their citizenship status and the SNAP policy on non-citizen eligibility (USDA, 2013). These limitations make it difficult for the African immigrants and refugees of Worcester to access the same levels of assistance as the city's American citizens.

Educational Resources

One approach the United States government encourages healthy eating among American households was by the creation of MyPlate, a nutrition guide developed by

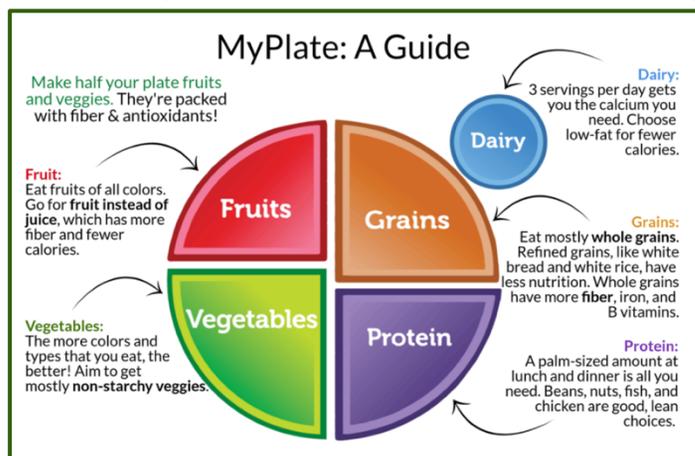


Figure 2: Overview of MyPlate (USDA, 2020).

the United States Department of Agriculture. The guide offers tips for creating a healthier eating style and how to portion the plate to include all the food groups: vegetables, dairy, protein, fruits, and grains. For each food group, the guide explains why this type of food is important, provides a recommended portion size, and gives some ideas of food that go under each food group. MyPlate uses simple messages to motivate the user to eat healthy, such as “make at least half the grains you serve whole grains, like oatmeal, whole-wheat bread, and brown rice,” and “don’t serve oversized portions.”

Food Assistance Programs

Private food assistance agencies, such as food pantries, are used as an approach in reducing the food security gaps in the United States. A food pantry is a nonprofit, charitable organization that functions based on grants and donations in order to benefit those who are hungry and food insecure (Feeding America, 2012). Normally, a food pantry receives a portion of their food from a local or regional food bank. Food banks play a critical role in supplying food to food pantries across the United States. Food pantry interventions provide promising results, but

face challenges in long-term health behaviors and outcomes due to dependence on donations and volunteers.

Limitations to food pantries include language and cultural barriers, lack of mutual trust, and social stigma which often



Figure 3: Volunteers at EBS Food Pantry distributing food.

limits the engagement of clients. Despite these challenges, food pantries have been proven effective in improving diet-based outcomes of clients and play a principal role in addressing the needs of Americans at high risk of food insecurity (An et al., 2019).

Establishing a Food Pantry for the African Community

While many programs, including food pantries, are in place to help feed low-income families and communities in Worcester, there is a need to make its access equitable to the African community living in the area. Due to this lack of accessibility, MOAD and supporting organizations are tasked to establish a food pantry at a faith-and-community-based location in the African community.

Establishing a successful and sustainable food pantry involves major planning. This process starts with getting to know the targeted African community and the best way to communicate with them. Successful food pantries envision and respond to community hunger and food insecurity with a unique response that best suits the community (Food Bank of Alaska, 2019).

The following list includes the basic steps in developing a food pantry (Food Bank of Alaska, 2019):



Figure 4: Steps of developing a food pantry.

Objectives & Methodology

The goal of this project was to develop a plan for a successful long-term food pantry for the African community in Worcester that will enable the Massachusetts Organization of African Descendants (MOAD) to inform the people about the food pantry and healthy eating options and work towards achieving food security. To accomplish this,

we advanced the following objectives through methods highlighted in Figure 5:

1. Obtain information on the impact of food insecurity on Worcester's African community.
2. Determine a convenient area for the location of the food pantry.
3. Increase access to information on healthy eating and the food pantry.
4. Develop a plan to inform MOAD on food pantry processes, use of its space and number of human resources needed.

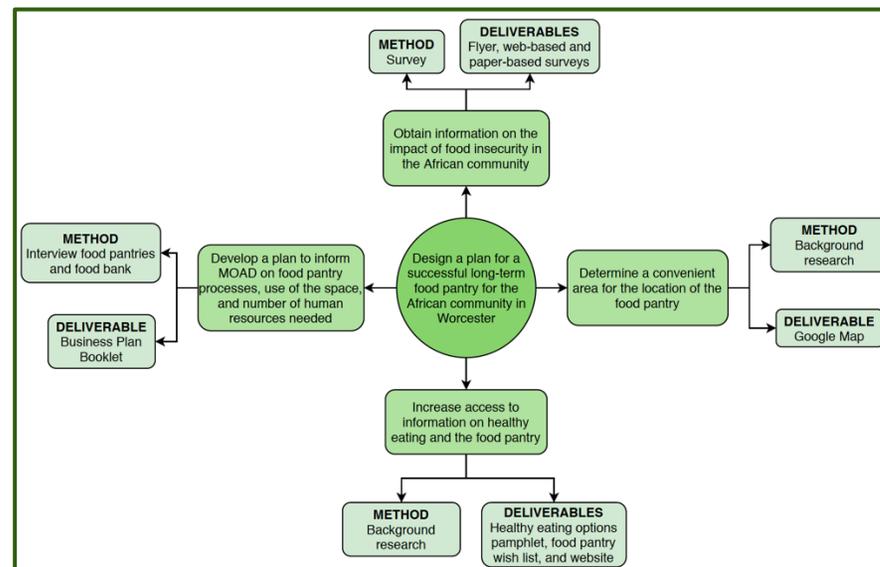


Figure 5: Overview of objectives, methods and deliverables.

Obtain Information on the Impact of Food Insecurity on Worcester's African Community

To successfully develop a plan for a food pantry that caters to the needs of the African community in Worcester,

we must obtain a better understanding of the community and its struggle with food insecurity. A web-based survey through the program Qualtrics was our primary method of collecting data on the current food insecurity situation present in the African community in Worcester.

The survey consisted of open-ended and close-ended questions, partially adapted from surveys conducted by MOAD and the USDA, and by members of our group. The questions ask about the severity of food insecurity in African households, the location of their household, the health problems they struggle with, their participation in government-run food assistance programs, and their participation in community-based food assistance programs. Other questions included their access to internet and technology, their primary speaking and reading languages, and their health practices. Since many of the questions included within the survey pertain to sensitive topics that relate to their socioeconomic standing and health status, the survey was completely voluntary, and all the questions were optional for the participant to answer.

Determine a Convenient Area for the Location of the Food Pantry

To meet the cultural needs of the targeted population, we identified places in Worcester where the African community use their service, such as African restaurants, churches, and stores. Knowing where African businesses and other establishments are located can help us narrow down an area where the community-based food pantry could be located. We want the food pantry to be accessible for our targeted community and having this program in an area where Africans usually visit can provide this accessibility. Our team also identified the locations of food

pantries in the area served by the Worcester County Food Bank. This will help our sponsor when applying for a partnership with the food bank since there is a lower chance of obtaining it if the food pantry is located in an area with a high concentration of previously established food distribution programs.

Our sponsor provided us with a list of African and Black organizations in Worcester. We added other organizations that were not already listed, if they were African owned, to ensure that we have a complete and accurate list of establishments. Then, our team obtained the addresses of the organizations and establishments to create a map of key African places. For the previously established food pantries, the addresses were obtained from the Worcester County Food Bank website. To create the map, we used Google Maps, a web mapping service developed by Google. This platform allows users to link the map to a spreadsheet containing all the information we want include in the map. Our team created a table with the following information about each location: organization sector, contact information (i.e., phone number and email), and address.

Increase Access to Information on Healthy Eating and the Food Pantry

To implement the idea of eating healthy foods that are culturally relatable to the African community, we created a food pantry wish list using MyPlate based on typical African cuisine. Our team obtained a list of typical African food from the Worcester Together group, a coalition of members in Worcester that deals with food insecurity in the region, and from our background research. We divided them into the 5 main food groups presented in MyPlate:

vegetables, dairy, protein, fruits, and grains. This wish list will be given to potential partners to identify the culturally based food products the food pantry is accepting.

Our team also designed a healthy eating options pamphlet that clearly lists all the suggested foods for each of the most common health conditions found among the African community. The pamphlet uses information from MyPlate, a nutrition guide designed by the USDA. Even though MyPlate wasn't specifically adapted for the Black or African community, the idea behind the application can be applied to this project. This will help the African community avoid food items that worsen the health conditions they commonly struggle with.

Finally, our team developed a website for our newly established sponsor. MOAD does not have any social media or effective outreach plan to communicate with the African community. The website can be used by our sponsor to increase access to information, such as healthy eating options, and facilitate visibility and fundraising for the organization and food pantry.

Develop a Plan to Inform MOAD on Food Pantry Processes, Use of Its Space and Human Resources Needed

To gain a better understanding of best practices for food distribution programs, we interviewed local, successful food pantries in Worcester. Our team conducted semi-structured interviews with two food pantries in the Worcester area: the Wachusett Food Pantry and the El Buen Samaritano Food Pantry. By conducting this interview, our team gained more insight on the distribution and collection of food, such as information on how the food is delivered from the food bank to the food pantry, the logistics of this

process, and how to acquire a truck if needed. We visited the El Buen Samaritano Food Pantry to get dimensions and pictures of the establishment. With the information gathered from the visits and interviews, our team mapped out the space available at the New England Ghanaian SDA Church, the church-based pilot location, to maximize its space and functionality.



Figure 6: Visit to the El Buen Samaritano Food Pantry (Photo by Camila Carvalho).

Our team also interviewed the Worcester County Food Bank to obtain information about the process of obtaining a partnership with the food bank. With the interview, we gained a different perspective and learned about procedures that could benefit the food pantry. Our team hoped to develop a long-term partnership with the food bank for MOAD to remain in contact with them.

After collecting information from the interviews and from our background research, our team developed a

business plan for the food pantry. The information collected from interviews was to supplement our literature review and to address our gaps in knowledge about the process of establishing a food pantry. The plan goes in detail about all the steps necessary to start and maintain a food pantry, which were listed in Figure 4 in our Background section.

Project Outcomes & Deliverables

To achieve all objectives previously mentioned, our team had 6 project deliverables to assist MOAD in establishing and running the food pantry. The deliverables are summarized in the diagram below, and then described in greater detail.

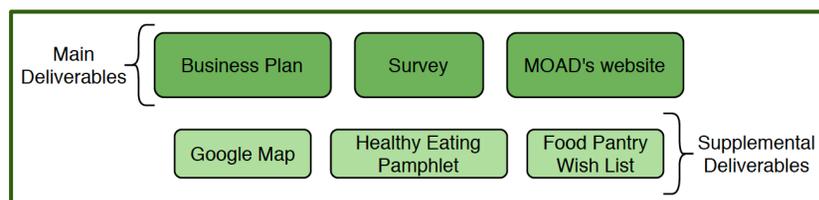


Figure 7: Overview of project deliverables.

Business Plan for the Ubuntu Food Pantry

To ensure a smooth opening of Ubuntu Food Pantry, we created a business plan that outlines the necessary steps to establish and maintain a food pantry (Figure 8). In this plan, we go in depth into each step and explain the necessary plan of action for Ubuntu to be as successful as possible. This detailed document will help MOAD cater to their clients, form partnerships, promote their pantry on social media platforms, and obtain a 501(c)3 license that will ensure they are a non-profit organization. To see the full plan, please refer to the Supplemental Material of this report.

A couple of highlights from the business plan include the information we acquired about obtaining a partnership with Worcester County Food Bank (WCFB) and the findings gathered regarding the logistics of running a food pantry in or near the Worcester area. Through our interview with WCFB's Agency Relations Manager, Seana Weaver, we gained valuable insight into the process of developing a partnership with the food bank. Seana oversees WCFB's operations with over 150 organizations spread across Worcester and shared the requirements necessary for forming a partnership with us. Once a food pantry has at least 3 to 6 months of successful and sustainable operating, proof of a board of volunteers, and proof of a 501(c)3, which classifies the pantry as a public charity, it is allowed to apply for the partnership. After a partnership is attained, WCFB requires the food pantry to serve everyone, as well as provide their own way of transporting food from the food bank to the pantry. Through interviews with the El Buen Samaritano (EBS) Food Pantry and Wachusett Food Pantry, we learned about the processes that are essential for food pantry maintenance. Serving the whole community allows for access to more grants and partnerships, while keeping track of food pantry clients and collecting data on them enables the successful preservation of these partnerships. Such data includes the number of people in their household, their main source of income, and their house zip code. The interviews with the food pantries also provided us with valuable insight into the affect COVID-19 has had on food distribution to clients, which is also laid out in the business plan for MOAD to take into consideration during development.

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Business Plan for Ubuntu Food Pantry

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THE 10 STEPS

- KNOW YOUR TARGET AUDIENCE** p. 01
Communicate and gain knowledge on the target audience.
- COMMUNICATION WITH FOOD PROGRAMS** p. 03
Find out more about existing food programs and agencies that offer food assistance.
- LOCATION & SPACE** p. 05
Determine the most appropriate location for the African community to easily access, and the use of space and process of distributing of food.
- REGULATIONS & LICENSES** p. 08
Determine the regulations and licenses needed to maintain a food establishment.
- VOLUNTEERS & BOARD OF DIRECTORS** p. 10
Certifications and recommended guidelines.
- RAISE FUNDS & FORM PARTNERSHIPS** p. 12
Raise money and form partnerships to maintain a sustainable food pantry (food, rent etc.).
- STOCK SHELVES** p. 13
Stock the shelves, fridges, freezers with food.
- SPREAD WORD** p. 14
Create social media presence and create a website to spread awareness about the food pantry.
- DAILY OPERATIONS & POLICY** p. 17
Determine the best hours that works for the community.
- NON-PROFIT UNDER CHURCH OR OWN AGENCY** p. 19
Obtain a 501(c)(3) to be established as a non-profit organization.
- SUPPLEMENTAL MATERIAL**
Survey Form
Paper Based Survey
Pantry Walked
Healthy Living Flyer
Information Sheet for Potential Partners
Letter for Potential Partners

Figure 8: The ten steps of setting up a food pantry, included in the business plan.

Additional valuable information featured in the plan includes a diagram of the floor plan for the church-based food pantry (Figure 9). Through our site visit to EBS Food Pantry, our team took a tour of their facility, learned about their use of space, and created a diagram that represented their floor plan. The spatial layout of EBS food pantry and information learned from the visit were analyzed and applied to the recommended floor plan for the church-based food pantry we developed. As MOAD goes on to establish the community-based food pantry, they will be able to incorporate the ideas provided by these diagrams to best suit their space and needs.

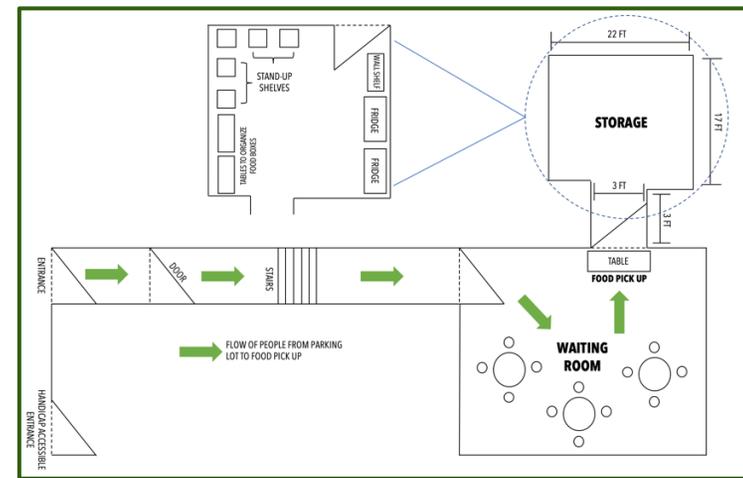


Figure 9: Floor plan diagram for church-based food pantry.

Creating Resources for MOAD to Obtain Information on Worcester's African Community

Our team created web-based and paper surveys for MOAD to utilize when obtaining information on their targeted community. By developing the proper materials and a distribution plan, we have granted the organization the ability to efficiently collect relevant data on Worcester's African community. We designed a flyer (Figure 10) as part of the distribution plan that promotes the survey and advertises a QR code that is linked to it. The web-based survey will remain up and running for MOAD's use while they are in the process of developing Ubuntu Food Pantry, and the paper-based survey can be utilized by MOAD in the future when COVID-19 poses less of a risk for participation likely required through the African establishments we mapped earlier. We have provided MOAD with editable versions of the web-based and paper surveys and the flyer. The little data collected through the pilot distribution of the

survey was applied towards our business plan for a food pantry but is subject to change as participation increases.



Figure 10: Survey flyer.

MOAD's Website

A website was developed in order to increase the awareness of the organization and the food pantry. The website created a social media presence and identity, including information on MOAD's purpose and mission. The website portrays the organization's purpose of uniting all people of African descent under a coalition for the advancement of economic, cultural and educational interest. The website includes a 'Home' page that provides a general overview of the MOAD

organization, and an 'About Us' page that goes into detail about the mission, vision and history. Another tab describes the details of the sub-committees that are part of the organization and includes a button for users to request to join the sub-committees. Other information contained on the website are a 'Resources' page including healthy eating options, jobs, and local African establishments; a tab for promoting the food pantry; a 'Getting Involved' page where the site provides current partners including UMASS Memorial Center and YWCA Central Massachusetts; and a 'Contact Us' page.



Figure 11: Home page of MOAD's website.

Mapping Out Key African Places in Worcester

Using the information from the list of African organizations and establishments given by our sponsor, our team created a map that includes the location of African stores, restaurants, and other organizations that MOAD can potentially partner with to obtain cultural foods. The map contains a second layer, which includes the location of all the

food pantries in the area served by the Worcester County Food Bank.

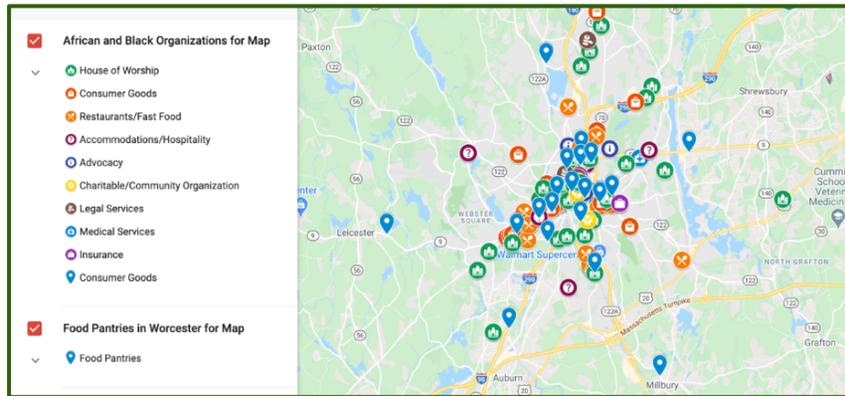


Figure 12: Map of African organizations and food pantries in Worcester County.

The map divides the African places in the different categories listed in Figure 12. The map is interactive, so when the user clicks on the icon for each location, it shows information about each establishment, such as its phone number, email, and address. This allows MOAD and the wider community to easily access the contact information of many African organizations in Worcester.

Some conclusions can be drawn by visualizing all the locations in the map. First, most of the African organizations are churches and houses of worship. In total, there are 37 African places that fall into this category. Moreover, the establishments are spatially spread-out in different areas in Worcester, so it's difficult to define clusters with significantly higher concentration of African establishments. Many of the places on the map, however, are primarily located in postal code 01610. Therefore, this can be considered a good area for MOAD to give initial consideration for the location of the community-based food pantry.

On the other hand, by analyzing the second layer of the map, which includes the location of food pantries in Worcester County, we can determine which areas are not the best fit to have the food pantry be located. There's a lower chance of obtaining a partnership with the Worcester County Food Bank if a new food pantry is located near other food distribution programs. Our team concluded that the first place to explore having the community-based food pantry is in zip code area 01605 and 01606. For the postal code 01610, there are 5 food pantries already established in the area. However, for zip codes 01605 and 01606, which are also areas with a high volume of African businesses, there are only 2 and 1 food pantries established in those areas respectively. The map can also be used as a resource to check if a location makes sense after MOAD has brainstormed a list of possible locations for the community-based food pantry.

Healthy Eating Options Pamphlet

With the information we acquired from our background research, we created the healthy eating options pamphlet (Figure 13). The first section of the pamphlet includes general information about the food pantry, such as contact information and the definition of "Ubuntu", while the second section includes detailed information on healthy eating for the African community specifically.



Figure 13: Healthy eating options pamphlet.

First, there is a general explanation of what MyPlate is, as well as the recommended portion sizes for each of the 5 food groups. Then, the pamphlet goes in detail about which food items specifically related to African cuisine follow under each category. This would help the African

community prepare their meals in a healthy way while still eating meals associated with their roots. Lastly, as previously mentioned in the Background section, there are some common health conditions experienced by many people in the African community, such as diabetes, heart disease, high blood pressure, obesity, and osteoporosis. Therefore, our team also included the recommended diets for people struggling with these conditions. It's important to notice that there's a disclaimer at the bottom of the pamphlet, which mentions how we are not nutritionists or registered dietitians, and that we understand that everyone has unique dietary needs and restrictions.

Food Pantry Wish List

With the information we acquired from our background research, we created a wish list (Figure 14) that divides typical African foods into the 5 main food groups used in MyPlate: vegetables, dairy, protein, fruits, and grains. We also included a spices and condiments section, as African cuisine uses a lot of them, and a toiletries section, as the food pantry will also be providing these items to the public.

Staples and vegetables form the bulk of food consumed in Africa, making these two groups have long lists of food items on the wish list (Oniang'o, Mutuku & Malaba, 2003). Some main fruits and vegetables, which are a good source of fibers and vitamins, commonly eaten include avocado, baobab fruit, citrus fruits, guava, mango, papaya, passion fruit, banana and jackfruit, and eggplant (Oniang'o, Mutuku & Malaba, 2003). Our team made sure to only include food items and toiletries that can be found in local markets in Worcester or provided by the Worcester County Food Bank.



Figure 14: Food pantry wish list.

Conclusions & Recommendations

Finally, the African community experiences many socioeconomic issues and other barriers that affect them daily, with food insecurity being just one of many. In the United States, lower income Black families are at a higher risk of being food insecure, and immigrants are not eligible for food assistance programs, such as SNAP. Taking this into consideration, the creation of a food pantry that is designed specifically for this community can assist African families in having access to quality and culturally relevant food. More importantly, food insecurity goes beyond the distribution of food, and the causes to this issue can encompass a lack of

access to information and a lack of well-organized programs that take the community's needs into consideration. The Ubuntu Food Pantry will provide culturally relevant food and access to information on healthy eating and other nutrition guidance to families that are lacking it. Ubuntu itself means "I am because you are", which is perfect for the motivation behind this project. The idea that community is the building block of a society and is what our team and MOAD wanted to accomplish with this pantry.

However, the work is not done. There are other steps that we encourage our sponsor to take to make this pantry successful. First, MOAD should include translations in the Ubuntu Food Pantry operations. For example, translating the survey and the pamphlet to African languages, such as Twi, a major language spoken in Ghana, can help the organization reach more people in the African community. The City of Worcester has developed a partnership with Ascentria Care Alliance to offer translation services for more than 90 languages, greatly improving access to city services for people with Limited English Proficiency (LEP). Moreover, we encourage MOAD to use the food pantry as a resource center for the participating families and individuals. We suggest services such as help for federal food assistance programs applications for those who are eligible, as well as other educational and informational services.

Another important step will be to collect data of food pantry users to help when applying for grants. Some of the data our team suggests collecting includes zip code, number of family members, age group, household income source, and participation in federal assistance programs. As well, we suggest holding food drives in local churches and schools and collect donations. This will help stocking shelves in the pantry, allowing MOAD to help as many people as possible,

especially during the period where they are not eligible for partnership with the Worcester County Food Bank. Lastly, we encourage MOAD to create other social media accounts, such as Instagram and LinkedIn, to increase awareness about not only the pantry, but the organization itself. Creating payment accounts in platforms such as Venmo and PayPal can also increase the number of donations received.

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