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The Plant-Based and Soul-Full Study (PASS): Examining How Owners of Local Vegan Soul Food Restaurants Promote the Consumption of Vegan Foods in the African American Community

Anthony Crimarco

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THE PLANT-BASED AND SOUL-FULL STUDY (PASS): EXAMINING
HOW OWNERS OF LOCAL VEGAN SOUL FOOD RESTAURANTS
PROMOTE THE CONSUMPTION OF VEGAN FOODS IN THE
AFRICAN AMERICAN COMMUNITY

by

Anthony Crimarco

Bachelor of Science
Stetson University, 2009

Master of Science
Ball State University, 2012

Master of Science
University of Florida, 2013

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University of South Carolina

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Accepted by:

Brie Turner-McGrievy, Major Professor

Mark Macauda, Committee Member

Christine Blake, Committee Member

Swann Adams, Committee Member

Cheryl L. Addy, Vice Provost and Dean of the Graduate School

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DEDICATION

I dedicate this work to my family and loved ones. To my father and step mother for believing in me and encouraging me to pursue my goals. To my brother, Stephen, for always being available for late night talks and text messages to support me during my doctoral studies. To my younger brother, Matteo, for your sense of humor and reminding me that playing games as an adult is still fun! To Lynette for your unconditional love and unwavering support. I am excited to continue on to our next adventure in life and to build a future with you. To all of my classmates and friends for supporting me on this journey. I love you all.

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ABSTRACT

Background: Obesity remains a prevalent public health epidemic and African American (AA) adults are disproportionately affected by obesity more than any other ethnic group. There are also disparities in obesity by location, with the South having the highest rates compared to other geographic regions in the United States. Addressing poor dietary habits is important for improving obesity rates among AAs, but there has been limited research that has focused on specifically developing culturally-tailored interventions. With a recent number of soul food restaurants serving exclusively vegan meals opening up across the country to appeal to AAs and others interested in eating healthier soul foods, there is a unique opportunity to explore how these restaurants might impact AA dietary habits. The purpose of this study was to examine how the location of vegan soul food restaurants in the South influence AA communities' exposure to vegan meals and how owners of local vegan soul food restaurants view their roles in promoting the health of their communities.

Methods: Vegan soul food restaurants were identified using a standardized search criteria for menu items in the 16 states and the District of Columbia that are categorized as being in the South from the Census Bureau (Specific Aim 1). Mean percentage of AAs, poverty rates, and obesity rates by county where restaurants were located were collected via census data. Restaurants were classified as being in or out of a food desert zone using the United States Department of Agriculture's (USDA) food atlas map (0.5- and 1.0-mile radius). Once the restaurants were identified, in-depth interviews were

conducted with a sample of owners (N=12, 100% AA) from the vegan soul food restaurants located in states in the Black Belt region (Specific Aim 2). The interviews assessed how they view their role as promoters of health in their community and identify strategies they use to make plant-based foods more culturally appealing to AA adults.

Results: A total of 45 restaurants were identified. Counties where the restaurants were located in had a mean AA population of $36.5 \pm 18.5\%$, mean poverty rate of $15.5 \pm 3.85\%$, and mean obesity rate of $26.8 \pm 4.8\%$. More than one third (n=18, 40.0%) of the restaurants were considered to be in a food desert zone. For the interviews, six themes emerged related to (1) the restaurants providing access to vegan meals, (2) the owners educating their customers about vegan diets and healthy eating, (3) the need to make AAs more culturally familiar with vegan foods (4) using fresh ingredients to make vegan soul foods taste good, (5) addressing limited cooking skills among AAs, and (6) the owners discuss non-health reasons to their patrons for following a vegan lifestyle to encourage them to become vegan.

Conclusion: Many of the restaurants were classified in food desert zones, implying their potential to provide access to healthier, plant-based meals among residents in the surrounding neighborhoods. All of the owners that were interviewed indicated they had engaged with many of their patrons to discuss the health benefits of plant-based diets. Some owners also provided cooking classes or educational resources focused on healthier eating. The themes that emerged from the interviews indicate that there may be future opportunities for health educators to partner with some of these restaurant owners to provide culturally-relevant healthy eating options to members of their community.

TABLE OF CONTENTS

DEDICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: BACKGROUND	8
CHAPTER 3: METHODS	32
CHAPTER 4: RESULTS	55
CHAPTER 5: OVERALL SUMMARY AND CONCLUSIONS	115
REFERENCES	128
APPENDIX A: IRB APPROVED LETTER	153
APPENDIX B: INVITATION EMAIL SENT TO RESTAURANT OWNERS TO PARTICIPATE IN INTERVIEW	156
APPENDIX C: VERBAL CONSENT FOR INTERVIEWS	158
APPENDIX D: INTERVIEW GUIDE	160
APPENDIX E: DEMOGRAPHIC QUESTIONNAIRE.....	162

LIST OF TABLES

Table 2.1. Summary of previous dietary interventions focused on modifying soul food ingredients.....	16
Table 3.1 Summary of interview questions based on constructs from conceptual framework.....	52
Table 4.1 Summary of vegan soul food restaurants identified in Southern states.....	67
Table 4.2 Demographic characteristics of the restaurant owners and states represented in interviews.....	100

LIST OF FIGURES

Figure 3.1. Social identification of how owners of vegan soul food restaurants influence ecological factors to increase the consumption of vegan foods.....	40
Figure 3.2 Example of mapping the percentage of AAs by county where a vegan soul restaurant is located.....	47
Figure 3.3 Example of mapping the county poverty rate of where a vegan soul restaurant is located	47
Figure 3.4 Example of mapping the county obesity rate where a vegan soul restaurant is located	48
Figure 3.5 Example of mapping a vegan soul food restaurant in the USDA’s Food Atlas Map	48
Figure 4.1 Consort Diagram	66
Figure 4.2 Comparison of the population, poverty, and obesity rates by county from the locations of vegan soul food restaurants to national rates	83
Figure 4.3 Social identification of how owners of vegan soul food restaurants influence ecological factors to increase the consumption of vegan foods.....	96

LIST OF ABBREVIATIONS

AA.....	African American
BMI.....	Body Mass Index
PBD.....	Plant-Based Diet

CHAPTER 1

INTRODUCTION

In the United States (U.S.) African American (AA) adults have the highest age-adjusted prevalence rate for obesity (47.8%) compared to all other ethnic groups.¹ Additionally, AAs have a greater prevalence of heart disease and diabetes than whites.^{2,3} Despite the fact that obesity rates in the U.S. continue to rise,¹ a recent report noted that that the percentage of adults who were overweight or obese that reported trying to lose weight within the past year declined from 55.65% in 1988-1994 to 49.17% in 2009-2014.⁴ The largest decline occurred among AA women. More than 65.0% of overweight or obese AA women reported trying to lose weight in 1988-1994, but now only 54.88% of them reported trying to lose weight in 2009-2014.⁴ It is unclear why this decline is most pronounced among AA women. But one study has suggested that AA women have a greater acceptance of their body image than previous generations, since participants expressed making “peace with their bodies,” and that they “had gotten off the dieting roller coaster.”^{5(P. 356)}

Poor dietary habits are a major contributor to the leading causes of morbidity and mortality in the U.S.,^{6,7} and traditionally AAs fail to meet the recommended dietary guidelines more often than other ethnic groups.⁸⁻¹¹ AAs typically consume fewer fruits and vegetables⁸⁻¹¹ and more processed fast foods¹²⁻¹⁴ than other ethnic groups. Some researchers have suggested modifying features of the built environment to help improve AA dietary habits, since some AA communities have limited access to stores selling

healthy foods, as well as more fast food restaurants available in their neighborhoods compared to white neighborhoods.¹⁵⁻¹⁷ However, results have been mixed as to whether or not interventions that focus on modifying the built environment in multiethnic neighborhoods actually improve residents' diet quality (i.e. more fruit and vegetable consumption).^{18,19} While one study did indicate having large-chain supermarkets within a one mile radius of residents' houses in multiethnic neighborhoods can increase fruit and vegetable consumption,¹⁵ other studies that considered two and five mile radiuses did not.^{18,19} One study indicated that the density of large grocery stores was unrelated to fruit and vegetable intake among a study of 77 AA adults, but a greater density of convenience stores within two miles of participants' homes was negatively associated with fruit and vegetable intake.¹⁸ Another study reported that the opening of a large grocery store in a neighborhood that was considered a food desert did not improve fruit and vegetable consumption, nor modify residents' dietary habits.¹⁹

The mixed results of the built environment literature suggest that there are other factors that researchers need to consider for understanding AA food choice and conducting dietary interventions. Previous research has indicated that one of the barriers to healthy eating for AA adults is the perception that eating healthily means giving up a part of their cultural identity.^{5,20,21} Understanding the historical and cultural foodways that influence the food choices of AAs today are important since AA eating patterns have evolved from a long history of slavery, discrimination, and segregation.^{5,22} West African slaves that were taken into the U.S. had to survive by using various food preparation and cooking techniques based on the limited foods they had available to them.^{5,22,23} These historical foodways evolved into the American cuisine called "soul food," where foods

that were once prepared in the Deep Interior South during slavery became mainstream all over the U.S. during the Great Migration and Civil Rights movement to celebrate culture and tradition and to reaffirm AA identity.^{5,22,23}

Today, some of the historically common soul foods, like collard greens, cornbread, pork, and fried chicken, which were staples for both African slaves and poor whites living in the South, are still favorites among many AA and white Americans living in the Black Belt region (i.e. the crescent shaped region that extends 300 miles long and 25 miles wide from southwest Tennessee to east-central Mississippi and then east through Alabama, Georgia, and the Carolinas) today.²⁴ In a previous study examining food preferences among a sample of 270 adults living in Southern Black Belt states, the participants cited fried chicken and catfish, collard greens, cornbread, and green or stringed beans among their top 10 favorite foods to eat.²⁴ Many soul food restaurants offer these types of dishes in the South and serve as means for some AAs to stay connected to their traditions.⁵ While churches and Sunday gatherings have always been an avenue for AAs to celebrate soul food, long work hours and other aspects of contemporary society have led to more people eating away from the home and eating on the go.^{5,25} In a focus group with AA participants, some of the participants had noted that their busy lives have made it difficult for them to eat at home and that they often relied on eating out at restaurants.⁵ Given the role that soul food restaurants serve as modern structures for preserving historical AA foodways in the South, they may be a relevant setting for dietary interventions.

However, some soul food items, like fried chicken, chitlins, pork, and other red meats, consumed in excess have high fat and sodium content that often exceed the

recommended dietary guidelines.²¹ A study participant from a focus group of AA women had described soul foods as ‘‘seductive, satisfying, filling, spicy, high-fat, spiritual, traditional cuisine of black Americans, especially southern blacks.’’^{26(P. 192)} Paradoxically, other staple soul foods, such as the various green vegetables, okra, and black-eyed peas, often meet the dietary guidelines due to having higher fiber and lower calorie content than the heartier foods and they are sourced from plants.²⁷ In fact, soul food’s origins can be traced back to a 14th century West African diet, which mostly consisted of plant-based meals, and was healthier than contemporary soul food today.^{23,28} Researchers have also noted that the prevalence of diabetes and hypertension is much lower among blacks living in West African countries than blacks living in Western countries due to a mostly plant-based diet (PBD) that is high in carbohydrates (~84% of total mean kcalories) and low in protein (~8% of total mean kcalories).^{29,30}

PBDs are associated with a lower risk for certain chronic diseases, such as diabetes, cardiovascular disease, and some cancers compared to the typical Western diet.³¹⁻³⁶ PBDs are also associated with a lower Body Mass Index (BMI),^{37,38} improved sleep quality,^{39,40} and healthier mood states.^{41,42} The observed health benefits from PBDs are based on an increased consumption of fruits, vegetables, nuts, phytonutrients, and whole grains.⁴³ The standard definition of a PBD is the avoidance of meat, poultry, and fish, however there are several categories of PBDs.⁴³ Vegans completely abstain from all animal products; lactovegetarians abstain from meat and fish, but consume dairy products; pescovegetarians consume fish and dairy, but no other meat products; and semi-vegetarians consume mostly plant-based foods, but still have meat and dairy products seldom (i.e.

less than once a week, but more than once a month).³¹ Finally, an omnivore, or non-vegetarian, has no dietary restrictions and regularly consumes animal products.³¹

Based on the health benefits of PBDs and the historical connection between soul food and the West African diet,³² vegan soul food restaurants can provide a culturally relevant context to encourage the adoption of more plant-based meals among AA adults living in the South. As such, this informed the development of the present study: **The overall goal of this study was to examine how the location of vegan soul food restaurants in the South influence African American (AA) communities' exposure to vegan meals and how owners of local vegan soul food restaurants view their roles in promoting the health of their communities.**

Previous research in the U.S. has indicated that AAs that follow vegan or vegetarian diets had better health outcomes than those following an omnivorous diet, including lower BMIs serum cholesterol levels, and blood pressure levels and lower risk of diabetes.⁴⁴⁻⁴⁶ However, while observational research has reported benefits of PBDs for AAs, there is a need for intervention research to assess potential health benefits from consuming a PBD in the AA community, and to find ways to make interventions culturally-relevant by including familiar Southern foods. Additionally, previous studies have demonstrated success with modifying traditional soul food recipes with healthier ingredients to reduce overall energy intake, fat, saturated fat, and sodium to meet the recommended dietary guidelines.^{26,27,47}

Prior public health studies that involved interviews with restaurant and food store owners indicated that one of the barriers for offering healthier options to their customers were concerns about a lack of profit and revenue due to limited demand for healthier

foods.⁴⁸⁻⁵⁰ However, since vegan soul food restaurants are health oriented, partnering with owners of these restaurants may be a viable strategy for learning how to promote healthier eating to local residents in the community and to extend these practices in future dietary interventions. AAs have been a traditionally understudied population in nutrition research and more work is needed to help them meet the recommended dietary guidelines.

1A. SPECIFIC AIMS AND RESEARCH QUESTIONS

This work included formative research in Specific Aim 1 and qualitative interviews in Specific Aim 2. The Specific Aims were as follows:

Specific Aim 1: To identify the locations of vegan soul food restaurants in order to understand the characteristics of the surrounding communities that they serve.

- Catalog the geographic location and describe census information of vegan soul food restaurants in the Southern U.S. Vegan soul food restaurants will be identified from internet searches with the following websites: Google, Yelp, Happycow.net, and Facebook. Restaurants will be searched in the 16 states and the District of Columbia that are defined under the South region of the Census Bureau: Alabama, Arkansas, Delaware, District of Columbia, Florida Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.⁵¹
 - RQ1: What is the density of vegan soul food restaurants in the 16 states and the District of Columbia that make up the South?⁵¹
 - RQ 2: What are the neighborhood characteristics of areas with vegan soul food restaurants?

- RQ 3: Are the majority of Southern vegan soul food restaurants located in a food desert zone as defined by the USDA?⁵²

Specific Aim 2: Conduct interviews with owners of vegan soul food restaurants in states located in the Black Belt region to identify how they view their role as promoters of health in the community in order to identify ways to make PBDs more culturally appealing in the AA community. The rationale for using the Black Belt Region is that these are states with a high percentage of AA residents.^{24,53} As other researchers have noted,⁵⁴ various counties within the Black Belt states yield a collective identity in the South based on the history of agricultural dependency on cotton, as well as higher rates of poverty and lower educational attainment compared to national averages. It is important to focus on this region to gain a thorough understanding of the specific needs of the AA community for potentially improving diet quality with public health interventions.

- A minimum of 12 restaurant owners will be interviewed to learn how they promote PBDs to their clientele in order to identify the best practices for reaching the AA community to introduce healthier, culturally-appropriate diets.
 - RQ4: What is the perception that owners of vegan soul food restaurants have of their role in influencing and promoting health in their communities?
 - RQ5: What strategies do owners of vegan soul restaurants use to make vegan foods more culturally appealing in the AA community?

CHAPTER 2

BACKGROUND

2A. DEFINING SOUL FOOD

Soul food is the term used to describe ethnic cuisine that was originally prepared by AAs living in the Deep Interior South during slavery.²³ Some examples of common soul foods include greens and vegetables, such as collard greens, okra, and kale; entrees like fried catfish, fried chicken, and chitlins; side dishes like black-eyed peas, yams, cornbread, and macaroni and cheese; and various desserts like sweet potato pies or pound cake.^{23,55-58} There isn't necessarily a one-size fits all definition as to what specific foods are considered soul food, since personal preferences, geographic location, and social and economic processes influence the type of foods individuals consume.^{58,59} But many would consider Southern dishes as soul food since that is where it originated.²³ Having a historical perspective on soul food is important for understanding its meaning and cultural significance for the African American (AA) community. With roots going back to West Africa in the 14th century and the Trans-Atlantic slave trade between the 16th and 19th centuries, followed by its contemporary transformation during the Civil Rights Movement and the Great Migration, soul food has an abundant history for shaping AA identity and culture in the U.S.²³

2B. ORIGINS OF SOUL FOOD

Soul food is reported to have originated during the 14th century when West Africans encountered food supplies from Europeans and used some of the newfound

foods along with their traditional crops to cook their own dishes.⁶⁰ These cooking traditions were transplanted to the Americas during the slave trade. African slaves had to recreate their material, cultural, and social lives in foreign land under extremely disempowering conditions. As others noted, “slavery shredded the whole of material life off its victims...tearing people loose from their cultures, lands and kin groups. But in the New World the slaves remade their lives culturally.”^{61(P. 49)} Part of this rebuilding included food, since it was an “essential material necessity and an elaborate cultural artifact that played a central role in this process.”^{62(P.207)}

In the U.S., African slaves began to cook with new greens (e.g. collard greens, kale, or mustard greens) and some crops that were originally found in Africa, such as okra.⁶⁰ Slaves that had to cook in the plantation owners’ kitchens were exposed to foods they had not encountered before, such as potatoes and fried chicken.⁶⁰ Indeed, the “cultural aspects of a cuisine and the pleasures of cooking and eating were reserved for the big house where the slaves were cooking for their masters. In fact, it was in those very houses that African slaves created what eventually would be termed Southern Cooking.”^{62(P. 208)} Additionally, slaves were given meats like pig’s feet and beef tongue because they were considered undesirable from their enslavers.^{22,23,60} Slaves would make use of these animal parts that their masters’ shunned, as well as inferior quality meats, by using a variety of seasonings to flavor and improve their taste. These potent seasonings would later become the hallmarks of Southern cooking and soul food.⁶² Slaves also relied on hunting, fishing, raising livestock, and trading food supplies with neighboring poor whites to further supplement their diet.⁶⁰ Through all of these mechanisms slaves went on

to develop a cuisine that would allow them to survive and “maintain a human soul under the dark and draconic conditions of slavery and later in the Jim Crow south.”^{62(P. 209)}

Another significant part of soul food’s history was the church. Black churches in the rural South also became a prominent place for soul food gatherings during the 1800s and 1900s.⁶³ In fact, prior to soul food becoming a popular term in the 1960s, it had religious connotations in black culture, since soul food was said to “‘feed one’s soul’, as it were, through hearing a sermon, saying your daily prayers, or studying scripture.”^{23(P.}

⁴²⁾ After the emancipation proclamation, religious gatherings became the center piece for social activity for AAs.^{23,63} Churches allowed many individuals to socialize with others in their local community and encouraged friendly cooking competitions and community building.⁶³ Weekly church gatherings and holiday celebrations included many soul food recipes, like fried chicken and fish, cakes, and sweet potato pies.⁶³ The church allowed many AAs to enjoy foods not otherwise consumed during the rest of the week because of the discrimination from the sharecropping system after slavery.²³ Former plantation masters became landlords to many AAs in the South and divided their farms into smaller plots of land for tenants to grow and harvest crops.²³ Tenants had to agree to harvest half of their crops to their landlords, making food very difficult to acquire.²³ As a result, many AAs would consume very little meat, lots of vegetables, and some processed foods during the week.²³ The weekly church gathering would allow many families to enjoy heartier meals.²³

After many years of oppression and discrimination, many black families decided to leave the South.²³ Between the decades of the 1910s to the 1970s, more than 6 million AAs migrated to the North and Midwest.²³ Historians termed this event the “Great

Migration.”⁶⁴ During this era, soul food would spread from the rural South and begin to become mainstream all across America.²³ The Great Migration movement resulted in many families transplanting their rural soul food traditions into urban homes in America.²³ After World War 2, a burgeoning middle class resulted in many AA families with more disposable income and the ability to settle into homes.²³ The added yard space and disposable income led to the Sunday dinner tradition, where AA families could sit down together and enjoy a table filled with traditional celebrations.²³ Supermarkets in black neighborhoods began to sell foods that were traditionally from the South, which allowed families to continue cooking foods they enjoyed prior to moving North.²³ Additionally, some AA soul food restaurants were becoming established.²³

Conceptualizing soul food is difficult since its meaning is very personal and varies from each chef or individual. For example, Jim Harwood, the author of *The Soul Food Cookbook*, noted that “Soul food takes its name from a feeling of kinship among Blacks. In that sense, it’s like ‘Soul Brother’ and ‘Soul Music’ – impossible to define but recognizable among those who have it. But there’s nothing secret or exclusive about Soul Food.”⁶⁵

Soul became a commonly used word to describe AA cultural empowerment during the Civil Rights Movement.^{60,66} Terms like “soul brother,” “soul sister,” or “soul music” were all commonly used phrases during this time.⁶⁰ As such, the term was naturally coined to describe the recipes that AAs had been cooking for generations.⁶⁶ The context and meaning of “soul” would also begin to take on different interpretations because while some individuals embraced all of the meals once prepared during slavery, others have argued that true soul food was not “the master’s chicken- and pork-laden left

overs,⁶⁷ but a traditional West African diet of mostly plant-based foods and fish. This latter interpretation has resulted in a number of health-conscious soul food restaurants today.²³

2C. SOUL FOOD TODAY

While soul food has been around for decades to define traditional black cuisine, contemporary habits have considerably changed how soul food looks and tastes today.⁶⁸ For instance, the American public has responded to the dietary guidelines provided by the U.S. government, i.e. consume less saturated fat and sodium and eat more fruits and vegetables, which has impacted food preparation methods.⁶⁹ Some AA adults make food purchasing decisions based on healthy choices. In interviews with AA residents shopping at their local supermarkets in Southwest Baltimore, the participants discussed how they defined eating healthy.⁷⁰ Several themes and attributes were noted, including cooking habits, eating schedule throughout the day, and food preparation and processing techniques.⁷⁰ Additionally, with time constraints from the modern working environment, as well as the increased availability of fast foods, many AAs have different eating patterns today than previous generations.^{66,71,72}

Today, soul food is at a crossroads with preserving its heritage and having to evolve again in present-day society. One of the concerns about keeping soul food's heritage alive is the shortage of AA cooks who practice the cuisine.²³ A number of veteran chefs are also retiring or pursuing other culinary experiences.²³ Some individuals feel that soul food today has lost its authenticity due to the heavy commercialization of mainstream restaurants and the urban identity it has taken on.²³ However, one area where contemporary soul food is progressing is incorporating healthier meals, which has been

termed “Down-home healthy” cooking.²³ Down-home healthy cooking involves modifying soul food ingredients and cooking preparation methods in an effort to meet the recommended dietary guidelines.⁷³ When discussing the future of soul food, Marcus Samuelsson, owner and chef of the Red Rooster Restaurant in Harlem, stated “As American heritage gets more diverse, I think there will be more takes on ‘soul food’ such as health-focused soul food, high end soul food, fast-casual soul food concepts, and more.”^{23(P. 257)} Similar sentiments were expressed by Adrian Miller, author of *Soul Food: The Surprising Story of American Cuisine, One Plate at a Time*, when he wrote “After eating my way across the country, it’s clear to me that soul food’s creative energy burns brightest in restaurants that are targeting upscale, vegetarian or vegan clientele.”^{23(P. 256)} He noted that among the 150 soul restaurants in 35 different cities that he visited, many restaurants do include vegan meals on the menu or there are restaurants that are exclusively vegan.²³ Soul food’s health conscious movement of today can actually be considered a return to its original roots, i.e. before slavery, and centered on mostly plant-based foods and little meat consumption.²³

2D. SOUL FOOD VERSUS SOUTHERN FOOD

The debate about soul food versus Southern food has ensued due to the fact poor whites in the South ate the same foods as African slaves.²³ During the Civil War food shortages became widespread in many Southern states.²³ As a result, it became common for whites and blacks to eat the limited food supplies that were available during this time.²³ Scholars and culinary experts point out that certain recipes were considered soul food, while others were simply Southern food.^{60,74} Generally, soul food recipes have been said to be saltier, spicier, and sweeter than Southern food.²³ But just as important as

ingredients are for defining soul food, cultural identity is significant. After all, soul food is used as a term to reaffirm black identity and distinguish itself from a white dominant culture.⁶⁶ Bob Jeffries described this notion in his book, *Soul Food Cookbook*, that “while all soul food is Southern food, not all Southern food is soul. Soul food cooking is an example of how really good Southern [African-American] cooks cooked with what they had available to them.”⁷⁵

2E. SOUL FOOD AND PUBLIC HEALTH

Prior public health research has reported greater rates of morbidity and mortality for heart disease, diabetes, and some cancers among AAs compared to whites partly due to poor dietary habits, especially in the South.⁸⁻¹¹ But others point out that the historically similar food pathways between Southern AAs and whites would suggest that many Southern whites should also have similar rates of heart disease, diabetes, and other leading chronic conditions like AAs, but yet it is only AA dietary patterns that are blamed as the culprit.⁷⁶ Additionally, it can be argued that since consumers are wealthier today, soul foods are consumed in much larger serving sizes and quantities than how it was originally consumed, when many of the foods were scarcely available during times of slavery.²³ Furthermore, public health research has consistently demonstrated that fast foods are more readily available in prominently black communities than white ones and some AA communities have limited access to supermarkets with fresh produce and healthy foods.⁷⁷⁻⁷⁹ Regardless of perspectives, experts and clinicians interested in dietary interventions for AAs should focus on modifying food practices rather than drastically changing food preferences in order to establish good habits without negating culture.⁵⁵ As noted from prior work, the implications for negating AA food choice may create the

perception of ignoring AA cultural heritage and forcing individuals in the AA community to conform to a dominant (i.e. white) culture.⁵

Previous dietary interventions have had success with modifying traditional soul foods with healthier ingredients.^{26,27,47} Baking foods instead of frying them, using healthier cooking oils, and using reduced-fat dairy products are some examples of the changes accomplished in order to meet recommended dietary guidelines.^{26,27,47} Rankins, Worthan, and Brown had seven women form a cooking club to modify 24 soul food ingredients and demonstrate cooking the healthier meals to a larger sample of AA women.²⁷ The goal was to have meals that met the nutrient criteria from the DASH diet.²⁷ Another intervention by Rankins involved 10 AA women that modified 21 soul food ingredients to comply with the dietary guidelines from the NCI.²⁶ The women were followed for a year and had other people from their local community taste-test the healthy meals they prepared.²⁶ Over half of the meals taste-tested were rated as “very good” and the mean fat content for vegetables and meat were reduced by 68% and 49% respectively.²⁶ Anderson-Loftin et al. had a sample of AA adults with type 2 diabetes incorporate healthier, low fat food choices based on recommendations in line with the Diabetes Food Pyramid.⁴⁷ The intervention group lost an average weight of 1.8 kg, while the control group gained an average of 1.9 kg.⁴⁷ There was also a trend in lower lipids and A1C levels in the intervention group.⁴⁷ A summary of the details of the interventions are in Table 2.1

Table 2.1. Summary of previous dietary interventions focused on modifying soul food ingredients.

Study	Population	Intervention	Approach	Main Outcomes
Anderson-Loftin, W., Barnett, S., Bunn, P., Sullivan, P., Hussey, J., & Tavakoli, A. (2005).	Sample of 97 AA adults with type-2 diabetes living in rural South Carolina.	Participants in the intervention group were taught to incorporate healthy, low fat food choices according to the Diabetes Food Pyramid based on their individualized goals and food preferences.	Four weekly classes and five discussion groups that covered preparation strategies for a low fat diet and demonstrated cooking classes.	At 6 months the intervention group had an average weight loss of 1.8 kg, while the control group had an average weight gain of 1.9 kg. A trend in lower A1C and lipids was also observed among the intervention group.

<p>Rankins, J., Wortham, J., & Brown, L. L. (2007)</p>	<p>Seven AA women from a neighborhood health center were recruited to form a cooking club peer group and 65 AA women (including the 7 from the cooking club) made up the intervention population.</p>	<p>Focus was to modify soul food ingredients to meet the nutrient criteria of the DASH diet plan.</p>	<p>The cooking group embarked on a 10-week workshop to modify soul recipes that they selected with healthier ingredients to meet DASH guidelines. The intervention group attended 8 meetings where they were presented with the recipes created by</p>	<p>A nutrient composition of the menu created by the cooking club indicated the nutrient levels were consistent with the DASH plan.</p>
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			the cooking club.	
Rankins, J. (2002)	Ten AA women were recruited through a social services organization serving an urban public housing project.	Modify soul food ingredients to comply with dietary guidelines from the National Cancer Institute (NCI).	The participants were interviewed through focus groups and were observed over a period of 12 months so that the researcher could assess their habitual cooking preparation methods. The participants modified the dishes they prepared and	Mean fat contents of modified vegetables (n=4) and meats (n=7) were reduced by 68% (from 7.7 ± 4.7 g to 2.5 ± 1.6 g) and 49% (from 15.0 + 4.4 g to 7.7 ± 4.4 g) respectively. Over half of the 21 modified recipes were rated as "very good" from 500 community taste-testers.

			<p>taste-tested the modified foods in interviews to assess dietary acceptability of the healthier meals. The dishes were tasted and sampled from participants in the surrounding community.</p>	
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2F. PLANT-BASED DIETS

The health benefits of plant-based diets (PBDs) gained attention in public health research after findings from the Seventh Day Adventist cohorts were published.^{38,80-84}

Researchers observed that most of the Seventh Day Adventists did not smoke or drink alcohol, practiced a Sabbath (i.e. a day of rest) once a week, and 50% of the population ate meat less than once a week or completely abstained from it.⁸⁰ These dietary patterns

allowed researchers to compare the health experiences of the Seventh Day Adventists to non-Adventists⁸²⁻⁸⁴ and to compare the different dietary patterns within the groups.^{38,80,81} The key findings from the Adventist Health Study-2 (AHS-2) was the observed lower BMI among each of the vegetarian groups compared to the omnivore participants.³⁸ Among the five groups studied (omnivore, semi-vegetarian, pesco-vegetarian, lactovegetarian, and vegan), vegans had the lowest BMI ($24.0 \pm 4.8 \text{ kg/m}^2$) and omnivores had the highest ($28.7 \pm 6.4 \text{ kg/m}^2$).³⁸ Additionally, some research with AA participants from the AHS-2 was published that also documented health benefits from the participants that followed a PBD.^{44,85} One report indicated that AAs that were vegan had a lower risk for diabetes than omnivore participants.⁸⁵ Another report found vegan and vegetarian AHS-2 AA participants had a lower waist-to-hip ratio, serum cholesterol levels, and blood pressure than AA semi-vegetarian and omnivore participants.⁴⁴ Other cohort studies have reported similar findings, where PBDs are associated with lower BMI.⁸⁶⁻⁸⁸

A recent systematic review of 86 cross-sectional studies and 10 prospective studies that compared vegetarian and vegan diets to omnivorous diets indicated that among the cross-sectional studies vegetarian and vegan diets were significantly associated with lower BMI (-1.49 kg/m^2 ; 95% CI: -1.72 to -1.25 kg/m^2), serum total cholesterol (-28.16 mg/dL ; 95% CI: -31.22 to -25.10 mg/dL), LDL-cholesterol (-21.27 mg/dL ; 95% CI: -24.27 to -18.27 mg/dL), HDL-cholesterol (-2.72 mg/dL ; 95% CI: -3.40 to -2.04 mg/dL), serum triglycerides (-11.39 mg/dL ; 95% CI: -17.42 to -5.37 mg/dL), and blood glucose levels (-5.08 mg/dL ; 95% CI: -31.22 to -25.10 mg/dL) compared to omnivorous diets.⁸⁹ Sub-analyses indicated that all of the health benefits were most pronounced among the vegan participants.⁸⁹ For the prospective studies, an overall

analysis comparing vegetarian and vegan diets to omnivorous diets indicated that vegetarian diets were significantly associated with a reduced risk of incidence mortality from ischemic heart disease (RR 0.75; 95% CI, 0.68 to 0.82) and incidence of total cancer (RR 0.92; 95% CI 0.87 to 0.98) compared to omnivorous diets.⁸⁹ For vegan diets there was a lower risk of incidence from total cancer (RR 0.85; 95% CI, 0.75 to 0.95) compared to omnivorous diets.⁸⁹

Two systematic reviews of clinical trials assessing PBDs for weight loss indicated that there was significant weight loss among the participants assigned to a PBD as compared to control or comparison diet conditions.^{37,90} Barnard, Levin, and Yokoyama reviewed 15 clinical trials that used PBDs for at least four weeks without energy intake restrictions and reported an average weight loss of -3.4 kg in an intention-to-treat analysis and -4.6 kg in a completers-only analysis.³⁷ Huang et al. reviewed 12 clinical trials and found participants assigned to some type of PBD lost an average of -2.02 kg more than participants assigned a non-vegetarian diet.⁹⁰ Six of the 12 studies involved energy restriction; unsurprisingly, the average weight loss was greater among the energy-restricted vegetarian diets than non-energy restricted vegetarian diets (mean of -2.2 kg vs. -1.6 kg respectively).⁹⁰

Two meta-analyses assessed diabetes risk and glycemic control among vegan, vegetarian, and omnivorous diets.^{91,92} One review assessed the association for diabetes risk between individuals consuming vegetarian diets (vegan, lactovegetarian, lacto-ovo-vegetarians, pesco-vegetarian, and semi-vegetarian) and omnivorous diets using pooled estimates from 13 observational studies.⁹¹ The pooled odds ratio for diabetes risk among vegetarians was 0.726 (CI: 0.608 to 0.867) compared to the omnivores.⁹¹ The observed

inverse association between the vegetarian diets and diabetes risk remained statistically significant even after BMI was adjusted for in the analysis.⁹¹ In subgroup analyses that compared each vegetarian type, vegans, lactovegetarians, and lacto-ovo-vegetarians had a lower risk of diabetes when compared to the omnivore group; however, pescovegetarians and semi-vegetarian diets were not associated with a decreased diabetes risk when compared to the omnivore group.⁹¹ Another review examined the association between vegetarian diets (vegan or lacto-ovo-vegetarian) and glycemic control (hemoglobin A1C and fasting blood glucose levels) among 6 clinical trials.⁹² The pooled analysis indicated that the consumption of vegetarian diets was associated with a significant mean reduction in HbA1c levels by -0.39 percentage point (CI: -0.62 to -0.15 percentage point) compared with omnivorous diets.⁹² There was a nonsignificant association for the consumption of the vegetarian diets with a mean reduction of -0.36 mmol/L (CI: -1.04 to 0.32) compared with omnivorous diets.⁹² Some of the possible mechanisms for the observed benefits of the vegetarian diets on glycemic control were that changes in energy and dietary components from the vegetarian diet interventions included less overall energy intake (-139.8 kcal), protein (-6.4% energy), and fat (-11.6% energy), while there was an increase in carbohydrate ($+13.8\%$ energy) and fiber ($+7.0$ g) intake.⁹²

Another meta-analysis of 7 clinical trials and 32 observational studies assessed the association between vegetarian diets and blood pressure.⁹³ The pooled analysis of the clinical trials indicated that the consumption of the vegetarian diets (vegan, lactovegetarian, and lacto-ovo-vegetarian) were associated with a mean reduction of -4.8 mm/Hg; (CI, -6.6 to -3.1 mm/Hg) for systolic blood pressure and -2.2 mm/Hg (-3.5 to

-1.0 mm/Hg) for diastolic blood pressure compared to omnivorous diets.⁹³ The pooled analysis of the observational studies indicated the consumption of the vegetarian diets (vegan, lactovegetarian, lacto-ovo-vegetarians, pesco-vegetarian, and semi-vegetarian) was associated with a mean reduction of -6.9 mm/Hg; (-9.1 to -4.7 mm/Hg) for systolic blood pressure and -4.7 mm/Hg; (-6.3 to -3.1 mm/Hg) for diastolic blood pressure compared to omnivorous diets.⁹³ While the health benefits of PBDs have been well documented, there are still a limited amount of studies that focused on ethnic minority populations.⁴⁴⁻⁴⁶

2G. STUDIES ON PLANT-BASED DIETS AND AFRICAN AMERICAN SAMPLES

Studies on PBDs and AA samples are limited, but the findings do indicate that AAs following vegan or vegetarian diets tend to have a lower BMI and cardiovascular risk factors than AAs following omnivorous diets.⁴⁴⁻⁴⁶ Two cross-sectional studies from the AHS-2 cohort compared health outcomes between vegetarian and omnivore AA participants.^{44,46} One study compared vegan or vegetarian AAs, semi-vegetarian AAs, and omnivore AAs for BMI, blood pressure, and fasting lipids.⁴⁴ There were no significant differences in BMI (vegetarian: 26.0 ± 0.8 kg/m², semi-vegetarian: 29.2 ± 0.8 kg/m², omnivore: 28.6 ± 0.8 kg/m²) and systolic blood pressure (vegetarian: 117.5 ± 1.9 mm/Hg, semi-vegetarian: 120.1 ± 2.1 mm/Hg, omnivore: 120.4 ± 2.3 mm/Hg) and diastolic blood pressure (vegetarian: 77.6 ± 1.3 mm/Hg, semi-vegetarian: 77.2 ± 1.4 mm/Hg, omnivore: 78.5 ± 1.5 mm/Hg) between any of the groups.⁴⁴ However, only 16% of the vegan or vegetarian AAs were confirmed hypertensive compared to 35.7% of the semi-vegetarians and 31.1% of the omnivores.⁴⁴ For total serum cholesterol, both vegetarians

and semi-vegetarians had significantly lower values than omnivores (vegetarian: 4.7 ± 0.1 mmol/L, semi-vegetarian: 4.9 ± 0.2 mmol/L, omnivore: 5.4 ± 0.2 mmol/L; $p < 0.05$).⁴⁴ For LDL cholesterol, vegetarians had a significantly lower value than omnivores, but there were no differences between vegetarians and semi-vegetarians or semi-vegetarians and omnivores (vegetarian: 2.7 ± 0.1 mmol/L, semi-vegetarian: 2.9 ± 0.2 mmol/L, omnivore: 3.2 ± 0.2 mmol/L; $p < 0.05$).⁴⁴ The authors concluded that the lack of differences between BMI and blood pressure values in any of the groups may be due to the fact there were only small differences between macro and micro nutrient intake between the groups and a higher percentage of semi-vegetarian and omnivore participants were taking blood pressure medications than the vegans or vegetarians.⁴⁴

A more recent study that compared health outcomes between vegan or vegetarian AAs to omnivore AAs found that the vegan or vegetarian AAs had odds ratios of 0.43 (95% CI: 0.28 to 0.67) for obesity, 0.54 (95% CI: 0.36 to 0.82) for abdominal obesity, 0.56 (95% CI 0.36 to 0.87) for hypertension, 0.48 (95% CI 0.24 to 0.98) for diabetes, and 0.42 (95% CI 0.27 to 0.65) for total serum cholesterol levels compared to the omnivore AA participants.⁴⁶ Another study with the AHS-2 cohort compared vegetarian and omnivore AAs with vegetarian and omnivore whites.⁴⁵ The findings indicated that AA vegetarians were significantly leaner than AA omnivores (vegetarian: 27.0 ± 0.7 kg/m², omnivore: 31.7 ± 1.1 kg/m²; $p < 0.05$) and exhibited lower average systolic BP (vegetarian: 131.4 ± 3.6 mm/Hg, omnivore 141.6 ± 3.1 mm/Hg) ($p < 0.05$), but had significantly higher average BP than either dietary group of whites (vegetarians: $120.9 \pm 2.1/66.7 \pm 1.1$ mm/Hg; non-vegetarians: $122.8 \pm 2.5/67.6 \pm 1.3$ mm/Hg; $p < 0.05$).⁴⁵

While these observational studies demonstrate the health benefits of PBDs for AAs, intervention research that specifically focuses on ethnic minorities is still lacking.

2H. EXAMPLES OF VEGAN SOUL FOODS

Similar to standard soul food, there is limited scientific literature as to what constitutes vegan soul food and there isn't a one size fits all definition.²³ Nor is there any "typical" eating pattern to which all AAs ascribe to.⁹⁴ Using a historical definition, many vegetables consumed from AAs in the South today were originally brought from Africa to the United States.⁹⁵⁻⁹⁸ For example, foods like black-eyed peas, yams, cassava, plantains, sweet potatoes, green bananas, collard greens, okra, squash, and kale, turnip, and mustard greens are thought of as staple soul foods in the South, and they originated from Africa.⁹⁸ Non-vegan staple soul foods like poultry, meat, and dairy products are often substituted with tofu, tempeh, seitan, eggplant, lentils, and nondairy products.^{99,100} Chefs also use a blend of herbs and spices to flavor the foods.⁹⁸ This is why soul food is described as a "fusion cuisine," as there is no universal standard as to what specific spices must be used for preparing foods, but rather it is based on the individual's own personal preferences.⁹⁸ Some examples of herbs and spices that are used include allspice, bay leaves, basil, chili powder, cilantro, cumin, curry powder, ginger, ground pepper, habanero (scotch bonnet) peppers, and thyme.⁹⁷⁻¹⁰⁰ Additionally, modern cooking preparations of vegan soul foods are healthier than traditional soul foods, since chefs rely on using lower fat, cholesterol-free substitutes for common high-fat, high-cholesterol items.⁹⁷⁻¹⁰⁰

2I. INDIVIDUAL, INTERPERSONAL, AND ENVIRONMENTAL DETERMINANTS OF FOOD CHOICE

Since this work was focused on exploring how owners of vegan soul food restaurants potentially influence the health of their communities, it is important to consider various individual and environmental determinants of food choice that can impact peoples' willingness to consume more plant-based foods at the restaurants and at home. Food choice is influenced from a combination of behavioral and environmental factors, since individual health and lifestyle choices are based on the physical and social structures that people live in.¹⁰¹⁻¹⁰³ The decision to eat and which foods to eat will vary over one's life course because of the differing food experiences and attitudes shaped from those experiences.^{59,104}

Individual determinants of food choice

Out of all the individual determinants of food choice, taste is one of the strongest predictors for food preferences.¹⁰⁵ Taste preferences are often less negotiable than other determinants of food choice, including convenience and cost.¹⁰⁵ In fact taste exerts such a powerful influence on food choice, one report suggested that the food industry should promote taste first and nutrition second.¹⁰⁶ If plant-based foods taste good to the individual, then he or she would likely be more motivated to consume a PBD. Another determinant for food choice is an individual's cooking skills. People with a higher diet quality tend to cook more meals with complex preparation steps, as opposed to individuals that rely on eating out more.¹⁰⁷ Individuals that eat more foods away from home have diets that are more energy dense with added sugars and fat.¹⁰⁷ Having the cooking skills to prepare more plant-based foods would likely increase the individual's

ability to adopt a PBD, since prior research comparing participants that were prescribed either a vegan diet or a low-fat diet found that the vegan groups rated the food preparation of their meals to be more difficult than the standard diet groups.¹⁰⁸⁻¹¹¹

Other individual determinants of food choice include psychological determinants like stress and mood states.¹¹²⁻¹¹⁵ Eating while hungry is pleasurable and rewarding since neural substrates, such as dopamine, are activated during the eating episode, which is similar to the effect of drug abuse.¹¹⁶ Meal size may influence this response, since the consumption of larger meals have been associated with more pleasurable mood states, compared to eating smaller snacks.¹¹⁴ Several studies have demonstrated that perceived stress changes consumers' food choices away from healthy meals to more energy dense foods.¹¹²⁻¹¹⁴ Individuals in a positive mood are more likely to choose healthier foods, while individuals in a negative mood state are more likely to choose indulgent foods, like chocolate.¹¹⁵ One study indicated that females that identified themselves as "chocolate addicts" had a lower positive and higher negative affect prior to eating than a control group.¹¹⁷ Although another study reported that among healthy men, sadness was associated with decreased appetite, but when cheerful, chocolate tasted more pleasant and was consumed in larger quantities.¹¹⁸

Interpersonal determinants of food choice

At an interpersonal level, family, friends, and peers in a person's social network all impact the types of foods someone chooses to eat because social interactions influence eating behavior and our views on food.¹¹⁹ An individual's willingness to try new foods can also be influenced from his or her social network, since a friend or family member can introduce the individual to foods that he or she may have otherwise avoided.¹²⁰

Vegan soul food restaurants can serve as a social setting for someone to introduce friends and family members to more plant-based foods.

Environmental determinants of food choice

The availability of foods, the cost of foods, and convenience are all significant environmental level determinants for food choice. It is well established in the built environment literature that the availability or lack of availability of restaurants, stores, and other structures offering healthy foods influences residents' dietary choices. For example, low income neighborhoods have worse access to supermarkets than wealthier ones, but more access to fast foods than the general population.^{121,122} These associations have been consistently reported in developed countries like the U.S.,¹²³⁻¹²⁵ the U. K.,¹²⁶⁻¹²⁸ the Netherlands,^{129,130} Sweden,¹³¹ and Australia.^{132,133} Although others have pointed out that the geographic location of poorer neighborhoods does not always lead to poor food choices.^{134,135} Factors like having an automobile and the subjective perception of having access to healthy foods are more important than the absence or presence of resources.^{134,135} It would be plausible to assume that people would be more likely to go to vegan soul food restaurants if they lived closer to them or if their place of work is nearby to the restaurants.

Cost is a significant determinant of food choice, particularly for individuals with low-income.^{136,137} Low-income groups have a tendency to consume unhealthy diets and consume less fruits and vegetables than high-income groups.¹³⁷ A potential barrier for people going to vegan soul food restaurants is the fact that some individuals with low incomes may not be able to afford it. One report indicated that lower income families would have to devote about 43 – 70% of their food budget to fruits and vegetables.¹³⁸

Comfort and convenience can also influence food choices since time constraints from modern life (e.g. balancing family life with longer working hours) drive consumers to seek readily prepared foods or to eat at restaurants.^{139,140} There has been an increasing trend for consuming more meals away from home in the U.S.²⁵ While roughly two-thirds of energy is consumed from home, only 54 – 57% of adults reported any cooking activities on a given day.²⁵ Vegan soul food restaurants can help address convenience by reducing patrons' food preparation burden at home and allowing them to eat plant-based meals prepared by chefs.

Other factors influencing food choice

There are also differences in food choice among certain demographic groups. Women are more likely to consume fruits and vegetables and less likely to consume fast food than men.¹⁴¹⁻¹⁴³ A few studies indicated that mothers and fathers tend to consume more calories and exercise less than nonparents.^{144,145} Socioeconomic status is a major determinant of food choice since poverty and food insecurity are associated with lower quality diets and less fruit and vegetable consumption.^{136,137} Race and ethnicity influence food choice based on access to foods^{146,147} and cultural preferences for specific food items.^{148,149} Race and ethnicity also reflect the interaction of ideals, identity, and roles, where the specific preferences for food are shaped by one's own ethnic affiliation embedded in specific contexts that are intertwined and interwoven with other factors.¹⁴⁹ For education, higher levels of educational attainment are associated with higher quality diets.^{146,150} Based on all of these determinants of food choice, unique strategies that are tailored to a particular individual or group's needs and interests are required to elicit long term, meaningful change of dietary habits.¹³⁹

2J. RESEARCH ON COMMUNITY NUTRITION PARTNERSHIPS WITH RESTAURANTS

Restaurants may be important settings to improve dietary choices, since more people are eating away from home than in previous generations, and foods consumed away from home typically have more fat and saturated fat, and less fiber, calcium, and iron than foods prepared at home.^{25,151} Interventions with restaurants that involve community health promotion have typically focused on increasing the availability of healthier foods on the menu and increasing patrons' awareness of the healthier foods offered.¹⁵²⁻¹⁵⁴ For example, a social marketing program titled "Project LEAN (Low-Fat Eating for America)" was implemented to train chefs at 10 different restaurants to offer healthier choices on the menu in order to reduce dietary fat consumption.¹⁵² The overall outcomes of the program were mixed, but one restaurant was reported to have reduced the fat content of one of their menu items from 57% of energy to 30% without customers discerning any change in the taste of the food.¹⁵² The American Heart Association (AHA) developed the "Dine to Your Heart's Content" program to focus on the preparation of menu items with reduced calories, fat, cholesterol, and sodium at 16 restaurants in Virginia.¹⁵³ Focus groups with both patrons and owners of the restaurants indicated there was strong interest for having healthier menu items, but there was no specific health outcome data on the program itself.¹⁵³ In Canada, the "Ottawa-Carleton Heart Beat Restaurant Program" was created to work with restaurants to offer lower-fat, higher fiber menu items.¹⁵⁴ A survey of the participating restaurants indicated that 86% of them were able to offer calorie-reduced salad dressings, 90% were able to offer fresh fruits or low-fat yogurts on their dessert menus, 98% were able to serve rich sauces or creams on the

side instead of on the entrees, and 100% were able to offer smaller portions of meat, fish, and poultry.¹⁵⁴ However, there was no data on consumer behavior or health outcomes.¹⁵⁴

Research on partnering with restaurants to improve health is still continuing to be explored, but gaps in the literature remain. There is limited data that specifically measures the environmental changes at the restaurants on the patrons' individual health behaviors.¹⁵⁵ It is also difficult to ensure fidelity for all aspects of the intervention.¹⁵⁵ Usually health interventions with restaurants are short lived due to a lack of sustainability once the intervention ends.¹⁵⁵ Finally, it is difficult and expensive to conduct rigorously designed studies with restaurant owners, since restaurants are a place of a business and some of the goals of the intervention may not necessarily align with the organization's business practices.¹⁵⁵

While there is emerging research to show that restaurants may play both positive and negative roles on community health, little is known about the role of vegan soul food restaurants have in supporting the health of the community.

CHAPTER 3

METHODS

3A. OVERVIEW OF RESEARCH DESIGN

Specific Aim 1: To identify the locations of vegan soul food restaurants in order to understand the characteristics of the surrounding communities that they serve.

- RQ1: What is the density of vegan soul food restaurants in the 16 states and District of Columbia that make up the South?⁵¹
- RQ 2: What are the neighborhood characteristics of areas with vegan soul food restaurants?
- RQ 3: Are the majority of Southern vegan soul food restaurants located in a food desert zone as defined by the USDA?⁵²

For Specific Aim 1, this work mapped the locations of vegan soul food restaurants in order to understand the characteristics of the surrounding communities that they serve. More specifically, the goal of this aim was to describe demographic information of the surrounding communities that these restaurants are located in. This involved using Census information to tally the percentage of AAs, poverty rates, and obesity rates by county, as well as using the USDA's food atlas map and to catalog each restaurant's location in order to assess if it was located in a food desert zone or not.⁵² The relevance of gathering this information was to determine how the restaurants might impact the communities that they serve. For example, if the majority of the restaurants were located in neighborhoods that are considered food desert zones, then the restaurants may expose

patrons to vegan meals that they may have otherwise not been exposed to due to the lack of supermarkets or stores that sell vegan foods. One such example is the Everlasting Life restaurant in Washington, DC, which uses a mobile food truck to visit lower-income neighbors to provide samples of plant-based foods cooked in rich in protein sources and whole grains, such as vegan mac-n-cheese, collard greens, black-eyed peas, and tempeh, which has a flavor similar to fried chicken.¹⁵⁶

An assumption of conducting this aim was that it assumed most patrons of the restaurants would live in nearby neighborhoods surrounding the restaurants. This might not necessarily be the case, since patrons could come from far away. Other work has indicated that the geographic location of poorer neighborhoods does not always lead to poor food choices.^{134,135} Factors like having an automobile and the subjective perception of having access to healthy foods are more important than the absence or presence of resources.^{134,135}

Specific Aim 2: Conduct interviews with owners of vegan soul food restaurants in states located in the Black Belt region to identify how they view their role as promoters of health in the community in order to identify ways to make PBDs more culturally appealing in the AA community.

- RQ4: What is the perception that owners of vegan soul food restaurants have of their role in influencing and promoting health in their communities?
- RQ5: What strategies do owners of vegan soul restaurants use to make vegan foods more culturally appealing in the AA community?

For Specific Aim 2 this work involved qualitative interviews with owners of vegan soul food restaurants located in Black Belt states⁵³ to assess how they view their

role in promoting health in their communities. Since this was exploratory research, doing in-depth interviews was important for discovering relevant themes and potential strategies that can be identified in future interventions targeting eating habits among AA adults, rather than superficial descriptions assessed from written questionnaires.¹⁵⁷ As noted before, the rationale for selecting restaurant owners located in states in the Black Belt Region is that there is a high percentage of AA residents that live there.^{24,53} Many of the counties and cities in the Black Belt states share a Southern identity based on the history of agricultural dependency on cotton. The interview questions were guided from a conceptual framework based on constructs from social identity theory and the social ecological model, which is discussed below.^{158,159}

3B. CONCEPTUAL FRAMEWORK

This research used constructs from Social Identity Theory (SIT) and the Social Ecological Model to inform the development of interview questions. The model considers the strategies that owners of vegan soul food restaurants use to promote the consumption of vegan meals (Figure 1).^{158,159} Specifically, this model emphasizes the social identification construct from SIT by focusing on how the restaurant owners would define their own personal identity from multiple social groups (African American, vegan, restaurant owners etc.). In the application of this model, it is assumed that owners of vegan soul food restaurants will have a strong sense of group identity for each of the role that they define themselves to be. Therefore, taking pride from identifying as an AA or vegan would influence their business practices and outreach to their patrons for promoting health in their communities. The model considers potential ecological factors that the owners may perceive that they influence. It should be noted that the particular

ecological constructs in this model are only based on the assumption from the researcher, which is why dotted arrows are used to illustrate these factors.

Social Identification Theory:

SIT was developed by Tajfel to explain that the groups which people belong to are important for influencing their own personal identity and a sense of belonging to the world.^{158,160} People tend to classify themselves into various social categories, such as age, gender, social class, or religious affiliation, and increase their self-image by enhancing the status of the group to which they belong to.¹⁶⁰ The individual's overall personal identity of self consists of a loose association from various group memberships. Different groups become more or less salient in different social situations.¹⁵⁸ Alternatively, people may discriminate against out-of-group members to also enhance their self-image.^{158,160,161} Extreme discrimination against out-of-group members can help to explain phenomena like racism or sexism.¹⁶¹ This model takes into account multiple identities that owners of vegan soul food restaurants would identify with for influencing the strategies that they use to influence and promote the health of their communities.

The constructs of the model are social categorization, social identification, and social comparisons. Social categorization involves placing people (including ourselves) into categories (e.g. black, white, Christian, Muslim).¹⁶⁰ Assigning people to a category enables us to define appropriate behavior by reference to the norms of the groups that we belong to.¹⁶⁰ Once one has categorized his or herself into a particular group, he or she will formally identify with the group that they belong to.¹⁶⁰ Social identification is defined as “the perception of oneness with or belongingness to some human aggregate.”^{161(P. 21)} It should be noted that social identification tends “to be viewed

positively in as much as the individual vests his or her self-conceptions in valued personas.¹⁶¹(P. 21) For example, people that work in menial jobs may distance themselves from their implied identity with the understanding that it is only temporary, because they are trying to save enough money to start their own business.¹⁶² In the case of this model, it assumes vegan soul food owners would be positively invested in all of their identities as African American, vegan, and business owners. In turn, their experiences from these multiple roles influence how they may encourage the consumption of vegan foods to their patrons and people in the community.

The central hypothesis of SIT is that group members of an in-group will seek to find negative aspects of an out-group, thus enhancing their self-image.¹⁶⁰ Once people have identified the group they belong to, social comparisons are made to compare that group with others.¹⁶⁰ However, my model specifically emphasizes only the social identification construct, since this work focuses on how the restaurant owners' identities would influence how they promote the consumption of vegan foods. Focusing on in-group and out-group comparisons is not critical to how the owners of vegan soul food restaurants perceive themselves as champions of health in their communities. Furthermore, previous work that examined AA identity with SIT had mixed findings on how AAs treated other out-groups (ethnic groups).^{163,164} One study with AA college students found that the higher in-group preferences were, the stronger negative perceptions were of other ethnic groups (out-group members).¹⁶³ But other work found that AA participants did not exhibit significant bias against out-group members, despite having the highest in-group preferences than all other ethnic groups.¹⁶⁴ Therefore, having

a strong in-group identity as an AA does not necessarily indicate ethnocentrism towards other ethnic groups, but rather a high self-esteem or sense of pride as being AA.¹⁶⁵

Social Ecological Constructs

The bottom portion of this model illustrates potential individual and environmental variables that owners of vegan soul food restaurants may perceive that they influence among the patrons and people in their communities. Bronfenbrenner's ecological model defines human development as being shaped from complex "layers" of interactions between individual attitudes and behavior with interpersonal and environmental factors.¹⁵⁹ Ecological models are most effective for guiding public health interventions when they are tailored to the specific health behaviors of the target population.¹⁶⁶ The following constructs are not being directly assessed, but rather are considered that the owners might perceive that they have influence over for promoting health in their communities:

Individual level

At the individual level of the model knowledge and attitudes about food, as well as cooking skills are considered as potential factors from patrons and people in the community that vegan soul restaurants can influence for consuming more plant-based foods. Vegan soul food restaurant owners may influence their patrons', or people in their communities, knowledge about vegan foods. They may discuss the health benefits of being vegan or motivate people to consume vegan foods based on the fact that soul food's origins can be traced back to a traditional West African diet.^{23,28} This work asked the owners of vegan soul food restaurants how vegan meals can be more appealing to AA

adults. This could involve specific cooking methods to make them taste better or simply using familiar greens used in traditional soul food (e.g. like okra or collard greens).

It is possible vegan soul food owners may feel that they influence their patron's cooking skills, since some vegan soul food restaurants do offer cooking.¹⁶⁷ This work asked the restaurant owners if they would be willing to offer classes to their patrons. Participants may benefit from attending a few classes to learn how to cook more plant-based meals and to transfer these skills at home. This in turn would increase the likelihood that individuals can stick to a vegan diet, since having cooking skills would reduce difficulties with preparing vegan meals.¹¹⁰

Interpersonal level

The interpersonal level of the model considers how vegan soul food restaurants can influence their own family, friends, and peers in a person's social network. Interviews with AA participants' food choices indicated that friends or relatives that were not supportive of dietary changes was a significant barrier for eating healthier.⁵ Vegan soul food owners may influence their own friends or family to consuming vegan meals by having them come to the restaurants and introduce them to vegan foods. In turn, these individuals may bring their own friends and family and others outside of the owners' social network and also introduce them to the vegan meals. This work asked the owners if they felt that they have influence over their friends or families eating habits.

Community and organizational level

At the community and organizational level the model considers how vegan soul food restaurants can influence the availability and cost of vegan foods in their local communities. Having nearby restaurants, supermarkets, or stores that have plant-based

meals would increase the likelihood that individuals will eat vegan foods, since people tend to make food choices based on the nearest outlets available to them.⁷⁷ If owners of vegan soul food restaurants are located in communities with limited availability of other restaurants and stores that sell vegan foods, then they may feel that they have significant influence on exposing people in their communities to vegan foods.

The last component at the organizational and community level is cost. If the prices of meals offered at vegan soul food restaurants are too expensive for patrons, then cost may be a barrier for adopting vegan diets.^{136,137} Although prior research has demonstrated that the cost of a 7-day, plant-based olive oil diet was cheaper than an economical version of the MyPlate diet (\$38.75 versus \$53.11 respectively).¹⁶⁸ Other work that tracked weekly grocery expenditures for 6 months between 5 diet groups (vegan, vegetarian, pesco-vegetarians, semi-vegetarians, and omnivores) found no differences in expenditures between any of the diet groups at 6 months.¹⁶⁹ But families with lower incomes could still have a difficult time affording plant-based meals, since they spend a much larger portion of their incomes on food than higher income individuals.¹³⁸ Recently, one report found that individual and household income were more influential for predicting cardiovascular disease risk independently of having access to healthier foods.¹⁷⁰ This work asked the owners of vegan soul food restaurants about their thoughts on the prices they determine for their meals and if they think the price of vegan foods is a barrier for their customers. An illustration of the model is provided in Figure 3.1.

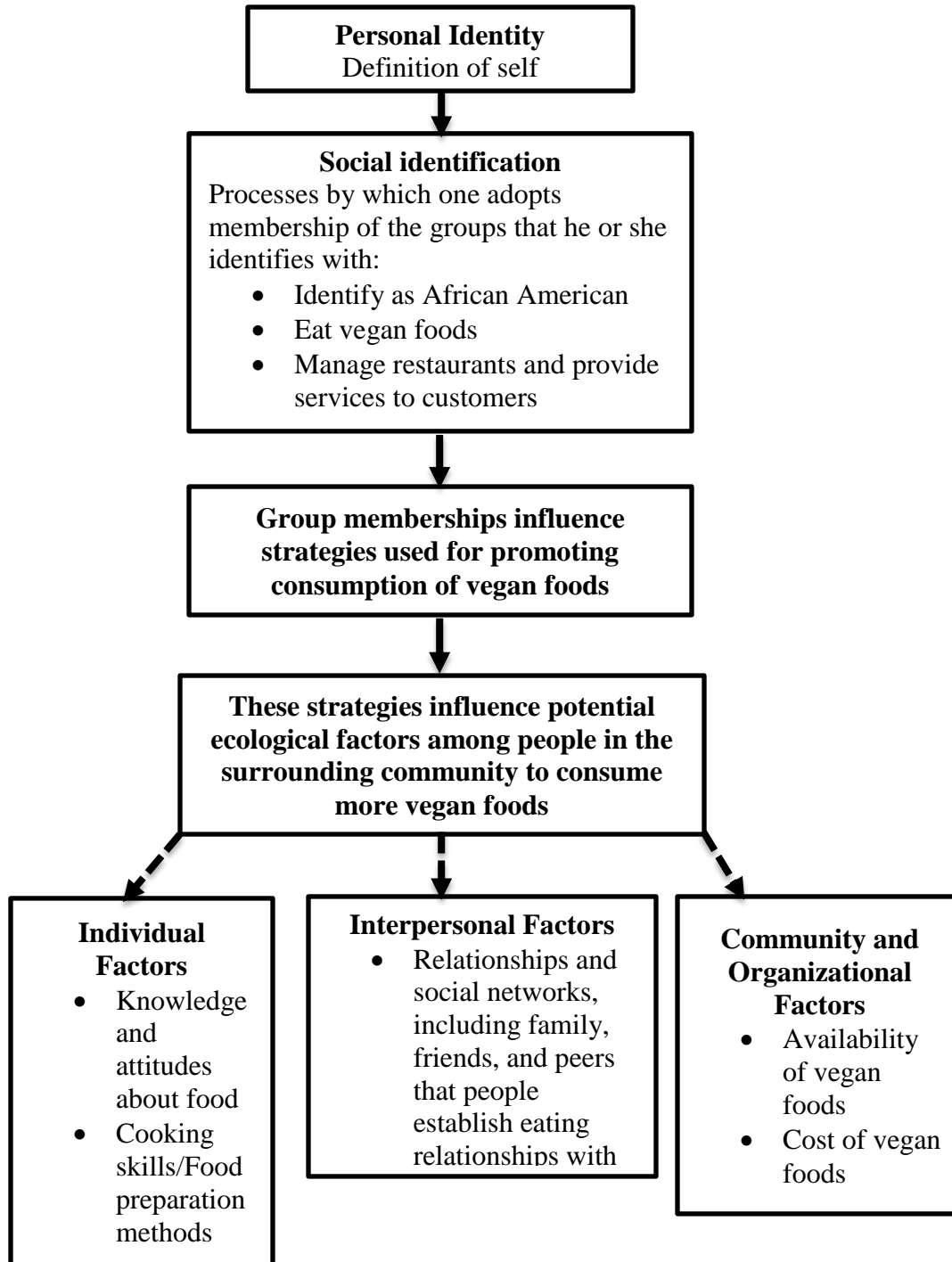


Figure 3.1. Social identification of how owners of vegan soul food restaurants influence ecological factors to increase the consumption of vegan foods.*

*Adapted from Tajfel (2010)¹⁵⁸ and Bronfenbrenner (1992)¹⁵⁹

3C. SIGNIFICANCE

Poor dietary habits are a major contributor to leading chronic diseases among African-Americans (AAs). Four of the leading causes of morbidity in the United States, cardiovascular disease (CVD), high blood pressure, type 2 diabetes, and cancer, occur disproportionately among AAs and minority populations and can be related to poor dietary habits.¹⁷¹⁻¹⁷³ The prevalence rates of cardiovascular disease are currently estimated to be 45% for AA men and 49% for AA women compared to 37% for white men and 35% for white women.¹⁷¹ In 2016, AAs were 40% more likely to be diagnosed with high blood pressure than whites and were 77% more likely to be diagnosed with type 2 diabetes than whites.¹⁷² The cancer death rate for AA men was 27% higher than white men and 11% higher for AA women than white women in 2014.¹⁷³ The consumption of fruits and vegetables are associated with a lower incidence of cardiovascular diseases, obesity, and some cancers because they supply antioxidants, phytonutrients, and fiber.¹⁷⁴ However, AAs typically consume fewer fruits and vegetables than other ethnic groups.⁸⁻¹¹ Since vegan and vegetarian diets often include more fruits and vegetables, as well as foods that are lower in saturated fat, cholesterol, and sodium than an omnivorous diet;⁴³ conducting research that explores the ways plant-based diets (PBDs) are promoted from vegan soul food owners to their clients can potentially inform researchers to better understand how to tailor strategies to approach AAs for promoting the consumption of more plant-based foods, in order to reduce the incidence of leading chronic diseases among this population.

AAs that are vegan or vegetarian tend to be healthier than omnivorous AAs.

The observational research with AA samples from the Adventist Health Study-2 (AHS-2)

has consistently demonstrated that vegan or vegetarian AAs have a lower risk of CVD than omnivorous AAs.⁴⁴⁻⁴⁶ Additionally, some studies have suggested that individuals of African and South Asian descent may be genetically predisposed to respond better to plant-based diets than individuals of European descent.^{175,176} This is based on the fact that some genetic markers associated with CVD and arachidonic acid levels are higher in AAs than other ethnic groups in the U.S., but are much lower in African populations.^{175,176} These differences may be based on the fact that the African populations consume a mostly PBD and do not consume as many processed foods as AAs in the U.S.^{175,176}

Vegan soul food restaurants may influence healthier food selection among residents in the local community. The built environment literature has consistently shown the link between ecological factors (e.g. access to food or the cost of food) and the risk of residents' developing chronic diseases.¹²¹⁻¹³³ Neighborhood disparities, in terms of access to healthier foods, can put communities at risk for the onset of cardiovascular diseases, diabetes, or other health conditions.¹²¹⁻¹³³ In the United States, many AA neighborhoods, particularly poorer neighborhoods, have fewer supermarkets and stores with healthier foods, but more fast food restaurants, and some restaurants in these neighborhoods heavily promote unhealthy food options to residents.^{72,177-179} With more people eating away from home,²⁵ vegan soul food restaurants may influence residents to be exposed to more plant-based foods and meals that are healthier than traditional soul food, as well as have an impact on local communities' food environment.

3D. INNOVATION

This work focused on small business owners of local restaurants as champions for promoting health in their community. Previous research that has focused on

interviews with restaurant owners addressed barriers to reducing portion sizes or offering healthier foods on the menu (e.g. fruits and vegetables).⁴⁸⁻⁵⁰ Additionally, most of the restaurants in these studies were larger chain restaurants that didn't specifically target AAs or any particular ethnic minority group.⁴⁸⁻⁵⁰ Soul food restaurants are different in that regard, since they originated as a means to reaffirm black identity in the United States and now serve as modern structures that preserve the historical AA foodways from slavery.⁶⁶

Soul food restaurants are also different than large chain restaurants in that they are not uniform across the United States with regards to a standard menu of items. Each restaurant would vary in terms of its menu and foods offered, since the owners use recipes that have been passed down to them from their own families or mentors.²³ Since vegan soul food restaurants focus on making traditional soul foods healthier, this proposed work will focus on how the owners of vegan soul food restaurants view their roles in promoting health in their communities. Engaging the restaurant owners can be effective to establish trust and open communication for better understanding the specific needs and interests of residents in their communities, as well as to develop future culturally-tailored dietary interventions that target the AA community.

This work used a social ecological model to qualitatively explore multiple factors that owners of vegan soul food restaurants impact for promoting health in their communities. An emphasis of this work was to move beyond just focusing on individual level factors that relate to the promotion of health among AAs. This work explored assessing community and organizational level factors, in addition to individual level factors, that may encourage or discourage restaurant owners from promoting health

in their communities. A review of 12 studies that applied the social ecological model to examine ways studies have tried to improve fruit and vegetable consumption among low-income AAs reported that only 5 of the 12 studies addressed factors at the community or organizational level.¹⁸⁰ More work is needed to focus on the environmental levels of the social ecological model for addressing AA adults' dietary habits. Vegan soul food restaurants have potential to impact several factors at the community and organizational level that increase the consumption of plant-based foods, including the availability and access, cost, and convenience.

3E. STUDY SETTING

Specific aim 1 did not require any specific setting other than a computer with internet access to search for the restaurants. For specific aim 2, I conducted individual, semi-structured interviews with the owners of vegan soul restaurants both in person and by phone. Half of the interviews were completed in person at the restaurant itself and the other half were recorded over the phone.

3F. SAMPLING, DATA COLLECTION, AND DATA ANALYSIS

For Specific Aim 1 the locations of vegan soul food restaurants in the American South were defined as the 16 states and the District of Columbia by the Census Bureau.⁵¹ Two trained reviewers searched for restaurants that served vegan soul foods from the following websites: Google, Yelp, Happycow.net, and Facebook. The search terms “vegan soul food,” “vegan southern food,” “vegan soul food restaurants,” and “vegan southern restaurants” were used. These websites were used since they are popular search engines for searching for restaurants and a number of recently opened vegan soul food restaurants used Facebook, rather than a traditional website to provide contact

information and menu items. In an effort to have a standardized definition for a vegan soul food restaurant, previous work and cookbooks were reviewed to determine what specific food items should be included on the menu.^{23,98,100} The criteria for the restaurants was that they had to:

- (1) Have a vegan menu (e.g., free of any animal products) with three or more of the following staple soul food items: Black eyed peas, okra or greens (collard greens, kale, mustard greens, turnips), candied yams, sweet potatoes, vegan substitutes for macaroni and cheese, vegan substitutes for cornbread, and/or vegan substitutes for common soul food meat-based dishes, such as fried or barbeque chicken, ribs, and catfish.
- (2) To be located in one of the 16 states plus the District of Columbia in the South as defined by the Census Bureau: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.⁵¹

The rationale for the choice of these particular menu items is that scholars tend to agree that soul food has roots in Southern cuisine and that many of the meals originated from Africa.^{60,66,181,182} Therefore, the focus of the menu items was to select dishes that were common in the South, as well as foods that were transplanted from Africa (e.g. okra and black eyed peas). Both reviewers independently searched for restaurants using the search criteria and then reviewed each other's lists to reach a final consensus for which restaurants to include. When there was a discrepancy for including or excluding a

restaurant, both reviewers would review the restaurant's menu together and come to a final consensus.

Once restaurants were identified, information for the county percentage of AAs, poverty rates, and obesity rates for each restaurant's location were catalogued from the Census Bureau's Data Mapper, the Small Area Income and Poverty Estimates map, and the Center for Disease Control's Obesity Map, respectively (Figures 3.2 – 3.4).¹⁸³⁻¹⁸⁵ Additionally, the USDA's food atlas map was used to code if each restaurant was located in a food desert zone or not (Figure 3.5).^{52,186} The standard definition of a food desert zone in an urban area was used, which is defined as a low income census tract where a significant number of people (at least 500 people and/or 33% of the population) are more than a 0.5 or 1.0 mile from the nearest supermarket.⁵² Descriptive statistics were conducted to assess the mean percentage of AAs, poverty rates, and obesity rates by county. The number of restaurants located in a food desert zone (0.5- and 1.0-mile radius) were tabulated as well. A t-test was conducted to test for differences among the county percentage of AAs, poverty rates, and obesity rates between the restaurants in counties that were classified as being in a food desert zone (0.5- and 1.0-mile radius) compared to the ones that were not in a food desert zone. Analyses were conducted in Stata, version 14.0 (StataCorp. 2015. Stata Statistical Software: Release 14. College Station, TX: StataCorp LP).

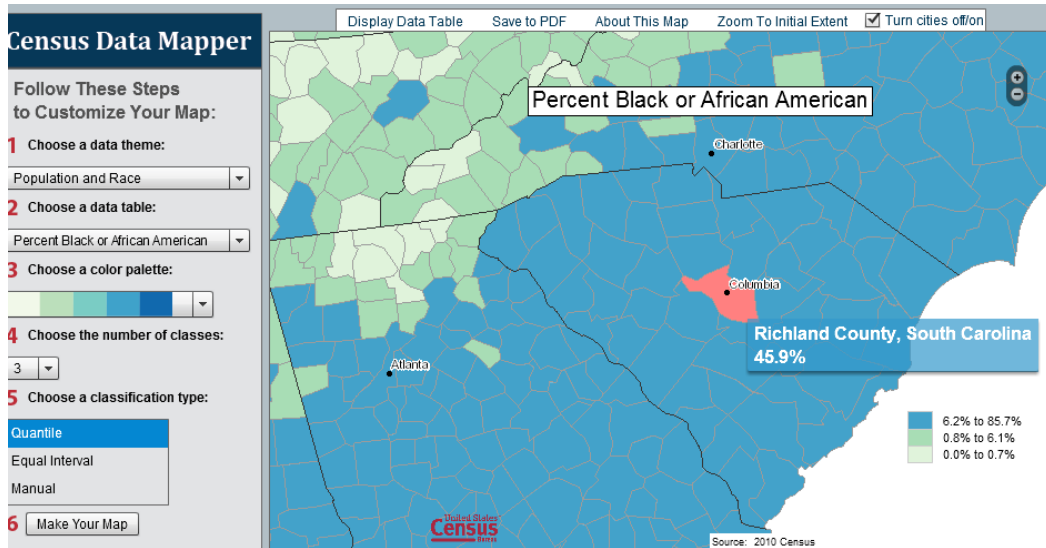


Figure 3.2. Example of mapping the percentage of AAs by county where a vegan soul restaurant is located.

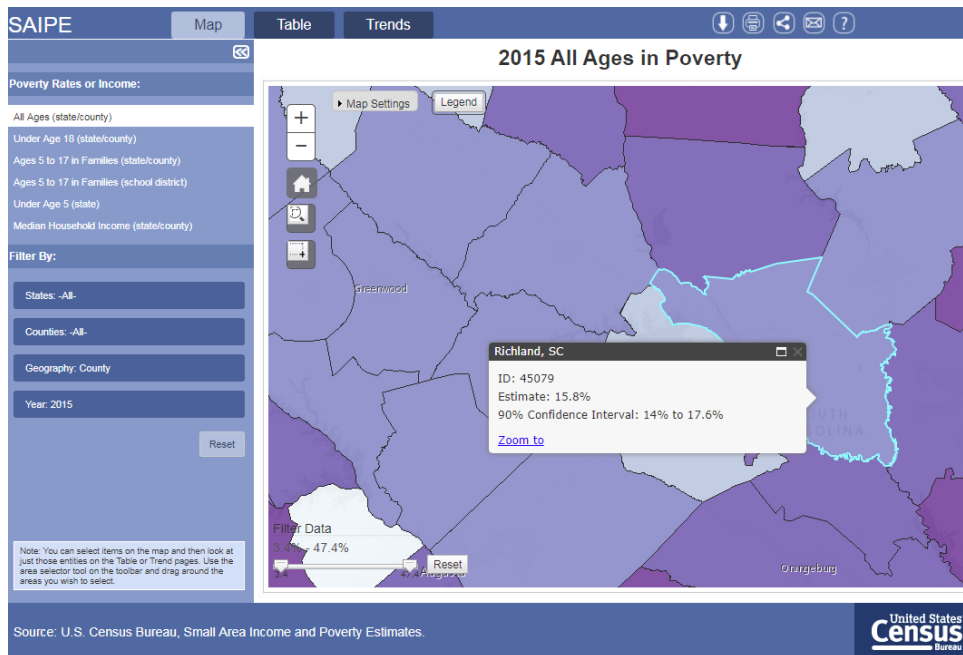


Figure 3.3. Example of mapping the county poverty rate of where a vegan soul restaurant is located.

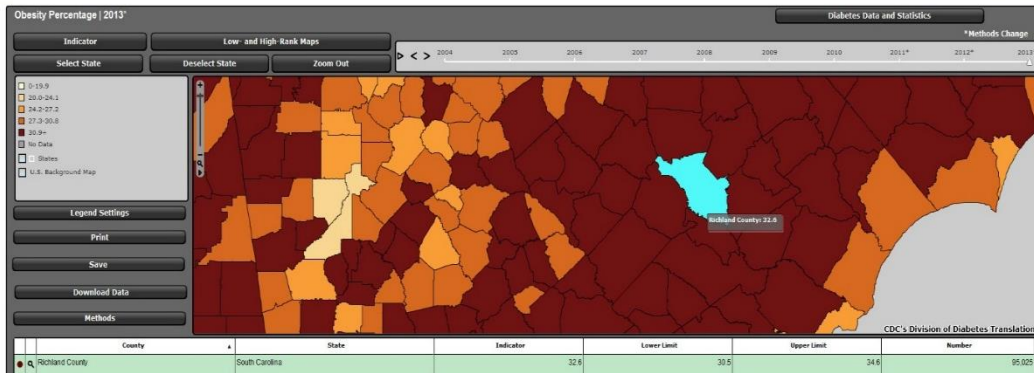


Figure 3.4. Example of mapping the county obesity rate where a vegan soul restaurant is located.

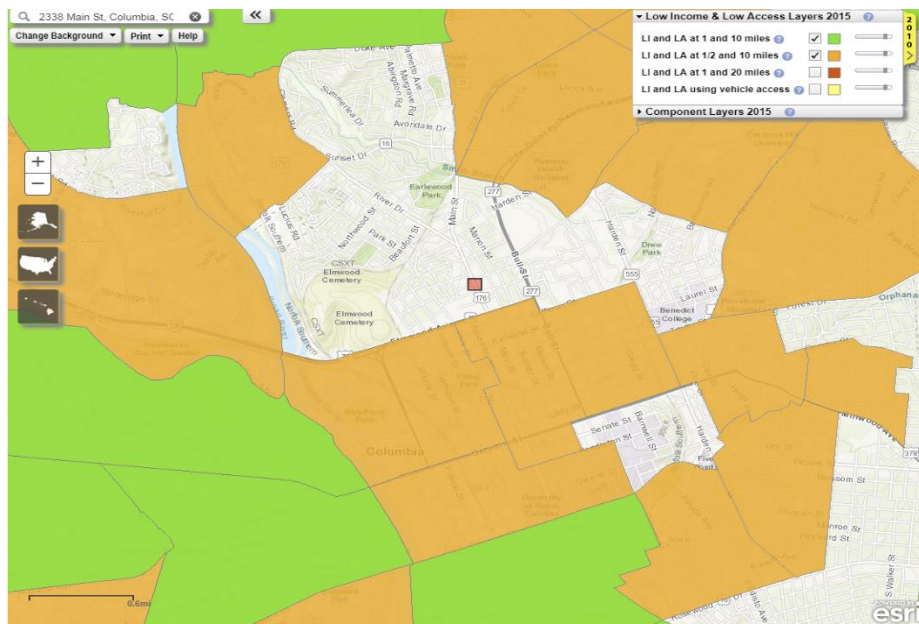


Figure 3.5. Example of mapping a vegan soul food restaurant in the USDA’s Food Atlas Map.

For Specific Aim 2 restaurant owners were selected from states in the Black Belt region, which is the crescent shaped region that extends 300 miles long and 25 miles wide from parts of Texas all the way through Virginia.^{24,53} Specifically the following states were included: Texas, Arkansas, Louisiana, Tennessee, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, and Virginia.⁵³ These 11 states are

included in the 16 Southern states from the Census Bureau.⁵¹ The term Black Belt was coined to describe this region because of the historical development of cotton plantations from enslaved AA labor in the South.⁵³ The rationale for using the Black Belt Region is that these are states with a high percentage of AA residents.⁵³ Black Belt states also have higher rates of poverty and lower educational attainment compared to national averages, which is important to consider for public health.^{24,53,54} Others have noted that the Black Belt region would benefit from regional commissions that focus directly on health, human services, and education.¹⁸⁷ By doing interviews with AA owners of vegan soul food restaurants in this area, relevant perspectives are provided for understanding some of the specific needs and interests of promoting the consumption of plant-based foods in AA communities in the South.

The inclusion criteria for the interviews were:

- (1) The restaurants must have the menu criteria from Specific Aim 1.
- (2) The restaurants must be located in one of the 11 Black Belt States.⁵³
- (3) The restaurant owners must identify as AA. The rationale for focusing on AA owned restaurant is that some of the most popular vegan-based soul foods, like blacked-eyed peas, kidney beans, lima beans, sweet potatoes, yam, okra were not indigenous to America, but were transplanted from Africa during the Atlantic Slave Trade. Therefore, these foods have a historical meaning to many AAs over standard vegan meals. Given the fact that soul food is rooted in black culture and history, it would be reasonable to interview owners that identify as AA and consider their restaurants to be soul food.

The goal was to interview at least 12 owners (~1 per state), since saturation from qualitative interviews has been reported to occur within the first 12 interviews.¹⁸⁸ The owners of the restaurants were contacted by either email, social media pages (e.g. Facebook pages), or by phone with an introductory script (Appendix B) that explained the purpose of the study and invited the owners to participate.

The interviews were semi-structured and were conducted either in-person (n=6) at the owner's restaurant or by phone (n=6). The reason for using telephone interviews was to reduce costs and traveling expenses for restaurants further away and being able to reach a variety of owners in several states. Prior work utilizing telephone interviews has described respondents as being more relaxed and more willing to talk freely.¹⁸⁹⁻¹⁹¹ Despite the perception that telephone interviews are lower in quality than face-to-face interviews (i.e. the lack of visual cues), there is little evidence that data loss or distortion occurs, or that interpretation and quality of findings is compromised when interview data is collected by telephone.¹⁹² Furthermore, others have noted that there is no evidence for the loss of rapport, inability to probe, or deception via telephone interviews as compared to in person interviews.¹⁹²

All interviews were recorded with the iPhone. The interview questions were guided from the conceptual framework in Figure 1 to assess strategies that owners of vegan soul food restaurants identify to promote the consumption of vegan meals to their patrons and people in the community. The questions were aimed to capture each of the constructs from the conceptual model. Details of how each question was related to a specific construct are provided in Table 3.1. The complete interview guide is provided in Appendix D. A brief demographic questionnaire assessing the owners' age, gender,

ethnicity, educational attainment, the number of years they had been in business, and the most popular item on the restaurant's menu was asked at the end of each interview (Appendix E).

All interviews were transcribed verbatim. The interviews were then coded in NVivo version 12. Two researchers separately coded all of the interviews using an inductive, opening coding process for thematic analysis.¹⁹³ Upon completion of the independent coding, both researchers reviewed each other's analysis and discussed and resolved any major discrepancies.¹⁹⁴ The results of major themes that emerged from the analysis are presented in the manuscript for Specific Aim 2 along with representative quotes.

3G. PROTECTION OF HUMAN SUBJECTS

Approval for this study's procedures were obtained from the University of South Carolina's Institutional Review Board (Appendix A). Participants were asked to give verbal consent prior to the interviews being recorded (Appendix C). Participants were reminded that they do not have to answer any questions they may feel uncomfortable discussing and they were free to stop the interview or the survey at any time. After the interviews were transcribed, the audio files were destroyed. No names or identifying information were printed in the transcribed interviews. Instead, a random letter or symbol was used to replace full names. Each participant received a \$10.00 gift card for participating in an interview and trained volunteers that helped to complete an in-person interview were given a \$50.00 Amazon gift card.

Table 3.1. Summary of interview questions based on constructs from conceptual framework.

Conceptual Framework Construct	Sample Interview Question
Social Identification	<p><i>Question 1:</i> Tell me what got you interested in opening a vegan soul food restaurant.</p> <ul style="list-style-type: none"> • Probes: What inspired you? Are you a vegan and did this play a role?
Availability and Access	<p><i>Question 6:</i> In addition to your restaurant, what other vegan restaurants are nearby that people can go to?</p> <ul style="list-style-type: none"> • <i>Probe:</i> Are there other sources of vegan food are available near your

	<p>restaurant, such as supermarkets or stores?</p>
<p>Cost</p>	<p><i>Question 7:</i> What are your thoughts on the price of the foods that you provide to your patrons?</p> <ul style="list-style-type: none"> • <i>Probe:</i> Do you believe vegan foods are more expensive than the typical American diet?
<p>Family and Social Networks</p>	<p><i>Probe from Question 4:</i> Do you feel that you influence your customers' eating habits? How about friends or family?</p>
<p>Knowledge and Attitudes about Food</p>	<p><i>Question 4:</i> The focus of this research is to identify strategies to inspire more African Americans to eat healthier, vegan meals. Do you have any thoughts or advice for</p>

	<p>how to get people eat more vegan foods?</p>
<p>Cooking Skills and Food Preparation Methods</p>	<p><i>Question 8:</i> Do you offer classes about healthy eating and cooking at your restaurant to people in the community? If not, would you be interested in offering classes?</p> <ul style="list-style-type: none"> • <i>Probe:</i> What resources would be helpful to have for offering classes? <ul style="list-style-type: none"> ○ Would these classes help to support the growth of your business and your business's overall mission?

CHAPTER 4

RESULTS

4.1 Manuscript 1

Examining demographic characteristics and food access indicators from the location of vegan soul food restaurants in the south¹

¹Crimarco A, Turner-McGrievy GM, Adams S, Macauda M, Blake C, Younginer, N. Under review at *Ethnicity and Health*.

Abstract

Objective: There have been a number of soul food restaurants serving exclusively vegan meals opening up across the country to appeal to African Americans and others interested in eating healthier soul foods. This study determined the number of restaurants serving vegan soul foods in the South and identified the locations of these restaurants in order to understand the characteristics of the surrounding communities that they serve.

Design: Two reviewers identified restaurants using standardized search criteria for menu items in the 16 states (and the District of Columbia) that are categorized as being in the South from the Census Bureau. Mean percentage of African Americans, poverty rates, and obesity rates by county where restaurants were located were collected via census data. Restaurants were classified as being in or out of a food desert zone using the United States Department of Agriculture's (USDA) food atlas map (0.5- and 1.0-mile radius). T-tests were conducted to test for differences in the census data between the restaurants that were considered to be in and out of a food desert zone.

Results: Overall, 45 restaurants met the inclusion criteria. Counties where restaurants were located had a mean African American population of $36.5 \pm 18.5\%$, mean poverty rate of $15.5 \pm 3.85\%$ and mean obesity rate of $26.8 \pm 4.8\%$. More than one third ($n=18$, 40.0%) of the restaurants were considered to be in a food desert zone. There were no significant differences in the mean population, obesity, and poverty rates between restaurants classified in a food desert zone and restaurants not located in a food desert zone.

Conclusion: A significant number of restaurants were classified in food desert zones, implying their potential to provide healthier meals by serving vegan soul foods to

residents in the surrounding neighborhoods. Future work should assess how these restaurants might influence healthier eating habits in their communities.

Keywords: Vegan; Plant-Based; Soul food; African American; Food Access

Introduction

Poor dietary habits are a major contributor to the leading causes of morbidity and mortality in the U.S. (Mokdad et al. 2004; Danaei et al. 2009). African American (AA) adults have the highest age-adjusted prevalence rate for obesity (47.8%) and fail to meet the recommended dietary guidelines more often than other ethnic groups (Centers for Disease Control and Prevention 2007; Neumark-Sztainer et al. 1998; Ogden et al. 2014). AAs typically consume fewer fruits and vegetables and more processed fast foods (Bowman and Vinyard 2004; Satia, Galanko, and Siega-Riz 2004) than other ethnic groups (Centers for Disease Control and Prevention 2007; Neumark-Sztainer et al. 1998; Bowman and Vinyard 2004; Satia, Galanko, and Siega-Riz 2004). Furthermore, rising obesity rates in the South are leading to a rapid increase in new cases of diabetes among black and white adults (Conway et al. 2018).

One reason for the disparities in obesity rates between AAs and whites may be due to the fact that AA neighborhoods tend to have fewer supermarkets compared to predominantly white neighborhoods (Morland et al. 2002). One study examining food store availability in the United States reported there were half (52%) as many chain supermarkets in black neighborhoods than white neighborhoods (Powell et al. 2007). Another study conducted in Detroit, MI indicated that the most impoverished

neighborhoods that AAs reside in were 1.1 miles farther to the nearest supermarket than the most impoverished white neighborhoods (Zenk et al. 2005). The literature on the food environment has also indicated that AA communities tend to have more fast food restaurants available in their neighborhoods compared to white neighborhoods (Zenk et al. 2009; Zenk et al. 2014; Reitzel et al. 2016). Besides the availability of grocery stores, neighborhood food choices are also influenced from the availability of farmer's markets, convenience stores, restaurants, and household food security status (Sadler, Gilliland, and Arku 2016).

In addition to socioeconomic and environmental factors impacting nutrition choices in the AA community, culture is also an important determinant to consider. After all, AA food culture has evolved from a long history of slavery, discrimination, and segregation (James 2004; Berg and Berg 1988; Airhihenbuwa et al. 1996). Many AA adults living in Southern states report regularly eating food items like collard greens, fried chicken or fish, and other "soul foods," because of cultural norms and family traditions (i.e. eating particular foods that were passed on from family and previous generations) (Yang et al. 2013; James 2004). Soul food is the term used to describe the ethnic cuisine that African slaves prepared in the Deep Interior South to survive during slavery (Miller 2013; Kittler, Sucher, and Nelms 2011; Van Deburg 1992; James 2004). Slaves had to recreate their material, cultural, and social lives in a foreign land under extremely disempowering conditions. Part of this rebuilding process included food, since it is a central cultural artifact that defines identity (Avieli and Markowitz 2018; Devine et al. 1999). Slaves transplanted their cooking traditions from Africa into the United States (U.S.) and relied on the limited foods that were available to them in order to survive

(Miller 2013; Kittler, Sucher, and Nelms 2011; Van Deburg 1992; James 2004). Slaves relied on mostly starches and vegetables, including rice, chili peppers, collards, turnip greens, and maize (Miller 2013). Occasionally some meats and fish were acquired from hunting and fishing, but they mostly relied on the crops their enslavers permitted them to grow (Miller 2013).

Slaves that had to cook in the kitchens of the plantations were exposed to foods they had not encountered before, such as potatoes and fried chicken (Van Deburg 1992). Additionally, slaves were given meats like pig's feet and beef tongue by their enslavers, because these foods were considered undesirable (Miller 2013; Kittler, Sucher, and Nelms 2011; Van Deburg 1992; James 2004). These new foods and ways of cooking were incorporated into the traditions they brought with them from Africa. Slaves would make use of these animal parts that their masters' shunned by using a variety of seasonings that were inspired by African cooking traditions, such as hot red peppers and vinegar, salt, black pepper, and paprika, to flavor them and improve their taste (Miller 2013; Kittler, Sucher, and Nelms 2011; Van Deburg 1992; James 2004). These potent seasonings would later become the hallmarks of Southern cooking and soul food (Miller 2013; Kittler, Sucher, and Nelms 2011; Van Deburg 1992; James 2004). Overtime the concept of soul food became popular during the Civil Rights Movement and the Great Migration, as it was used to reaffirm black identity and distinguish itself from a white dominant culture (Henderson 2007). The Great Migration, which occurred from 1915-1970, resulted in the relocation of more than 6 million AA families from the rural South to the cities in the Northern and Midwestern states (Miller 2013). Black families left the South to pursue better economic opportunities and avoid harsh segregationist laws. It was

during the Great Migration that soul food restaurants began to open up across the U.S., since many black families that left the South still had a longing for down-home cooking (Henderson 2007).

Today, common soul foods like collard greens, cornbread, pork, and fried chicken, which were staples for African slaves living in the South, are still regularly consumed by both AA and white Americans living in the Black Belt region (i.e. the crescent shaped region that extends 300 miles long and 25 miles wide from southwest Tennessee to east-central Mississippi and then east through the Carolinas) (Yang et al. 2013). Some soul food items, like fried chicken, chitlins, or pork, consumed in great portions contain high fat and sodium content that often exceed the recommended dietary guidelines (Airhihenbuwa et al. 1996). Despite public health concerns about overconsumption of high fat or high sodium soul food, some AA adults have reported that eating healthier meant giving up a part of their cultural identity (James 2004; Berg and Berg 1988; Airhihenbuwa et al. 1996). A focus group of AA women had described soul foods as “seductive, satisfying, filling, spicy, high-fat, spiritual, traditional cuisine of black Americans, especially southern blacks.” (Rankins 2002). Despite health concerns, soul food has served as a means for AAs to stay connected to their traditions (James 2004). Despite the association of high fat and sodium foods with traditional soul food, many other staple soul foods, such as the various green vegetables, okra, and black-eyed peas, have high fiber and low caloric density as they are sourced from plants (Rankins, Wortham, and Brown 2007). It is this connection of soul food’s origins to a 14th century West African diet, which mostly consisted of plant-based meals, that has prompted the growing popularity of vegan soul food restaurants (Miller 2013).

Plant-based diets (PBDs) are associated with a lower body mass index (BMI) and a lower risk for certain chronic diseases, such as diabetes, cardiovascular disease, and some cancers compared to the typical Western diet (Fraser 2009). The observed health benefits from PBDs are based on an increased consumption of fruits, vegetables, nuts, phytonutrients, and whole grains (Fraser 2009). The standard definition of a PBD is the avoidance of meat, poultry, and fish, however there are several categories of PBDs (Fraser 2009). Vegans completely abstain from all animal products; lactovegetarians abstain from meat and fish, but consume dairy products; pesco-vegetarians consume fish and dairy, but no other meat products; and semi-vegetarians consume mostly plant-based foods, but still have meat and dairy products seldom (i.e. less than once a week, but more than once a month) (Fraser 2009). Finally, an omnivore, or non-vegetarian, has no dietary restrictions and regularly consumes animal products (Fraser 2009).

Recently there has been a growing movement of vegan soul food restaurants in the U.S. that serve healthier, plant-based meals as an alternative to traditional soul food (Severson 2017). With events like the Baltimore Vegan Soulfest, and other vegan movements throughout the U.S., more AAs are learning about the health benefits of vegan soul foods (Rodricks 2014). The 2015 edition of the U.S. dietary guidelines identified a vegetarian diet as one of the three main healthful dietary patterns, and that most people would benefit from basing meals around plants sources (Millen et al. 2016). Being able to enjoy vegan soul foods allows people in the AA community to eat healthier and still feel connected to the foods that connect them to tradition. Adrian Miller, author of *Soul Food: The Surprising Story of American Cuisine, One Plate at a Time*, wrote in his book: “After eating my way across the country, it’s clear to me that soul food’s

creative energy burns brightest in restaurants that are targeting upscale, vegetarian or vegan clientele.” (Miller 2013). He noted that among the 150 soul restaurants in 35 different cities that he visited, many restaurants do include vegan meals on the menu or there are restaurants that are exclusively vegan (Miller 2013).

Vegan restaurants that have soul food entrees may serve as structures in the built environment that influence more AA adults to eat plant-based meals. Therefore, with more vegan soul food restaurants opening up, it is possible these restaurants may offer more AA families access to healthier versions of traditional soul food dishes in communities historically devoid of fresh produce or affordable, nutritious meals (Brown 2013). While there may be a potential for vegan soul food restaurants to positively impact health if accessible to AA communities, it is not known if these restaurants are located in or near AA neighborhoods and so called “food desert” zones (Rodricks 2014). Therefore, this study aimed to determine the number vegan restaurants serving vegan soul foods in the South and to identify the locations of these restaurants in order to understand the characteristics of the surrounding communities that they serve. Specifically, this study assessed the average county AA population, poverty, and obesity rates based on the location of identified vegan soul food restaurants. By understanding the geographical distribution of these restaurants, their potential to introduce healthier, plant-based foods to improve dietary quality and obesity rates among AAs in the South are more clearly understood.

Methods

In order to assess the locations of vegan soul food restaurants in the American South, we defined the South as the 16 states and the District of Columbia as defined by the

Census Bureau (United States Census Bureau). Two reviewers searched for vegan restaurants that served vegan soul foods from the following websites: Google, Yelp, Happycow.net, and Facebook. The search terms “vegan soul food,” “vegan southern food,” “vegan soul food restaurants,” and “vegan southern restaurants” were used. These websites were used since they are popular search engines for searching for restaurants and a number of recently opened vegan soul food restaurants used Facebook rather than a traditional website to provide contact information and menu items. In an effort to have a standardized definition for a vegan soul food restaurant, previous work and cookbooks were reviewed to determine what specific food items should be included on the menu (Miller 2013; Whit 1999; Terry 2009). The criteria for the restaurants was that they had to:

- (1) Have a vegan menu (e.g., free of any animal products) with three or more of the following staple soul food items: Black eyed peas, okra or greens (collard greens, kale, mustard greens, turnips), candied yams, sweet potatoes, vegan substitutes for macaroni and cheese, vegan substitutes for cornbread, and/or vegan substitutes for common soul food meat-based dishes, such as fried or barbeque chicken, ribs, and catfish.
- (2) To be located in one of the 16 states plus the District of Columbia in the South as defined by the Census Bureau: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (United States Census Bureau).

The rationale for the choice of these particular menu items is that scholars tend to agree that soul food has roots in Southern cuisine and that many of the meals originated from Africa (Henderson 2007; Van Deburg 1992; Witt 1999; Opie 2010). Therefore, the focus of the menu items was to select dishes that were common in the South, as well as foods that were transplanted from Africa (e.g. okra and black eyed peas). Both reviewers independently searched for restaurants using the search criteria and then reviewed each other's lists to reach a final consensus for which restaurants to include. When there was a discrepancy for including or excluding a restaurant, both reviewers would review the restaurant's menu together and come to a final consensus.

Once restaurants were identified, information for the county percentage of AAs, poverty rates, and obesity rates for each restaurant's location were catalogued from the Census Bureau's Data Mapper, the Small Area Income and Poverty Estimates map, and the Center for Disease Control's Obesity Map (United States Census Bureau 2010, 2015; Centers for Disease Control Prevention 2017), respectively. Additionally, the USDA's food atlas map was used to code if each restaurant was located in a food desert zone or not (United States Department of Agriculture 2015; Rhone et al. 2017). The standard definition of a food desert zone in an urban area was used, which is defined as a low income census tract where a significant number of people (at least 500 people and/or 33% of the population) are more than a 0.5 or 1.0 mile from the nearest supermarket (Rhone et al. 2017). Descriptive statistics were conducted to assess the mean percentage of AAs, poverty rates, and obesity rates by county. The number of restaurants located in a food desert zone (0.5- and 1.0-mile radius) were tabulated as well. A t-test was conducted to test for differences among the county percentage of AAs, poverty rates, and obesity rates

between the restaurants in counties that were classified as being in a food desert zone (0.5- and 1.0-mile radius) compared to the ones that were not in a food desert zone. Analyses were conducted in Stata, version 14.0 (StataCorp. 2015. Stata Statistical Software: Release 14. College Station, TX: StataCorp LP).

Results

Initially 56 restaurants were identified. Eleven restaurants were excluded because 1) their menu items didn't fit the inclusion criteria (n=6), 2) they were food trucks and not a sit-down restaurants (n=2), 3) they were currently not open for business (n=2), or 4) they had recently gone out of business (n=1). A total of 45 restaurants were included in the final analysis (Figure 4.1).

Table 4.1 presents a summary of all of the restaurants that have vegan soul food identified from the 16 states and the District of Columbia that are defined as being in the South region from the Census Bureau (United States Census Bureau). The mean percentage of AAs, obesity rates, and poverty rates by county for each restaurant's location are presented, as well as each restaurant being coded in a food desert zone from the USDA's food atlas map (United States Department of Agriculture 2015; Rhone et al. 2017). Additionally, the menu items that met the inclusion criteria are presented and a randomly selected sample entrée from each restaurant.

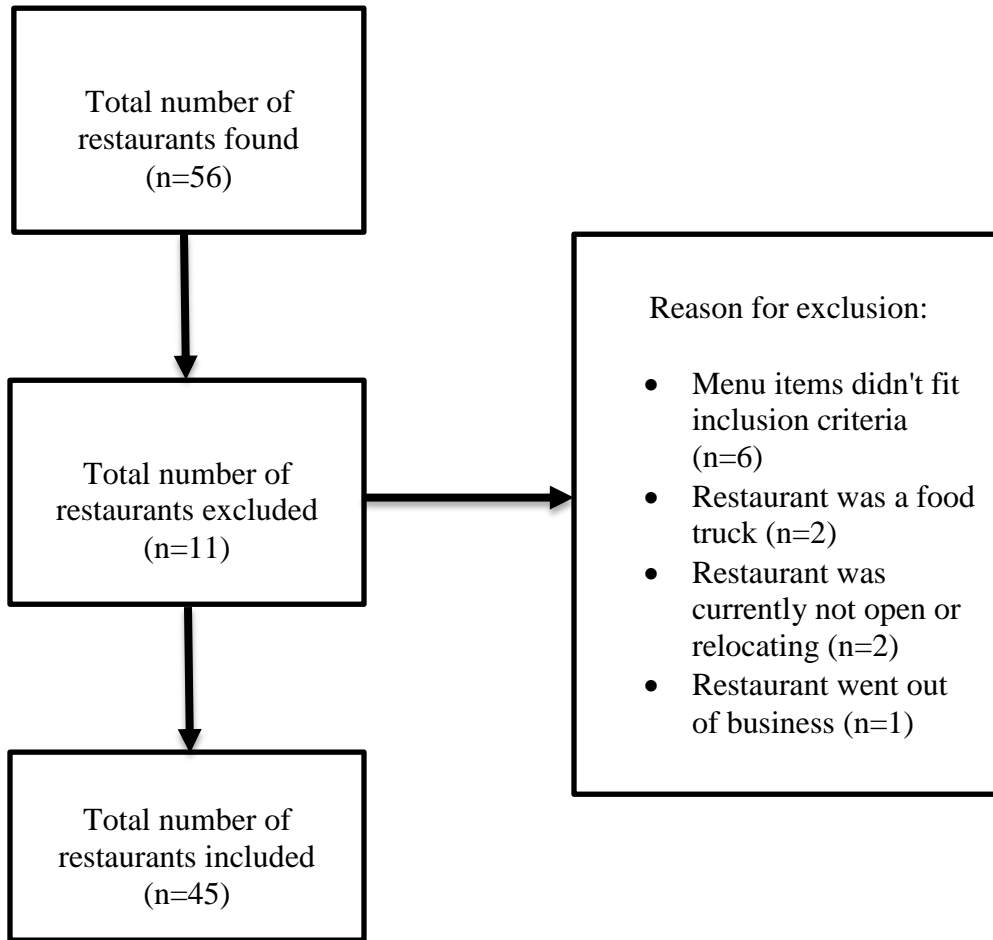


Figure 4.1. Consort Diagram.

Table 4.1. Summary of vegan soul food restaurants identified in Southern states.

Name	State	Percent AA (by County)	Percent Poverty Rate (by County)	Percent Obesity rates (by County)	Food Desert Low Income and Low Access Census Tract 1 mile radius ^a	Food Desert Low Income and Low Access Census Tract 0.5 radius ^a	Menu Items for Inclusion Criteria	Sample Entrée ^b
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Evolve	DC ^c	47.7	18.6	21.5	No	No	Fried "chicken," mac and "cheese," collard greens, yams	Southern fried "chick-un"
NuVegan	DC ^c	47.7	18.6	21.5	No	No	Fried "fish," collards, kale, yams, mac and "cheese," cornbread, okra	Fried "chicken" fillets
Senbeb Café	DC ^c	47.7	18.6	21.5	No	No	Friend "chicken," kale, collards, mac and "cheese," cornbread	Cajun fried "chicken"
Paisley Vegan Kitchen	FL	10.7	14.7	25.6	No	Yes	Fried "chicken," mac and "cheese," barbeque vegan substitutes for meat	Barbequed pulled jackfruit sandwich
Dixie Dharma	FL	22.7	16.3	24.9	No	No	Kale, collards, mac and "cheese," barbeque	Carolina barbequed

							vegan substitutes for meat	pulled jackfruit
Soul Vegetarian Tallahassee	FL	31.6	19	26.4	No	Yes	Candied yams, mac and “cheese,” collards, barbeque vegan substitutes for meat	Barbequed tofu sandwich
Vegan International Co Kitchen & Market	FL	17.7	15	28.3	No	Yes	Barbeque vegan substitutes for meat, sweet potatoes, collard greens, mac and “cheese”	Barbequed vegan fish with collard greens and rice
Darbster Vegan	FL	19.4	12.6	21.5	No	No	Mac and “cheese,” kale, sweet potatoes, black beans	Sampler of vegan wings, cashew mac and

								“cheese,” and onion rings
Ray's Vegan Soul	FL	10.3	13.3	25.5	No	Yes	Mac and “cheese,” cornbread, collard green wrap, barbeque vegan substitutes for meat	Barbequed pulled jackfruit
Wilde Flower Vegan Café	FL	11.1	11.4	24.6	No	Yes	"Chicken" and waffles, cornbread, collard greens	Barbequed pulled jackfruit sandwich
Ethos Vegan Kitchen	FL	22.7	16.3	24.9	No	No	Mac and “cheese,” barbequed "chicken," cornbread, beans and rice	Cornbread skillet

Avocado Vegan Café	GA	44.5	16	23.9	No	No	Barbequed vegan substitutes for meat, sweet potato fries, kale	Barbequed Portobello sandwich
Healthful Essence	GA	44.5	16	23.9	No	No	Collard greens, sweet potato, barbequed vegan substitutes for meat, cornbread	Barbequed tofu
Soul Vegetarian South	GA	44.1	16	23.9	No	No	Barbequed tofu, mac and “cheese,” cornbread, collard greens	Barbequed kalebone twists
Soul Vegetarian Highland	GA	44.5	16	23.9	No	No	Cornbread, barbequed vegan substitutes for meat, collard greens, sweet potato, mac and “cheese”	Fried cauliflower

Viva La Vegan	GA	44.5	16	23.9	Yes	Yes	Sweet potato fries, kale salad, barbequed, fried "chicken"	Fried "chicken" and waffle
Café Life	GA	28.1	10	22.9	No	Yes	Collards, sweet potato, cornbread, mac and "cheese," candied yams	Soul food plate (collards, mac and "cheese," mashed yam, and corn bread)
Huli Vegan Kitchen	GA	71	20.8	38	No	Yes	Sweet potato, barbequed vegan substitutes for meat, kale	Southern grilled vegan ribs, mac and "cheese,"

								and collard greens
Natural Selections Cafe	GA	40.5	16.6	31.3	No	No	Collard greens, mac and "cheese," kale	Black bean burger with mac and "cheese"
Go Vegetarian	GA	54.3	17.5	27.3	No	Yes	Fried "chicken", collard greens, mac and "cheese"	Smothered fried vegan "chicken" with gravy
Louisville Vegan Kitchen	KY	20.8	14.9	31.6	No	Yes	Mac and "cheese," collard greens, cornbread muffins	Southern Hospitality (barbequed cauliflower with mac and

								“cheese,” mashed potatoes, and smoked collards)
Naturally Naw'lins Vegan Cuisine L.L.C	LA	60.2	24.1	31.9	No	No	Mac and “cheese,” collard greens, cornbread, sweet potato	Entrée plate (Vegan stuffing, collards, mashed yams, and corn bread)
Sweet Soul Food-NOLA Vegan Experience	LA	60.2	24.1	31.9	No	No	Mac and “cheese,” collard greens, okra, corn bread, candied yams	Fried cauliflower, okra gumbo and yams

The Grub Factory	MD	63.3	21.8	28.8	No	No	Mac and “cheese,” string beans, seitan substitute for meat dishes	Soul food style mac and “cheese”
The Land of Kush	MD	63.3	21.8	28.8	No	No	Barbequed vegan substitutes for meat, kale, collard greens, candied yams, mac and “cheese,” cornbread	Kush barbequed “ribs”
Everlasting Life Restaurant	MD	65	9.5	33.4	No	No	Mac and “cheese,” collard greens, kale, vegan meat substitutes	Mock “chicken” and gravy with
Great Sage	MD	19.1	5.2	21.7	No	No	Kale, green beans, cornbread, mac and “cheese”	Summer mac and “cheese”

NuVegan Café	MD	65	9.5	33.4	Yes	Yes	Vegan substitutes for meat, sweet potato, collards, kale, yams, mac and “cheese,” cornbread, okra	Vegan fried “chicken” fillets
Sweet and Natural	MD	65	9.5	33.4	No	No	Mac and “cheese,” collard greens, fried "chicken," black beans, candied yams	Organic veggie fried “chicken”
Bean Vegan Cuisine (Charlotte)	NC	32.7	12.3	23.9	No	Yes	Barbequed vegan substitutes for meat, mac and “cheese,” kale, collards	Fishless filet sandwich
Bean Vegan Cuisine (Asheville)	NC	6.4	13.5	23.5	No	No	Barbequed vegan substitutes for meat,	Barbequed pulled

							mac and “cheese,” kale, collards	jackfruit sandwich
ZiZi's Take Out	NC	32.7	12.3	23.9	No	No	Vegan substitutes for meat, collard greens, mac and “cheese,” candied yams	Soul burger (black eyed peas, yams, collard greens, seasoning, flour, lettuce, tomato, onion, “cheese”)
Souly Vegan Café	NC	38.3	16.1	29.2	No	Yes	Cornbread, kale, barbeque vegan substitutes for meat,	Popping barbeque platter

							candied yams, mac and “cheese,” collards	(vegan “chicken” with mac and “cheese,” collard greens, and rice)
A Peace of Soul (Lamb's Bread)	SC	45.9	15.8	32.6	No	No	Vegan substitutes for meat, mac and “cheese,” collard greens, candied yams,	Gong bao “chicken” with mac and “cheese,” purple cabbage, and collards

Universal Love Vegan Cafè	SC	45.9	15.8	32.6	No	Yes	Vegan substitutes for meat, collard greens, black eyed peas, mac and “cheese”	Barbequed “chicken” with collards and mac and “cheese”
The Reizod Vegan Experience	SC	45.9	15.8	32.6	Yes	Yes	Vegan substitutes for meat, collard wraps, sweet potato pie, mac and “cheese”	Fried vegan “chicken”
Sanctuary Vegan Café	TN	9	14.8	29.7	No	No	Vegan substitutes for meat, kale, mac and “cheese,” black beans	“Chicken” fried seitan with veggies and gravy

Imagine Vegan Café	TN	54.1	20.8	32.6	No	Yes	Vegan substitutes for meat, sweet potatoes, mac and “cheese”	Fried “chicken” and waffles
Graze	TN	28.1	15.1	30.9	No	No	Vegan substitutes for meat, mac and “cheese,” mashed sweet potatoes,	Cashew mac and “cheese” topped with seitan chorizo
The Southern V	TN	28.1	15.1	30.9	No	No	Fried “chicken,” mac and “cheese,” turnip greens, black beans	Hot fried “chicken” sandwich
Vegeticious	TN	28.1	15.1	30.9	No	No	Mac and “cheese,” barbeque “chicken,” collards.	Soul Food plate (mac and “cheese,”

								barbeque "chicken," collards, and yams and rolls)
Counter Culture	TX	8.9	12.2	20.3	Yes	Yes	Barbequed vegan substitutes for meat, mac and "cheese," cornbread	Barbequed jackfruit and bean quesadilla
The Beer Plant	TX	8.9	12.2	20.3	No	No	Fried "chicken," mac and "cheese," kale	Hill country "chicken" and gravy

V-Eats	TX	23.5	16.3	27.6	No	Yes	Fried "chicken," mac and "cheese," corn bread, sweet potato	Country fried "chicken" with mushroom gravy, grilled vegetables, mac and "cheese"
Green Seed Vegan	TX	19.7	16.6	27.2	No	No	Vegan substitutes for meat, sweet potato, kale	Lil red bbq (barbequed jackfruit)

^aOnly the 0.5 mile and 1.0 mile radiuses were used since none of the restaurants were located in rural areas.

^bSample entrees were selected as every second item on the main entrée menu or from the first day of the week the restaurant was opened if it used a rotating menu.

^cThe Distract of Columbia is not considered a state or county, but it is classified as a part of the Southern region in the Census Bureau.

The overall mean percentage of AAs by county was $36.5 \pm 18.5\%$ (95% CI: 31.1 – 41.2%). Mean county poverty rates were $15.5 \pm 3.85\%$ (95% CI: 14.4 – 16.6%) and the mean obesity rates were $26.8 \pm 4.8\%$ (95% CI: 25.4 – 28.2%). The percentage of AAs and poverty rates were higher than national averages, while the obesity rates were lower (Figure 4.2) (United States Census Bureau 2011; Semega, Fontenot, and Kollar 2017; Hales et al. 2017).

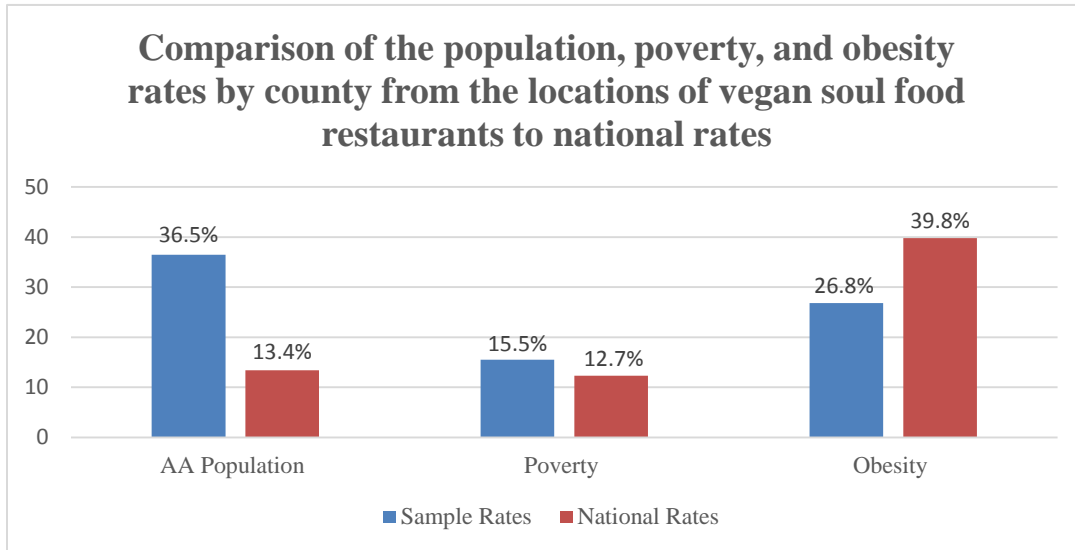


Figure 4.2. Comparison of the population, poverty, and obesity rates by county from the locations of vegan soul food restaurants to national rates.

Of the 16 states examined, 4 did not have any identified restaurants that served vegan soul foods (Alabama, Arkansas, Virginia, and West Virginia). Of the states that had at least one identified restaurant, Georgia had the most vegan restaurants serving soul food ($n=9$) and Kentucky had the fewest ($n=1$). None of the restaurants were located in rural areas. Many were located in or near to larger cities (e.g. 5 of the restaurants in

Georgia were located in Fulton County, which is the most populated county in Georgia). The most popular food items that met the inclusion criteria were vegan mac and cheese (n=39 restaurants), chicken and other meat substitutes (n=37 restaurants), vegan cornbread (n=16 restaurants), as well as collards (n=9 restaurants). Of the 45 restaurants identified, 14 (31.1%) were located 0.5 mile away from the nearest supermarket and 4 (8.9%) were 1.0 mile away from the nearest supermarket (Table 1). Therefore, more than one third (40.0%) of the restaurants were considered to be in a food desert zone as defined by the USDA 0.5 mile or greater (Rhone et al. 2017).

There were no differences between the percentage of AAs located in counties with restaurants in food desert zones (mean=34.1±19.4%) compared to the counties with restaurants that were not located in a food desert zone (mean=37.9±18.4%) (P=0.51). Neither were there differences between the poverty rates (mean of restaurants located in food desert zone=15.1±3.3% compared to mean of restaurants not located in a food desert zone=15.7±4.3%; P=0.60) or the obesity rates (mean of restaurants located in food desert zone=28.1±4.6% compared to mean of restaurants not located in a food desert zone=26.7±4.3%; P=0.29).

Discussion

This study aimed to identify the locations of vegan soul food restaurants in order to quantify the number of these restaurants located in the South and to understand the characteristics of the surrounding communities that they serve. The main findings were that slightly more than one third of these restaurants were located in the 0.5 or 1.0 mile distance from the nearest supermarket (Rhone et al. 2017). This is important to consider

because the location of these restaurants have the potential to impact the existing food environment by selling healthier versions of soul food meals in neighborhoods that typically do not have access to healthier food options. Additionally, the average county AA population rates and poverty rates from the locations of these restaurants were higher than the national averages. This suggests these restaurants do have potential to reach many AA patrons and introduce them to vegan meals, but future work would need to thoroughly assess the demographics of the clientele that eat out at these restaurants to confirm this. The higher poverty rates likely coincide with the fact that many of the restaurants are located in or near a food desert zones, since individuals living in poorer communities face more hurdles for accessing healthy food (Rhone et al. 2017).

Locally-owned vegan soul food restaurants also provide a healthier alternative to traditional chain restaurants, as the majority of large chain restaurants in the United States have made limited progress to promote healthful options or improve the diet quality of their menu items (Kraak et al. 2017). There is little evidence of large chain restaurants using pricing strategies to make healthy products more affordable (Kraak et al. 2017). Many restaurants instead rely on reduced pricing promotions on larger portion sizes to remove the financial incentive for choosing the larger portion size (Kraak et al. 2017). Additionally, large chain restaurants have made limited progress on promoting healthier foods as default options, such as replacing French fries with fruits and vegetables (Kraak et al. 2017). These are all issues vegan soul food restaurants have potential to address. The National Academies of Medicine and the World Health Organization have recommended restaurants to be place-based intervention sites to have strategies and promotions that improve healthy eating behaviors in order to reduce the obesity epidemic

(Vandevijvere et al. 2015; Committee on Accelerating Progress in Obesity Prevention 2012). Having more vegan soul food restaurants may help to contribute to these recommendations by providing patrons with plant-based meals so that they are more likely to meet the US Dietary Guidelines and reduce the consumption of higher fat meals from traditional soul foods.

In addition to influencing food access, these vegan soul food restaurants can interest more AAs in trying plant-based meals with the same cultural appeal as traditional soul food. As others have noted, unlike the average vegan restaurant, vegan soul food recipes can “capture the spirit of the dish by drawing on the same indulgent spicy-earthly flavors that make such cuisine distinct, while satisfying the palate”(Arnold 2017). Studies on plant-based diets with AA participants indicate that AAs following vegan or vegetarian diets tend to have a lower body mass index (BMI) and cardiovascular risk factors than AAs following omnivorous diets (Melby, Toohey, and Cebrick 1994; Fraser et al. 2015). Therefore, having more vegan soul food restaurants and growing movements centered on black veganism, may provide opportunities to influence the nutrition habits in the AA community. Future nutrition interventions focused on AA eating habits may benefit from collaborating with some of these restaurant owners, as well as influential individuals in the vegan soul food movement. Forming such partnerships could create opportunity to reach and engage people in the AA community to focus on healthier eating. AAs have been a traditionally understudied population in nutrition research and more work is needed to find innovative and culturally-relevant ways to help AAs meet the recommended dietary guidelines.

There were some limitations to this study. One limitation of this work is not knowing if most of the patrons at these restaurants actually live in nearby neighborhoods or if they come from surrounding communities. Furthermore, other work has indicated that the geographic location of poorer neighborhoods does not always lead to poor food choices (Macintyre 2007; Sadler, Gilliland, and Arku 2016). Factors like having an automobile and the subjective perception of having access to healthy foods may be more important than the absence or presence of resources (Macintyre 2007; Sadler, Gilliland, and Arku 2016; Ma et al. 2018; Liese et al. 2014). Another limitation is the fact that the Census Bureau's definition of the South as a region is very broad and some states (e.g. Maryland or the District of Columbia) may not be truly considered as representing the culture of the "South." There were a number of restaurants concentrated in places like Maryland (n=6), the District of Columbia (n=3), and Florida (n=8) that are not typically considered states that are culturally representative of the Deep South. On the other hand, there were no restaurants identified in Virginia and West Virginia. Nor were there any restaurants identified in Alabama and Arkansas, both of which would be considered deep Southern states. Finally, while standard menu criteria were used to identify restaurants, many entrees varied from restaurants to restaurant. While some restaurants had numerous soul food entrees, others had only one or two soul food specific entrees, but met the inclusion criteria due to having several side dishes (like collards or mac and "cheese"). This made the conceptualization of some vegan soul food restaurants a challenge to distinguish from ordinary vegan restaurants. It should be noted that vegan soul food may still be a relatively new concept. A Google trend analysis for the search term "vegan soul food" tripled in popularity from August 2017 through August 2018. Prior to August

2017, the trend value ranged from 0 – 42. Whereas within the last year the trend value ranged from 66 – 100. This is likely due to the fact that a number of vegan soul food restaurants have opened within the past year or the growing popularity of vegan soul food cuisine (Severson 2017; Rodricks 2014).

In conclusion, with more vegan soul food restaurants opening across the South and the rest of the U.S., there is potential for these restaurants to impact the AA community by exposing patrons to healthier, plant-based foods that are familiar and similar to traditional soul foods. This study attempted to identify these restaurants and describe the characteristics of the communities that in which they are located. Future work should continue to explore the impact that these restaurants have on the surrounding communities that they serve. In particular, more work should assess how they might influence healthy eating habits of residents living in the surrounding community.

4.2 Manuscript 2

“We’re not meat shamers. We’re plant pushers.” How Owners of Local Vegan Soul Food Restaurants Promote Healthy Eating in the African American Community²

²Crimarco A, Botchway, M, Turner-McGrievy GM, Macauda M Adams S, Blake C, Younginer, N. Prepared for *Family and Community Health*.

ABSTRACT

A number of soul food restaurants serving exclusively vegan meals have opened up across the country to appeal to African American (AA) adults and others interested in eating healthier versions of southern favorites. This presents a unique opportunity to explore how these restaurants might impact AA dietary habits, since more work is needed to develop culturally tailored dietary interventions among diverse populations. In-depth interviews were conducted with owners (N=12) of vegan soul food restaurants located in states in the Black Belt region to assess how they view their role as promoters of health in their community and identify strategies they use to make plant-based foods more culturally appealing to AA adults. Six themes emerged from the interviews related to (1) the restaurants providing access to vegan meals, (2) the owners educating their customers about vegan diets and healthy eating, (3) the need to make AAs more culturally familiar with vegan foods, (4) using fresh ingredients to make vegan soul foods taste good, (5) addressing limited cooking skills among AAs, and (6) discussing non-health reasons to become vegan. The findings indicate there may be future opportunities for health educators to partner with these restaurant owners to improve healthy eating among African Americans.

Keywords: Vegan; Plant-Based; Soul food; African American; Food Access

BACKGROUND

Current research has estimated that almost four in ten adults (39.8%) in the United States are now classified as having obesity.¹ Ethnic minorities are disproportionality

affected by obesity and African American (AA) adults have the highest age-adjusted prevalence rate for obesity (47.8%) compared to all other ethnic groups.² There are also disparities in obesity rates by region in the United States. There are greater rates of obesity in the Southern states, particularly in the Deep South, Central Appalachia, and the Carolina areas.³ The rising obesity rates in the South are leading to a rapid increase in new cases of diabetes among both AA and white adults.⁴

Poor dietary habits and excessive energy consumption are major contributors to obesity and chronic diseases.⁵ AAs typically consume fewer fruits and vegetables and more processed fast foods than other ethnic groups.⁶⁻⁹ Many dietary disparities have been associated with the built environment, since AA communities tend to have more fast food restaurants, but fewer supermarkets and stores selling healthy foods than white neighborhoods.¹⁰⁻¹² Results of built environment interventions targeting multiethnic neighborhoods to improve residents' diet quality (i.e. more fruit and vegetable consumption) have been mixed.^{12,13} There are likely other factors to consider for better understanding the underlying causes of ethnic disparities in obesity rates and eating behaviors.¹⁴

Previous work has indicated that one of the barriers to healthy eating for AA adults is the perception that eating healthily means giving up a part of their cultural identity.^{15,16} Food culture has a significant influence on AA food choices, since AA dietary patterns have evolved from a long history of slavery, discrimination, and segregation.^{15,16} Many AA adults living in the Black Belt region (i.e. the crescent shaped region that extends 300 miles long and 25 miles wide from southwest Tennessee to east-central Mississippi and then east through Alabama, Georgia, and the Carolinas) report regularly eating foods like

collard greens, fried chicken, and other “soul foods,” because of cultural preferences and family traditions.¹⁷ Soul food is the term used to describe the ethnic cuisine that African slaves prepared in the Deep Interior South to survive during slavery.¹⁵⁻¹⁹ Slaves had to make use of the limited resources provided to them to create foods in a foreign land under extremely disempowering conditions.^{20,21} Many of these soul foods remain popular among black and white adults in the South today.¹⁷

However, some soul food items, like fried chicken, chitlins, or pork, consumed in great portions contain high fat and sodium content that often exceed the recommended dietary guidelines.²² Despite the public health concerns, soul food continues to serve as a means for AAs to stay connected to their roots and traditions.¹⁵ Other staple soul foods, such as the various green vegetables, okra, and black-eyed peas, have high fiber and low caloric density because they are sourced from plants.²³ Soul food’s early history in the 1400s, prior to the Atlantic Slave Trade, suggests that most West African tribes actually ate a mostly plant-based diet (PBD).¹⁸ This has led to a health-conscious movement that has prompted a number of vegan soul food restaurants to recently open up throughout the South that provide completely plant-based (i.e. no foods containing meat, dairy, or animal products), healthier versions of traditional soul food dishes.²⁴ The increase in vegan soul food restaurants are based on events like the Baltimore Vegan Soulfest, and other black vegan movements throughout the U.S., which has increased interest from AAs to learn about the health benefits of PBDs.²⁵

PBDs are associated with a lower body mass index (BMI) and a lower risk for certain chronic diseases, such as diabetes, cardiovascular disease, and some cancers compared to the standard American diet.²⁶ The observed health benefits from PBDs are based on an

increased consumption of fruits, vegetables, nuts, phytonutrients, whole grains, and the exclusion of animal products, which are typically high in cholesterol and saturated fat.²⁶ The standard definition of a PBD is the avoidance of meat, poultry, and fish, however there are several categories of PBDs.²⁶ Some PBDs might include dairy products (i.e. lactovegetarian diet) or select animal products like fish (i.e. pesco-vegetarian diet).²⁶ Evidence suggests that AA adults may experience health benefits, such as lower blood pressure, serum cholesterol levels, and body mass index (BMI) from consuming a plant-based diet compared to an omnivorous diet.²⁷⁻²⁹ Additionally, the 2015 edition of the U.S. Dietary Guidelines identified a vegetarian diet as one of the three main healthful dietary patterns, and that most people would benefit from basing meals around plants sources.³⁰

Based on the potential health benefits from consuming plant-based foods and the increasing number of vegan soul food restaurants in the South that provide healthier versions of traditional soul food dishes,³¹ there may be opportunities for these restaurants to impact dietary behaviors in local AA communities. However, it is not known how these restaurants may impact the health in their communities and how owners of these restaurants perceive their role in promoting the health of their customers. This led to the development of the present study, where the focus was to conduct qualitative work to better understand how these restaurants impact their local communities. Therefore, the purpose of this study was to assess how owners of vegan soul food restaurants located in states in the Black Belt region view their role as promoters of health in their community and to identify strategies that they use to make PBDs more culturally appealing in the AA community. The following research questions were assessed:

- RQ1: What is the perception that owners of vegan soul food restaurants have of their role in influencing and promoting health in their communities?
- RQ2: What strategies do owners of vegan soul restaurants use to make vegan foods more culturally appealing in the AA community?

METHODS

Development of the Interview Guide

This research used constructs from Social Identity Theory (SIT) and the Social Ecological Model to inform the development of interview questions. A conceptual model is presented in Figure 4.3. The model considers the strategies that owners of vegan soul food restaurants use to promote the consumption of vegan meals.^{32,33} Specifically, this model emphasizes the social identification construct from SIT by focusing on how the restaurant owners would define their own personal identity from multiple social groups (African American, vegan, restaurant owners etc.). The bottom portion of this model illustrates potential individual and environmental variables that owners of vegan soul food restaurants may perceive that they influence among the patrons and people in their communities. Bronfenbrenner’s ecological model defines human development as being shaped from complex “layers” of interactions between individual attitudes and behavior with interpersonal and environmental factors.³³ Ecological models are most effective for guiding public health interventions when they are tailored to the specific health behaviors of the target population.³⁴ The specific ecological constructs considered were knowledge and attitudes about food (individual level), social networks that people establish eating

relationships with (interpersonal factors), and the availability and cost of vegan meals (community/organizational level).

Once questions were developed, the interview was piloted tested with two different vegan soul restaurants in Baltimore, MD. After the first pilot test, some interview questions were removed that were deemed redundant and others were reworded. The modified interview questions were then used for the second pilot test and the questions were deemed appropriate for use as the final interview guide.

Sampling

A list of vegan soul food restaurants had been identified from preliminary work. Two trained reviewers conducted an online search for restaurants located in the 16 states in the South region and the District of Columbia as defined by the Census Bureau.³⁵ Two reviewers searched for restaurants that served vegan soul foods from the following websites: Google, Yelp, HappyCow.net, and Facebook. The search terms “vegan soul food,” “vegan southern food,” “vegan soul food restaurants,” and “vegan southern restaurants” were used.

In order to be included in recruitment for this study, the restaurants had to have a vegan menu (e.g., free of any animal products) with three or more of the following staple soul food items: black-eyed peas, okra or greens (collard greens, kale, mustard greens, turnips), candied yams, sweet potatoes, vegan substitutes for macaroni and cheese, vegan substitutes for cornbread, and/or vegan substitutes for common soul food meat-based dishes, such as fried or barbeque chicken, ribs, and catfish.

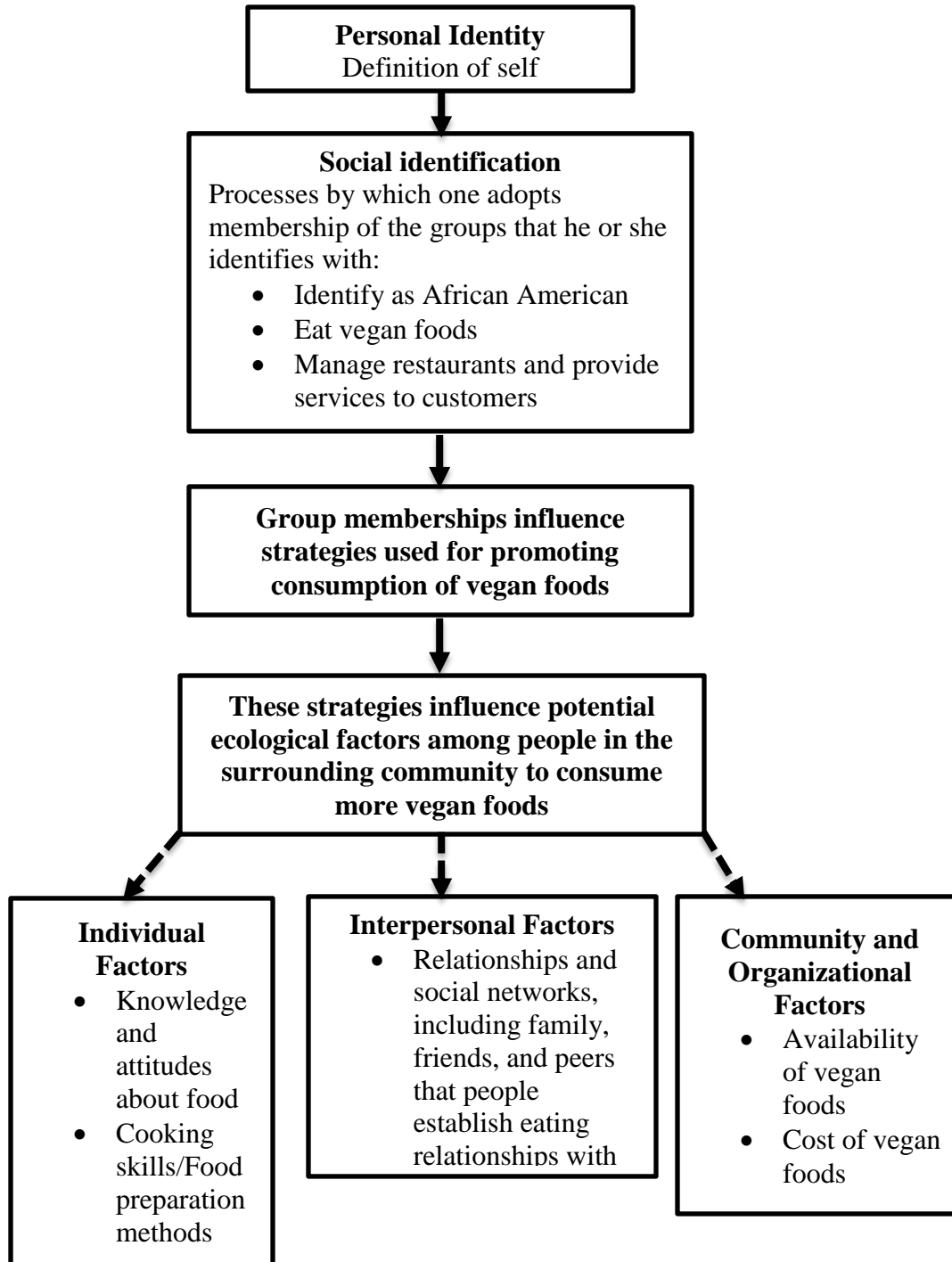


Figure 4.3. Social identification of how owners of vegan soul food restaurants influence ecological factors to increase the consumption of vegan foods.*

*Adapted from Tajfel (2010)³² and Bronfenbrenner (1992)

The rationale for these particular menu items is that scholars tend to agree that soul food has roots in Southern cuisine and that many of the meals originated from Africa.^{19,36-}

³⁸ Therefore, the focus of the menu items was to select dishes that were common in the South, as well as foods that were transplanted from Africa (e.g. okra and black-eyed peas).

Both reviewers independently searched for restaurants using the search criteria and then reviewed each other's lists to reach a final consensus for which restaurants to include. When there was a discrepancy for including or excluding a restaurant, both reviewers would review the restaurant's menu together and come to a final consensus.

Once restaurants had been identified, the following inclusion criteria were required for the interviews:

1. The restaurants had to be located in one of the 11 Black Belt States.³⁹ Specifically the following states assessed were: Texas, Arkansas, Louisiana, Tennessee, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, and Virginia.³⁹ These states are all a part of the 16 states and the District of Columbia from the Census Bureau's definition of the South region. The rationale for using the Black Belt Region is that these are states with a high percentage of AA residents.³⁹ Black Belt states also have higher rates of poverty and lower educational attainment compared to national averages, which is important to consider for public health.^{17,39,40}
2. The restaurant owners had to identify as AA. The rationale for focusing on AA-owned restaurants is that some of the most popular vegan-based soul foods, like

black-eyed peas, kidney beans, lima beans, sweet potatoes, yam, okra were not indigenous to America, but were transplanted from Africa during the Atlantic Slave Trade.^{19,36-38} Therefore, these foods have a historical meaning to many AAs over standard vegan meals. Given the fact that soul food is rooted in black culture and history, it would be reasonable to interview owners that identify as AA and consider their restaurants to be soul food.

The goal was to interview a minimum of 12 owners (~1 per state), since saturation from qualitative interviews has been reported to occur within the first 12 interviews.⁴¹

Study Design and Analysis

Approval for this study's procedures were obtained from the University of South Carolina's Institutional Review Board. Participants were asked to give verbal consent prior to the interviews being recorded. After the interviews were transcribed, the audio files were destroyed. No names or identifying information were printed in the transcribed interviews. Instead, a random letter or symbol was used to replace full names.

A combination of in-person interviews and phone interviews were used. Phone interviews were used for restaurants that were geographically far in an effort to save costs. Despite the perception that telephone interviews are lower in quality than face-to-face interviews (i.e. the lack of visual cues), there is little evidence that data loss or distortion occurs, or that interpretation and quality of findings is compromised when interview data is collected by telephone.⁴² The in-person interviews took place at the restaurants. The interviews were semi-structured and lasted approximately 30 – 40 minutes each. A demographic questionnaire was assessed at the end of each interview

that asked participants' age, gender, ethnicity, educational attainment, the number of years that their restaurant had been open for, and the most popular item on their menu. Each participant received a \$10.00 Amazon gift card for his/her participation in the interviews.

All interviews were recorded and transcribed. The interviews were then coded in NVivo version 12. Two researchers separately coded all of the interviews using an inductive, opening coding process for thematic analysis.⁴³ Upon completion of the independent coding, both researchers reviewed each other's analysis and discussed and resolved any major discrepancies.⁴⁴ The results of major themes that emerged from the analysis are presented in the results section along with representative quotes.

RESULTS

Based on the search criteria, some states did not have any restaurants that met the inclusion criteria. As a result, a total of 27 restaurants through 7 states were identified and available to sample for interviews. A total of 12 owners from 7 different states (Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, and Texas) were interviewed. The mean age of the participants was 40.6 ± 9.8 years and they were all African American ($n=12$, 100%), mostly male ($n=8$, 66.7%), and the majority were college educated or had an advance degree ($n=7$, 58.3%) (Table 4.2).

Table 4.2. Demographic characteristics of the restaurant owners and states represented in interviews

Category	n	Percent
Gender		
Female	4	33.3
Male	8	66.7
Race		
African American	12	100.0
Education		
Advanced Degree (Master's, Doctoral, Professional degree)	2	16.6
College	5	41.7
High School or Equivalent	5	41.7
States Represented in Interviews		
Florida	2	16.6
Georgia	2	16.6
Louisiana	1	8.3
North Carolina	1	8.3
South Carolina	3	25.0
Tennessee	2	16.6
Texas	1	8.3

Six themes emerged from the interviews related to how restaurant owners of vegan soul food restaurants view their roles of promoters of health in their community and strategies that they use to make PBDs more culturally appealing in the AA adults: (1) The owners believed opening their restaurants provided their communities more access to vegan meals. (2) The owners often educate their customers about vegan diets and healthy eating by having discussions with them. (3) There is a need to make AAs more culturally familiar with vegan foods. (4) The owners emphasize quality and fresh ingredients to make vegan soul foods taste good. (5) Many owners felt that AA adults lack cooking skills to prepare vegan specific meals. (6) The owners also discuss non-health reasons to their patrons for following a vegan lifestyle to encourage them to become vegan.

Providing Access to Vegan Meals

At the time of the interviews, the restaurants had been in business as little as 2 months to as many as 39 years. When it came to opening a vegan soul food restaurant, most of the owners had noted that limited dining options for vegans in their communities interested them to do so. Additionally, many of them felt consumers have become more interested in trying PBDs in recent times. As one owner had said:

“So pretty much if you’re asking about what influenced me to start, I mean its supply and demand I guess. There was a demand there. So I just try to supply it.” (O#11)

When asked what were some challenges that AA adults in their local communities face when it comes to eating more plant-based foods, many owners noted that the high cost of healthy meals (n=6, 50%) and limited access to stores or restaurants that provide quality plant-based meals (n=5, 41.7%) as significant barriers. Two examples:

“I think it really is just having access to healthy food you know? That's really the biggest thing for a lot of our neighborhoods. A lot of people are not willing to drive you know 10, 15 miles just to get something that's going to be better for them.” (O#9)

“Food deserts. We still have food deserts. The black neighborhoods still have food deserts. I remember in Brooklyn it was a food desert where I live in Flatbush. Now gentrification is required and not only can I get almond milk, but I can get like eight different almond milks and eight different ice creams. And I can get five different cashew cheeses. I could go into a vegan cheese shop that has all nut cheeses in Brooklyn. I mean completely a different environment from it was before. Whereas here, in this part of Florida, there are little to no options for vegan foods.” (O#3)

Most of the owners felt by opening their restaurants they could address the limited availability of vegan foods in nearby neighborhoods. A few of the owners also mentioned growing up in communities with an unhealthy food environment themselves. They felt that their restaurants could ultimately make an impact in their communities. For example, one owner noted:

“Catastrophically, the African American health in South Carolina is, and has been, dreadful for the last 30 years. It's getting worse every year. It's starting to affect youth a lot more in the last decade and probably more so than ever before. And it's a real problem. So the easiest way to change something is to put energy towards something that allows change to happen. And that's why I opened a vegan restaurant.” (O#5)

Engaging and Educating the Customer about Vegan Diets and Healthy Eating

Discussing the Health Benefits of Vegan Diets: The most prevalent theme that emerged from the interviews was that all of the owners at some point have had discussions with their customers about the health benefits of vegan diets or eating healthier in general. Since most of the customers that patron at these restaurants were not vegan, many of the owners regularly approached them and engaged with them about vegan diets. For example one owner reflected on his approach by saying:

“For people looking to transition, we're usually their first stop. So we are given that type of responsibility to educate the customer first. The first thing I always say is 'Are you Vegan?' And if they say no, you know I welcome them and tell them they came

to the right place. And I start asking simple questions, like ‘What do you know about veganism?’ Then they start asking questions about ingredients and things like that. And you know it’s all about making the customer feel comfortable.” (O#11)

Some owners felt that educating patrons about what specific foods are vegan and what a vegan lifestyle means was a first step towards getting more people in their community to try more vegan foods. One owner mentioned:

“Most people, to be honest, aren’t even sure what vegan means. It’s kind of thrown in this box, when they figure it means no animals. But sometimes we get crazy question like ‘Well, what kind of potatoes?’ Or ‘Is it real rice?’ You know what I mean? So people don’t really have like a basis for what vegan actually means.” (O#4)

Discussing Healthy Eating in General: Others felt that they were simply trying to encourage their customers to pursue healthier eating, whether that meant being vegan or not:

“My restaurant is a judgment-free zone where the focus is not necessarily on becoming vegan or being healthy, but on eating better and allowing that to take you to better health.” (O#11)

“Even if a customer has no intentions of ever converting to a vegan diet, I still believe they come away with the knowledge that cutting down on fatty foods and eating more plant-based foods can benefit them.” (O#2)

Familiarity with Vegan Foods

Another theme that emerged along with the need for educating patrons about the health benefits of vegan foods was the fact that AAs were mostly unfamiliar with vegan foods. Most of the owners pointed out that people in their communities had the perception that vegan diets were culturally foreign to them. One owner noted:

“I really think culture is an issue too. Where people think that being vegan is somehow unnatural. People say that eating plant-based foods is an acquired taste. And yet they eat chitterlings. So you mean to tell me you can eat chitterlings without any issue? But eating broccoli is an acquired taste? I’ve literally had folks tell me that eating processed foods or refined sugar is their ‘normal’ food. So getting people to realize that being vegan isn’t a foreign way of eating is important.” (O#1)

In addition to the lack of familiarity with vegan foods, the owners also noted that many AA families had been raised with only knowing how to prepare plant-based soul foods with oils, gravies, and animal products high in fat. In other words, showing patrons how to make these foods with only vegan ingredients would help to make them perceive vegan soul foods as normal. For example, one owner said:

“Most people have grown up eating collards, eating sweet potatoes, eating mac and cheese, and all of those foods can be prepared without animal fat or animal protein. But very rarely are people presented with that opportunity. So even when beans are prepared people instinctively think ham hock has to be in them, or bacon fat, or some piece of animal, and that’s completely not necessary. All of the food that we eat can be either duplicated in a vegan manner or prepared in a way that doesn’t require anything to that, you know?” (O#4)

Another owner also discussed the concept of the modern AA diet being influenced from historical events like slavery. Specially, he said:

“Most African Americans don’t even realize what their true diet is. Like, when they were captured as slaves they didn’t bring the traditional foods that they were eating for generations with them. They were basically put on a diet of starch and blood because it was cheap. And it was the cheapest thing for the slave master to feed them. So, I would say to look into your historical diet.” (O#10)

He went on to explain that if AA adults took a historical perspective on how their West African ancestors ate, then they would realize that a vegan diet was in fact their true diet.

Emphasizing High Quality Ingredients and Good Taste

Fresh Ingredients: Almost all of the owners mentioned that one way they make vegan soul foods appealing to their patrons was emphasizing the quality of the ingredients. Many of the restaurants use fresh ingredients and some used only organic

foods. They believed that their patrons would notice the difference in meal quality than what they would get from standard restaurants. Example quotes:

“We use fresh ingredients. We take the time to prepare the meal from scratch.” (O#1)

“I’m using fresh produce that’s coming from a farm. I’m not just opening a can and putting something in a microwave.” (O#4)

“If you want to pay 8 dollars for a plate of vegetables, know that they came from a can. Know that they were warmed up in a microwave, more than likely, know that the quality is just not the same.” (O#6)

Upfront Costs of Higher Quality Meals: When probed about the cost of organic or natural ingredients and the potential expenses to the patron, many of the owners felt that the prices of the items on their menu were reasonable. Although their prices might not compete with cheap fast food meals, it was still a better investment for customers to purchase healthier meals upfront, rather than to settle for lower quality foods and face potential health issues in the future. Two examples:

“Would you rather pay for it on the front end? Or pay for it on the back end with medications and health issues later?” (O#1)

“In the long run it’s more costly to eat unhealthy fast food and get high blood pressure than it would be to simply pay a few more dollars for clean food.” (O#7)

Ensuring Meals Taste Good: In addition to emphasizing high quality ingredients, many of the owners felt vegan specific soul foods can taste good and be healthy for the consumer. For example, one owner said:

“I wanted to show people, particularly people in the black community, how they can get healthier eating delicious, healthy cuisine, dispelling the myth that in order to eat well, one must sacrifice taste.” (O#1)

Several of the owners also felt that peoples' perceptions of vegan meals being bland or unappealing in taste were a major barrier for getting people to eat more plant-based meals. Some examples:

"In my opinion, it's very simple. The food has to taste great. Not just good, but great. It has to taste so great that people want to keep eating it." (O#7)

"I think people would eat what tastes good. Unfortunately for a great deal of time vegan food just has a reputation of not tasting good. You know when people say vegan they think cardboard or grass. Something that's very unappealing. Most of my customers aren't even vegan, they just happen to enjoy good food. The perk is that it's healthy. So I believe if you present people with an option that's not only taste good, but is healthy for them and is something they can identify with, then they would embrace more vegan foods." (O#4)

Cooking and Lifestyle Habits

Another issue identified from many of the owners was that they felt many people in their communities lack cooking skills for preparing vegan specific meals. One owner discussed this issue by mentioning:

"A lot of people get discouraged from preparing their own meals and if you eat out every single night then yes, vegan meals will be expensive. You know instead of just going to the store grabbing you a bag of apples, or blueberries, or some grapes and kind of popping those around the day and eat some granola, then going home and making some potatoes yourself. Making a baked potato or baked sweet potato is pretty simple and affordable as an example. So I think it really just comes down to how you live your lifestyle." (O#9)

At the time of the interviews 7 of the 12 owners said that they offered cooking classes or demonstrations. Some charged for their classes, while others were free for anyone to attend them. A few of the owners said that they didn't offer classes at the time because of limited time and staffing. One of the owners that was not offering any cooking classes did mention that it was important for her to provide some type of educational resources for people in her community. She noted that:

“Having a class, even if it’s not anything to grow our business, is still important to do. And it’s a community that I live in. It’s a community of people that I care about. So even if it does nothing for the business, it’s still essential to do.” (O#4)

Non-Health Reasons for Eating Vegan Soul Foods

Ethical Eating: In addition to emphasizing healthier soul foods, many of the owners also expressed the importance of eating plant-based foods for ethical reasons. They felt that speaking to their customers about animal and environmental welfare would further motivate them to consider being vegan. One owner remarked:

“I try to get people to not just solely focus on health, because the reason being is that you know when you choose the vegan lifestyle every component of it opens up your eyes to every angle. Whether it be animal rights or environmental welfare, they all affect each other no matter what choice you would like to choose.” (O#9)

Feeling Connected to Vegan Soul Foods: Another non-health aspect of eating vegan soul foods expressed by the owners to motivate more AAs to try vegan foods was the concept of preparing the meals from the heart. Specifically, they discussed that it was important for their customers to feel a connection to the meals they have at the restaurants. Some examples were:

“We have people that come to our restaurant and not only enjoy eating healthy food, but they say to us ‘We can feel the love in your food,’ and that is very important to us! We want everyone to come here and know they are getting food made from the heart.” (O#7)

“Our goal here at the restaurant is to make all of customers have a feeling of warmth and a feeling of being fulfilled every time they eat the food here.” (O#8)

DISCUSSION

This study assessed how owners of vegan soul food restaurants located in states in the Black Belt region view their role as promoters of health in their community and identified strategies that they use to make PBDs more culturally appealing in the AA

community. This study found six major themes from the interviews that indicated owners of vegan soul food restaurants focus on: (1) Providing access to vegan meals, (2) educating customers, (3) informing others about cultural familiarity of vegan foods, (4) using fresh ingredients to make vegan soul foods taste good, (5) addressing limited cooking skills among patrons, and (6) discussing non-health reasons to become vegan.

When the owners were asked about why they opened a restaurant that specifically focused on vegan soul foods, most of them had indicated their communities had limited dining options for vegan meals. Some of them pointed out they felt black neighborhoods in particular lacked quality healthy meals. A number of previously published built environment studies have confirmed this. Black neighborhoods tend to have more fast food restaurants compared to white neighborhoods.¹⁰⁻¹² Additionally, black neighborhoods also tend to have fewer supermarkets compared to predominantly white neighborhoods, which means having less access to fresh fruits and vegetables.⁴⁵ One study comparing a nationally representative sample of individuals and zip code addresses, based on Census data, reported there were half (52%) as many chain supermarkets in black neighborhoods than white neighborhoods.⁴⁶ Therefore, it is likely that these vegan restaurants have potential to expose AA residents that live in communities typically devoid of healthy, plant-based meals to vegan soul foods. This in turn could create interest among AA residents to try eating more plant-based foods.

All of the owners at some point reported engaging with their customers about eating habits or discussed the health benefits of a vegan diet. Owners reported that many of the customers that come to these restaurants were non-vegans either interested in trying out plant-based soul foods, or to simply enjoy a healthier cuisine. The ability of the

restaurant owners to discuss healthy eating with their patrons could be an opportunity for a “teachable moment,” where the owners motivate individuals to spontaneously take up healthier eating habits.⁴⁷ The concept of a teachable moment has been conceptualized in other public health behaviors, such as smoking cessation or pregnancy.⁴⁷ Individuals are reportedly more likely to be motivated to make behavioral change from a recent health event, such as cancer diagnosis or becoming pregnant.⁴⁷ In this particular instance, patrons wanting to change their eating habits might be more receptive to listening to the owner of a vegan soul food restaurant discuss the benefits of a vegan diet or healthy eating in general, when he/she would otherwise not be motivated to make dietary changes.

One of the major barriers for AAs to eat more plant-based foods that the restaurant owners noted was the lack of cultural familiarity with vegan foods in general. As one owner had noted in his interview, although AAs often cook with collards or other plant-based foods, they often do so with animal fats, gravies, or other sauces that are high in fat and cholesterol. One of the reasons for the lack of familiarity with vegan foods among AAs might be because of the perception of veganism being a predominately white movement.⁴⁸ Foods like tofu or quinoa are often marketed in mainstream veganism, which simply do not have the same appeal and familiarity as foods like collards, vegan pulled “pork” sandwiches, and others that have an African diaspora.⁴⁸ With more vegan soul food restaurants opening up across the country, there is greater opportunity for people in the AA community to experience vegan culture from foods connected to their roots and traditions. Furthermore, more resources that are culturally tailored to the AA community have been developed, such as the “African Heritage Pyramid,” which was

developed by the Oldways organization to conceptualize what a traditional West African diet looks like.⁴⁹

Another notable theme was the concept of making vegan soul foods taste good from the use of fresh ingredients. There are many drivers of food choice, but taste is one of the strongest predictors for food preferences.⁵⁰ Taste preferences are often less negotiable than other determinants of food choice, including convenience and cost.⁵⁰ In fact taste exerts such a powerful influence on food choice, one report suggested that the food industry should promote taste first and nutrition second.⁵¹ As such, it was not surprising that many of the owners felt that many AAs expressed little interest in vegan diets because of their perceptions of the foods tasting bland. Many of the owners expressed using spicy seasonings as a way to flavor their foods without added fat or cholesterol. Therefore, having patrons come into the restaurants and experience good tasting, vegan soul foods for the first time would likely be another way for more AAs to become interested in vegan diets.

Along the lines of preparing foods that taste good, the owners also noted that many people in their communities lack basic cooking skills. Research has indicated that more people are in fact eating away from home and not cooking as many meals at home as previous generations did.⁵² This is important to consider, since people that eat more foods away from home tend to have diets that are more energy dense with added sugars and fat.⁵³ Also, one of the barriers for dietary acceptability of plant-based diets is the perceived difficulty of preparing plant-based meals.⁵⁴ Having restaurants that provide familiar tasting plant-based meals could potentially help with this issue by giving an individual a break from cooking all the time or inspiring him/her to learn recipes from the

restaurant that they could try at home. Since many of the owners indicated that their restaurants do provide cooking classes, there are already opportunities for patrons to acquire necessary cooking skills for making healthier meals.

The last theme that emerged from the interviews was that many owners also felt it was important to talk to their patrons about non-health reasons for being vegan. Many of them had talked about animal welfare and the importance of choosing plant-based foods to be more environmentally friendly to the planet. Many people do follow vegan or vegetarian diets for these reasons in addition to just health.^{55,56} Some of the owners felt that by talking about to their patrons about ethical reasons for following a vegan diet over and beyond just health would further motivate them to try more plant-based foods. Some research does in fact support this theory, since people are more likely to find it rewarding to seek behavior change that supports their values and benefits society, rather than viewing diet as sacrifice or burden.⁵⁷ The choice to choose a vegan lifestyle not only impacts the owners' dietary preferences, but their business practices as well. Preparing food products for ethical reasons may resonate with patrons to support these small business owners, since consumers favorably view businesses that practice corporate social responsibility.⁵⁸

Strengths and Limitations

As an exploratory study, there are notable strengths to this work. This work utilized a conceptual model that included both individual and environmental level constructs from the social ecological model to frame the interview questions. A review of a dozen studies that applied the social ecological model to examine ways to improve fruit

and vegetable consumption among low-income AAs reported only 5 of the studies focused on constructs at the community or organizational level.⁵⁹ Additionally, many of the constructs theorized in this model were supported from the interviews. For instance, at the individual level this modeled proposed that vegan soul food owners may see themselves as having influence over peoples' knowledge and cooking skills about vegan foods. Most of the owners did state they have educated their customers about plant-based foods and provide cooking classes to help patrons learn to cook vegan soul foods. At the community and organizational level, the conceptual model proposed that vegan soul food owners may influence the availability and cost of vegan foods in their communities, and many of the owners felt that their restaurants did make an impact on those issues in their communities.

This study was innovative by focusing on small business owners of local restaurants as champions for promoting health in their community. This is different than other public health interventions that aimed to have large chain restaurants reduce portion sizes or offer healthier foods on the menu (e.g. fruits and vegetables).⁶⁰⁻⁶² This study also contributes to the literature on PBDs by focusing exclusively on ethnic minorities. Recent reviews of clinical trials have noted the lack of diversity in research that focuses on vegan and vegetarian diets.^{63,64}

There were also some limitations to this work. One limitation to the study was the small sample size, although there was a limited sample frame to choose from (27 restaurants through 7 states) since four of the states (Alabama, Arkansas, Mississippi, and Virginia) had no restaurants that met the inclusion criteria. Another limitation was the challenge of determining menu criteria for identifying the restaurants. While a

standardized menu criteria from other research and soul food cookbooks was used to identify restaurants, many entrees still varied from restaurant to restaurant. Some soul food restaurants had numerous soul food entrees, while others had only one or two soul food specific entrees, but met the inclusion criteria due to having several side dishes (like collards or mac and vegan “cheese”). This made the conceptualization of some vegan soul food restaurants a challenge to distinguish from ordinary vegan restaurants. It should be noted that vegan soul food may still be a relatively new concept. A Google Trends analysis for the search term “vegan soul food” doubled in popularity from 2017 through 2019. Google Trends assess how frequently search terms are entered into Google’s search engine relative to the website’s overall search volume during a given period of time.⁶⁵ The data is normalized and presented on a scale from 0–100, where a search term of 0 indicates a very low search volume for the given time period and search term of 100 indicates a very high search volume for the given time period.⁶⁵ From January through December of 2017, the trend values ranged from 14 – 56. Whereas from January 2018 through March 2019 the trend values ranged from 36 – 100. Finally, it is not clear what the precise demographics of the patrons at these restaurants are in terms of ethnicity. Many of the owners had suggested that they had a 50-50 mix of either AA or non-AA customers. Since most of these restaurants had only recently been opened for business (7 of the 12 restaurants had been open for 3 years or less), it is not clear if the demographics of customers will change over time to either more AA patrons or non-AA patrons.

Implications of Including Vegan Soul Food Restaurants in Public Health

Based on the need for more culturally tailored dietary interventions for AA adults and the growing popularity of vegan soul food restaurants, there is potential for public health researchers to partner with interested owners at some of these restaurants to focus on getting more AAs to eat more plant-based foods. In fact, the National Academies of Medicine and the World Health Organization have recommended restaurants to be place-based intervention sites to have strategies and promotions that improve healthy eating behaviors in order to reduce the obesity epidemic.^{66,67} Locally-owned vegan soul food restaurants are set up to provide a healthier alternative to traditional soul foods at a reasonable cost and some are even able to provide cooking classes to patrons. In contrast, many traditional chain restaurants in the United States have made limited progress with promoting healthful options or to improve the diet quality of their menu items.⁶⁸

In conclusion, AAs have been a traditionally understudied population in nutrition research and more work is needed to find innovative and culturally-relevant ways to help them meet the recommended dietary guidelines. Establishing partnerships with vegan soul food restaurants in order to target more AA adults to eat plant-based foods could be a promising first step for reducing obesity disparities in the South.

CHAPTER 5

OVERALL SUMMARY AND CONCLUSIONS

The goal of this research was to examine how the location of vegan soul food restaurants in the South have the potential influence African American (AA) communities' exposure to vegan meals and how owners of local vegan soul food restaurants view their roles in promoting the health of their communities. This goal was assessed by identifying the location of vegan soul food restaurants in order to understand the characteristics of the surrounding communities that they serve (Specific Aim 1) and conducting interviews with a sample of owners from vegan soul food restaurants in states located in the Black Belt region in order to identify how they view their role as promoters of health in the community and ways that they make PBDs more culturally appealing in the AA community (Specific Aim 2). In this chapter, the results of the five research questions are reviewed and implications for future research are discussed.

5A. RESEARCH QUESTION 1: WHAT IS THE DENSITY OF VEGAN SOUL FOOD RESTAURANTS IN THE 16 STATES AND THE DISTRICT OF COLUMBIA THAT MAKE UP THE SOUTH?

Overall, 45 restaurants were identified in the Southern states and the District of Columbia. It is worth noting that there could be more vegan soul restaurants that will open up for business in the future based on (1) more consumers being interested in PBDs and (2) the fact that the concept of vegan soul food appears to still be a relatively new term.^{195,196} As mentioned in both manuscripts 1 and 2, a Google Trends analysis for the

search term “vegan soul food” doubled in popularity from 2017 through 2019. Google Trends assess how frequently search terms are entered into Google’s search engine relative to the website’s overall search volume during a given period of time.¹⁹⁶ The data is normalized and presented on a scale from 0–100, where a search term of 0 indicates a very low search volume for the given time period and search term of 100 indicates a very high search volume for the given time period.¹⁹⁶ From January through December of 2017, the trend values ranged from 14 – 56. Whereas from January 2018 through March 2019 the trend values ranged from 36 – 100. Therefore, the density of vegan soul restaurants in the South, and possibly the rest of the United States, may increase even more in the next few years.

Four of the 16 states did not have any identified restaurants that served vegan soul foods (Alabama, Arkansas, Virginia, and West Virginia). Among the 12 states and the District of Columbia that did have at least one identified restaurant, Georgia had the most vegan restaurants serving vegan soul foods (n=9) and Kentucky had the fewest (n=1). None of the restaurants were located in rural areas. Many of them were located in or near to larger cities (e.g. 5 of the restaurants in Georgia were located in Fulton County, which is the most populated county in Georgia). Despite the fact that opening a vegan soul food restaurant in an urban city would likely result in competition from fast food chains and other restaurants, rural areas tend to have smaller populations than larger cities and therefore might not warrant enough demand for a small sized restaurant to make a profit.¹⁹⁷ It is also likely that there might be a lack of cultural interest in black owned restaurants in in a rural cities, since the demographics of these areas have less AA populations compared to urban places.¹⁹⁷

5B. RESEARCH QUESTION 2: WHAT ARE THE NEIGHBORHOOD CHARACTERISTICS OF AREAS WITH VEGAN SOUL FOOD RESTAURANTS?

Based on the Census data, the overall mean percentage of AAs by county where the restaurants were located was $36.5\pm 18.5\%$. The mean county poverty rates were $15.5\pm 3.85\%$ and the mean obesity rates were $26.8\pm 4.8\%$ where the restaurants were located. The mean AA population and county poverty rates in the states that these restaurants are located in are greater than the national averages (the national poverty rate is 12.3% and AAs make up approximately 13.4% of the U.S. population), while the mean obesity rates are lower than the national average (i.e. 39.8%).¹⁹⁸⁻²⁰⁰ This indicates that these restaurants have potential to reach a number of AA patrons based on the population rates.

5C. ARE THE MAJORITY OF SOUTHERN VEGAN SOUL FOOD RESTAURANTS LOCATED IN A FOOD DESERT ZONE AS DEFINED BY THE USDA?

Overall, 40% (n=18) of the identified vegan soul food restaurants were located within 0.5 mile (n=14, 31.1%) or 1.0 mile (n=4, 8.9%) from the nearest supermarket.⁵² Although the majority of these restaurants are not classified in food desert zones, more than one third of them are, which is still a significant number. These findings likely coincide with the higher poverty rates and AA populations reported from Research Question #1. Additionally, as noted from the literature review in chapter 2, black neighborhoods tend to have fewer supermarkets compared to predominantly white neighborhoods, which means having less access to fresh fruits and vegetables.¹⁷⁸ One

study comparing a nationally representative sample of individuals and zip code addresses, based on Census data, reported there were half (52%) as many chain supermarkets in black neighborhoods than white neighborhoods.²⁰¹

Another point worth mentioning is some restaurants that were not classified as being in food desert zones were surrounded by neighborhoods that were. This is not captured in the data, but highlights the potential of these restaurants to impact the existing food environment by selling healthier versions of soul food meals in neighborhoods that typically do not have access to healthier food options. In addition to having limited access to supermarkets that sell fresh produce, AA neighborhoods tend to have more fast food restaurants available in their neighborhoods compared to white neighborhoods.^{15,16,18} Vegan soul food restaurants not only have potential to offer healthier, plant-based foods in a restaurant setting, but they also do so with foods that are culturally appealing and/or familiar to AAs. One of the key factors lacking from the food access literature is the failure for researchers or policy makers to consider the need for establishing food retail stores, restaurants, and other outlets that can stock cultural and traditional food items to appeal to the preferences of neighborhood residents.²⁰² In other words, simply building more supermarkets might not impact dietary habits in multiethnic neighborhoods if the available food items are not appealing to the residents that live there. Vegan soul food restaurants can address this gap, since the foods offered at these restaurants directly appeal to AAs, yet are healthier versions of traditional soul food items.

5D. RESEARCH QUESTION #4: WHAT IS THE PERCEPTION THAT OWNERS OF VEGAN SOUL FOOD RESTAURANTS HAVE OF THEIR ROLE IN INFLUENCING AND PROMOTING HEALTH IN THEIR COMMUNITIES?

The six major themes that emerged from the interviews were that owners of vegan soul food restaurants focus on (1) providing access to vegan meals, (2) educating customers, (3) informing others about cultural familiarity of vegan foods, (4) using fresh ingredients to make vegan soul foods taste good, (5) addressing limited cooking skills among patrons, and (6) discussing non-health reasons to become vegan.

Many of the owners of the vegan soul food restaurants initially established their restaurants because of the lack of vegan options in their communities. Some of them also specifically mentioned that black neighborhoods have limited dining options for eating healthier meals. All of the owners had mentioned in their interviews that they had engaged with their customers at some point about healthier eating and choosing to eat more plant-based foods. Therefore, most, or perhaps all, of the owners of vegan soul food restaurants feel that they have had a significant role in inspiring their customers to think about making better dietary choices.

One of the discussion points in manuscript 2 that is relevant to answering this research question is the fact that all of the restaurant owners engaging with their patrons about healthy eating could be an opportunity for a “teachable moment” to spontaneously motivate them to take up healthier eating habits.²⁰³ The concept of a teachable moment has been conceptualized in other public health behaviors, such as smoking cessation or pregnancy.²⁰³ Individuals are reportedly more likely to be motivated to make behavioral change from a recent health event, such as cancer diagnosis or becoming pregnant.²⁰³ In

this particular instance, patrons wanting to change their eating habits might be more receptive to listening to the owner of a vegan soul food restaurant discuss the benefits of a vegan diet or healthy eating in general, when he/she would otherwise not be motivated to make dietary changes.

5E. RESEARCH QUESTION #5: WHAT STRATEGIES DO OWNERS OF VEGAN SOUL RESTAURANTS USE TO MAKE VEGAN FOODS MORE CULTURALLY APPEALING IN THE AA COMMUNITY?

As noted from the main themes that emerged in the interviews, some specific strategies that owners of vegan soul food restaurants use to inspire more AAs to try plant-based foods include having conversations with them about vegan diets or healthy eating in general, using fresh ingredients to make the vegan soul foods taste good, providing cooking classes, and discussing non-health reasons (such as animal welfare or being environmentally friendly to the planet) to follow a vegan diet. These are all important strategies that health educators should consider when developing future dietary interventions that target AA populations.

Discussing the health benefits of plant-based foods has been common in many dietary interventions, but finding a way to do so in a manner that actually connects with AA adults is still lacking.^{204,205} It is likely that AA patrons that speak to the owners of vegan soul food restaurants simply have a better time relating to them for discussing health information than an academic researcher. Therefore, future dietary interventions should consider a community-based approach where health educators and researchers can collaborate with some of these restaurant owners to provide educational information about vegan diets and healthy eating.

In terms of addressing taste and cooking skills to prepare vegan specific foods, future dietary interventions targeting AA participants might benefit by having cooking demonstrations that specifically include spices and ingredients that can flavor vegan foods. This would help to decrease the perception among AAs and others that believe vegan foods are bland and unappealing.²⁰⁶ Furthermore, simply encouraging individuals to visit vegan soul food restaurants could help them to be exposed to good tasting meals that could motivate them to incorporate healthier, plant-based meals into their diet without sacrificing taste. Simply having AAs go out to eat at the restaurants a few times a week might help with motivating them to adhere to a vegan diet or to continue to eat more plant-based foods. Prior research has noted that one of the barriers for dietary acceptability of plant-based diets is the perceived difficulty of preparing plant-based meals.²⁰⁷ Therefore it is important to address this particular barrier if health educators realistically expect AAs to adhere to eating plant-based foods.

Some of the owners felt that by talking to their patrons about ethical reasons for following a vegan diet over and beyond just health would further motivate them to try more plant-based foods. Some research does in fact support this theory, since people are more likely to find it rewarding to seek behavior change that supports their values and benefits society, rather than viewing diet as sacrifice or burden.²⁰⁸ Therefore, when developing a culturally-tailored dietary intervention, it would be beneficial to find ways to incorporate materials that discuss why eating more plant-based foods is beneficial beyond health reasons alone. In fact, tying in soul food's early history about West African tribes eating mostly plant-based foods might be a compelling reason to encourage AAs to adhere to eating PBDs.²³

5F. RELEVANCE OF USING THIS STUDY'S CONCEPTUAL FRAMEWORK

The conceptual model that was used to develop the interview questions was framed from constructs from Social Identity Theory (SIT) and the Social Ecological Model. They proved to be insightful for better understanding how owners of vegan soul food restaurants perceive the way they influence health in their communities.

For SIT, this work had only focused specifically on the social identification construct to assess how the restaurant owners' identities would influence how they promote the consumption of vegan foods. The central premise of this conceptual model was that the restaurant owners juggled both their roles as AA and vegan to influence their approach with talking to patrons about vegan soul foods. Many of the themes that emerged from the interviews did support this theory. For example, most of the owners felt that the typical AA adult in the South was not as culturally familiar with vegan foods as they were themselves. Therefore, having conversations about eating vegan foods or providing cooking classes was a way for the owners to make use of their identities as AA and vegans to influence their customers' eating habits. The literature on SIT and ethnicity has mostly been focused on in-group and out-group comparisons.^{163,164} As discussed in chapter 3, one study with AA college students found that the higher in-group preferences were, the stronger negative perceptions were of other ethnic groups (out-group members).¹⁶³ But other work has indicated that AA participants do not exhibit significant bias against out-group members, despite having the highest in-group preferences than all other ethnic groups.¹⁶⁴ Since in-group versus out-group comparisons was not the focus of this work, it is not entirely clear how owners of vegan soul food restaurants might

perceive members from out of their group. But it is clear that they were open with talking to non-vegan customers about their diets and health in general.

For the Social Ecological Model, the constructs from the individual level of this model proposed that vegan soul food owners may see themselves as having influence over peoples' knowledge and cooking skills about vegan foods. Most of the owners did in fact state that they have educated their customers about plant-based foods and provide cooking classes to help patrons learn to cook vegan soul foods. At the community and organizational level, the conceptual model proposed that vegan soul food owners may influence the availability and cost of vegan foods in their communities, and many of the owners felt that their restaurants did make an impact on those issues in their communities. By focusing on constructs at the community and organizational level, this model addresses some of the gaps the current literature on AA dietary behaviors that have been limited to mostly individual and interpersonal level constructs only. As mentioned in chapter 3, a review of a dozen studies that applied the social ecological model to examine ways to improve fruit and vegetable consumption among low-income AAs reported only 5 of the studies focused on constructs at the community or organizational level.¹⁸⁰ Future work that continues to focus on exploring the promotion of PBDs among AAs may be able to utilize this framework and expand it for answering more research questions.

5G. IMPLICATIONS FOR FUTURE RESEARCH

This exploratory research has provided preliminary insights for how vegan soul food restaurants can have an active role in impacting AA adults to eat more plant-based foods and make healthier dietary choices. Both specific aims of this project can be further

investigated for an even more thorough understanding about the way vegan soul restaurants can impact AA health. For example, Specific Aim 1 was able to identify the demographic characteristics with Census data. But using more detailed methods like geographical interface systems (GIS) can be conducted to have more precise account of the demographic characteristics in the surrounding neighborhoods by the restaurants. More importantly, GIS could further capture how the location of the restaurants could improve food accessibility. As mentioned earlier, the USDA's food atlas map doesn't fully capture the fact that there were cases of surrounding neighborhoods that were in food desert zones despite the restaurant near by being considered to not be in a food desert zone.

Since Specific Aim 2 focused on the perspectives of the restaurant owners, future research can focus on the patrons themselves. For example, a researcher could conduct qualitative interviews with a sample of patrons at various restaurants to assess why they became interested in trying vegan soul food restaurants. It would also be beneficial to conduct a needs assessment and ask patrons what they believe would be helpful for getting themselves and people in their communities to make better dietary choices. This in turn could inform the development of relevant components to include in a culturally tailored dietary intervention for AA adults.

Future dietary interventions should consider partnering with interested owners of vegan soul food restaurants to have their restaurants serve as sites for introducing AAs to plant-based meals. In turn, health educators can deliver educational materials to their participants and allow them the option to occasionally eat out at the restaurants, since many people today are frequently eating away from home.²⁵ This may also help AAs and

others realize that they do have dining options for adhering to a vegan or PBD. Finally, since many of the restaurant owners reported offering cooking classes and other resources that promote healthier eating, having participants visit the restaurants may make them feel like they are in a supportive environment that is conducive to healthy eating outside of just a standard intervention delivered in an academic or work setting. Future work can also assess if diet quality changes among AA residents in nearby neighborhoods that routinely go to vegan soul food restaurants compared to those that choose not to go.

5H. STRENGTHS

This work had some notable strengths. The use of objective data from the USDA's Food Atlas Map supports the qualitative theme of food access that emerged from the interviews. The conceptual model utilized to develop the interview guide questions was innovative and useful for capturing many of the themes and perspectives that emerged from the interviews. Based on the need for dietary interventions to focus on diverse populations and the lack of AA samples in research on PBDs, this work contributes to the literature by being one of the first studies specifically focus on AA populations. Additionally, this work provides preliminary information that future dietary interventions can utilize for developing strategies to motivate AAs to eat more plant-based foods. Finally, this work considers the importance of culture for influencing AA dietary habits, which is something that has been often overlooked in public health research.^{5,22}

5I. LIMITATIONS

This work had some limitations as well. The most challenging aspect of this work was defining what specifically a vegan soul food restaurant is versus a standard vegan

restaurant. While a standardized menu criteria from other research and soul food cookbooks was used to identify restaurants, many entrees still varied from restaurant to restaurant. Some soul food restaurants had numerous soul food entrees, while others had only one or two soul food specific entrees, but met the inclusion criteria due to having several side dishes (like collards or mac and vegan “cheese”). This made the conceptualization of some vegan soul food restaurants a challenge to distinguish from ordinary vegan restaurants.

Another potential limitation is the assumption that most of the customers that come to these restaurants are AA and from local communities. While there isn't a precise breakdown of the exact number of AA patrons that go these restaurants, many of the owners that were interviewed had suggested that they had a 50-50 mix of either AA or non-AA customers. In addition to not knowing the precise demographics of patrons, it is also not clear if the majority of them are local customers or come from outside the community. For example, some restaurants owners felt they had a balance of local customers and some that travel from far away. The growing popularity of vegan tourism may add to the increase in customers that visit these restaurants from a great distance.²⁰⁹ Other owners had pointed out that their business had only been open for a short time during the interviews (7 of the 12 restaurants had been open for 3 years or less) and most of their customers were local as a result. It is possible for customers from further away to travel to these restaurants once their reputation builds (e.g. having favorable reviews on social media websites).

The sample size for the interviews were modest and may not necessarily reflect the viewpoints of all owners of vegan soul food restaurants. However, the combination of

the identified restaurants in Specific Aim 1 and the specific criteria for Specific Aim 2 resulted in a limited sample frame to choose from (27 restaurants through 7 states) since four of the states (Alabama, Arkansas, Mississippi, and Virginia) had no restaurants that met the inclusion criteria.

5J. CONCLUSIONS

Although it is well documented that AAs are disproportionately affected from obesity compared to all other ethnic groups, public health research has remained limited for understanding the underlying causes for these disparities.²¹⁰ AAs have also been a traditionally understudied population in nutrition research and more work is needed to find innovative and culturally-relevant ways to help them meet the recommended dietary guidelines. This work has focused on a unique opportunity to potentially explore how black-owned, vegan soul food restaurants can make an impact on AA eating habits. Establishing partnerships with vegan soul food restaurants in order to target more AA adults to eat plant-based foods could be a promising first step for reducing obesity disparities in the South.

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APPENDIX A
IRB APPROVED LETTER



OFFICE OF RESEARCH COMPLIANCE

INSTITUTIONAL REVIEW BOARD FOR HUMAN RESEARCH
APPROVAL LETTER for EXEMPT REVIEW

Anthony Crimarco

Arnold School of Public Health

Health Promotion, Education & Behavior

915 Greene Street, Discovery 1, Room 259

Columbia, SC 29208

Re: Pro00076585

Dear Mr. Crimarco:

This is to certify that the research study *The Plant-Based and Soul-Full Study (PASS): Examining How Owners of Local Vegan Soul Food Restaurants Promote the Consumption of Vegan Foods in the African American Community* was reviewed in accordance with 45 CFR 46.101(b)(2), the study received an exemption from Human Research Subject Regulations on 3/7/2018. No further action or Institutional Review Board (IRB) oversight is required, as long as the study remains the same. However, the Principal Investigator must inform the Office of Research Compliance of any changes in procedures involving human subjects. Changes to the current research study could result in a reclassification of the study and further review by the IRB.

Because this study was determined to be exempt from further IRB oversight, consent document(s), if applicable, are not stamped with an expiration date.

All research related records are to be retained for at least three (3) years after termination of the study.

The Office of Research Compliance is an administrative office that supports the University of South Carolina Institutional Review Board (USC IRB). If you have questions, contact Arlene McWhorter at arlenem@sc.edu or (803) 777-7095.

Sincerely,



Lisa M. Johnson

ORC Assistant Director

and IRB Manager

APPENDIX B

INVITATION EMAIL SENT TO RESTAURANT OWNERS TO PARTICIPATE IN INTERVIEW

Dear _____,

My name is Anthony Crimarco. I am a Ph.D. student at the University of South Carolina studying Public Health. I am currently doing research that focuses on the promotion of vegan diets to African American adults in the South. I am interested in learning how African-American owners of vegan soul food restaurants reach and serve the health of their clientele.

Would you be interested in doing an interview?

If this is something that you would be interested in doing, we can arrange a date and time at your convenience for me to meet you at your restaurant to conduct the interview.

- *If restaurant is for a phone interview:* If this is something that you would be interested in doing, we can arrange a date and time to do the interview over the phone.

I anticipate the interviews being no more than 30 minutes of your time. Please email me back, or call me, and let me know if you are interested or have any questions. My phone number is: 803-216-5263

Thank you for your time and consideration,

Anthony Crimarco

APPENDIX C

VERBAL CONSENT FOR INTERVIEWS

The purpose of this study is to conduct interviews with owners of vegan soul food restaurants in order to learn how they view themselves as health promoters within their communities and to learn how they inspire people in the African American community to eat healthier. You will be interviewed by answering a series of questions that ask you about your views on promoting a healthy diet in your community and how these views influence your business practices. The interview is expected to last no more than 30 minutes. The interview will be recorded by the researcher so that it can be transcribed verbatim. No names or identifying information will be used in the transcription of the interview. A random number will be assigned in place of your name. Upon completion of the interview you will receive a \$10.00 gift card.

Do you have any questions for me before deciding to participate or not in this study?

By saying “yes,” I agree to take part in this interview and have been informed about the procedures of this study.

I anticipate the interviews being no more than 30 minutes of your time. Please email me back, or call me, and let me know if you are interested or have any questions. My phone number is: 803-216-5263

Thank you for your time and consideration,

Anthony Crimarco

APPENDIX D

INTERVIEW GUIDE

1. Tell me what got you interested in opening a vegan soul food restaurant.

2. Can you describe what your current diet is like?
 - *Probe (if individual identifies as vegan):* What inspired to you become a vegan?

3. Can you describe to me the type of customers that come to eat at your restaurant?
 - *Probe:* Are most of your customers from nearby neighborhoods and communities? Or do you get customers from all over?

4. The focus of this research is to identify strategies to inspire more African Americans to eat healthier, vegan meals. Do you have any thoughts or advice for how to get people eat more vegan foods?
 - *Probe:* Do you feel that you influence your customers' eating habits? How about friends or family?

5. What are challenges that people in your local community face when it comes to eating healthy?
 - *Probe:* As a restaurant owner that sells vegan food, do you feel that your restaurant can help with some of the challenges you identified?
6. In addition to your restaurant, what other sources of vegan food are available nearby, such as supermarkets or stores, that people can go to?
7. What are your thoughts on the price of the foods that you provide to your patrons?
 - *Probe:* Do you believe vegan foods are more expensive than the typical American diet?
8. Do you offer classes about healthy eating and cooking at your restaurant to people in the community? If not, would you be interested in offering classes?
 - *Probe:* What resources would be helpful to have for offering classes?
 - Would these classes help to support the growth of your business and your business's overall mission?

APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE

Thank you for taking the time to do an interview for the research study titled “*The Plant-Based and Soul-Full Study (PASS): Examining How Owners of Local Vegan Soul Food Restaurants Promote the Consumption of Vegan Foods in the African American Community.*” We are asking you to complete a short demographic questionnaire:

1. What is your age?

2. Please indicate your gender (select only one):

- Male
- Female
- Other (specify): _____

3. Please indicate your ethnicity (you may include more than one choice):

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic

- Native Hawaiian or Other Pacific Islander
- White
- Other (specify): _____

4. Please indicate your highest level of education attainment (select only one):

- Some high school
- High school or equivalent
- Some college
- Associate's degree
- College degree
- Advanced degree (Master's, doctoral, or other post-college degree)

5. How many years as your restaurant been in business?

6. What is the most popular item on your menu?
