

# FOOD AVAILABILITY IN EATONVILLE, FLORIDA

by

JERIAN BENWELL-LYBARGER

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Thesis Chair: Dr. Amy Donley

## **ABSTRACT**

Food availability is a serious problem for some low-income neighborhoods. This study examines food access in Eatonville, Florida, a small town in Orlando, Florida. Eatonville was one of the first African American towns incorporated into the United States after emancipation. It is a low-income community with 25% of the overall population and 30% of children living below the poverty line. This study will examine the state of food availability through food store and resident surveys in hopes of diagnosing need in order to alleviate it. There are serious implications for residents of cities with inadequate access to nutritious, affordable food. Children living with unequal access will face many future disadvantages in education, employment, and health. These compounding problems lead to a cycle of poverty that can be alleviated with appropriate public policy measures and other neighborhood changes that address food access in low-income neighborhoods.

## **DEDICATION**

For my family and friends for their love and support, especially my extraordinary mother without whom this would not have been possible.

## **ACKNOWLEDGEMENTS**

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## INTRODUCTION

There are many disparities in food access among low-income and affluent neighborhoods. The objective of this study is to assess food access in Eatonville, Florida, a small town of about 1.1 square miles, with a population of about 2400 located five miles north of Orlando. Eatonville was one of the first African American towns incorporated into the United States after emancipation. It is a low-income community with 25% of the overall population and 30% of children living below the poverty line. There are serious implications for residents of cities with inadequate access to nutritious, affordable food. Children living with unequal access will face many future disadvantages in education, employment, and health. These compounding problems lead to a cycle of poverty that can be alleviated with appropriate public policy measures and other neighborhood changes that address food access in low-income neighborhoods.

## LITERATURE REVIEW

Serious inequalities in food access have been found in many areas around the country. Studies have found that areas with high concentrations of low-income and minority residents have less access to affordable, healthy food. Powell et al. (2006) conducted a large study of over 28,050 zip codes. They found that African American neighborhoods (defined as?) had almost one and a half times as many convenience stores than their white counterparts. Even when controlling for income, they found greater supermarket distance in African American neighborhoods; supermarket availability was only 52% of that in white neighborhoods. Another study of 869 communities in Detroit, Michigan found that large supermarkets were an average of 1.1 miles further away in black neighborhoods than in White neighborhoods (Zenk, Schulz, Israel, James, Bao, & Wilson, 2005).

In many urban areas, there is a lack of large supermarkets, but there are more small-scale food outlets, like convenience stores and fast food restaurants. A study of New Orleans, LA found that African American neighborhoods had fewer supermarkets and more convenience stores. Small convenience stores carried fewer fresh fruits and vegetables (Bodor, Rice, Farley, Swalm, & Rose, 2010). As with convenience stores, fast food restaurants are also more prevalent in low-income minority neighborhoods. Another study in New Orleans found that black neighborhoods had six times as many fast food restaurants as white neighborhoods (Block, Scribner, & DeSalvo, 2004). They found that as percent of African Americans increased and income decreased in a



neighborhood, the number of fast food restaurants increased. Because they depend more on smaller stores, low-income neighborhoods tend to pay higher prices for the same products. A study of 191 stores in New York found that prices at large chain stores were ten percent lower than in non-chain stores and were one to three percent higher in African American neighborhoods (Hall, 1983).

The increased availability and proximity of convenience stores and fast food restaurants has serious implications for low-income populations. Small food stores and fast food restaurants offer fewer healthy food options and these neighborhoods have higher rates of health problems like obesity and heart disease (Morland, Diez, & Wing, 2006). A study of 10,763 participants in four states found correlations between supermarket availability and obesity rates. Neighborhoods with large supermarkets had a lower prevalence of health problems like obesity and hypertension. Communities with convenience stores but no supermarkets faced the greatest risk for these health problems. They found that residents of communities without large supermarkets have a 35% higher risk for obesity. Another study of 165 census blocks in East Harlem, New York found that African American neighborhoods had fewer supermarkets than white counterpart neighborhoods (Galvez, Morland, Raines, Kobil, Siskind, Godbold, & Brenner, 2007). The obesity rates for the residents of the primarily African American neighborhoods were 34% versus 18% for residents of the primarily white neighborhoods.

There are many variables that compound to put certain communities at a disadvantage. Class and racial segregation, inequality and poverty, capitalist production, and other social factors have contributed to the lack of large supermarkets and

abundance of fast food restaurants in African American neighborhoods (Kwate, 2006) and continue to affect life opportunities in education, employment, and health. Class and racial segregation are a fundamental factor in determining quality of health in American neighborhoods. Zenk's study of food access in Detroit, Michigan notes the historical factors that have led to the segregation of African Americans and inevitable inadequate access to nutritional, affordable food. Institutional discrimination, white flight, and racism are a few of the many factors that have led to disproportionate amounts of minorities in neighborhoods without access to healthy food. Segregation has a major effect on health because it "differently sorts individuals into social and economic environments on the basis of race and class" (Williams, 2001).

Shopping habits among low-income populations is another major factor in determining the consumption of healthy food. Walker et al. interviewed residents of areas with low supermarket access. The findings represent the problems residents of all food insecure areas may face in getting healthy food. Surveys of low-income households in New York cities show that they have a harder time accessing fresh produce because they tend to shop at smaller stores, with lower quality food, less availability, and higher prices than large chain stores. Unhealthy foods are much more convenient and accessible (Webber, 2010). Shoppers noted that prepackaged and boxed foods are cheaper, easier to prepare, and most do not see a difference in the benefits of these foods.

This research study is based on previous food gap studies done in the Central Florida area. University of Central Florida researchers studied fifteen zip code areas in

Central Florida that were defined as food deserts by the USDA to examine the gaps between food accessibility and distribution. One of these areas, Pine Hills, was extensively studied for the type and quality of food stores available. Five supermarkets in Pine Hills and one outside for comparison were studied. They found inadequate standards in Pine Hills; lower quality food at higher prices. Pine Hill residents were also surveyed and they found that twenty-three percent of the Pine Hills respondents did not have a car for grocery shopping and almost half said they would rather shop at a different store but couldn't because of its location (Wright & Morgan, 2011).

Research has shown the failure of our current food system to feed all people. In "Closing the Food Gap," Mark Winne shares his extensive experience working to reduce food insecurity. "The fact that our food system is racist, classist, and sexist should come as a surprise to no one" (Winne, 2008, pg. 190). He notes that our industrial systems of food production and corporate marketing have helped create the gaps that exist in food access. Mass-production, corporate farming operations, and other government issues, such as oil, take precedent over the low-income shopper. The media, which encourages purchasing junk food and overconsumption, ensures a lack of nutritional knowledge and contributes to higher health risks and future opportunity disadvantages. Ten billion dollars was spent in 2006 to market food and beverages to the United States population. About 20% of this was spent on marketing to children under 18 (FTC, 2008). As children are continually exposed to more media in television, movies, games, and the Internet, these messages encourage the overconsumption of unhealthy foods and places additional barriers on equal access.

Research has shown the importance of creating local food systems especially in low-income neighborhoods. Improving food security can be an important basis for solving many other community problems (USDA, 2009). Community gardens, for example, have been shown to have many benefits, the most obvious of which is a direct, local source of healthy foods necessary for a healthy life. A study done in Colorado found that almost 60% of those who participated in community gardens ate enough fruits and vegetables compared with only 25% of those who did not garden (Litt, 2011). There are also many latent benefits. Community gardens can bring residents together in a shared sense of purpose. It can increase social and cultural capital. People must feel a strong attachment to their neighborhood and be involved in community activities, which make residents care about the well being of themselves and their community. Community gardens can foster more social involvement, more care and concern, and an overall healthier lifestyle. It can teach children valuable lessons while providing them with sustenance and more opportunity in other areas of life.

## **THEORETICAL ORIENTATION**

This study examines the disparities in food access in a low-income minority neighborhood. Karl Marx famously noted the class struggle that takes place in our capitalistic society. His conflict theory is a fundamental social theory and explains some of the fundamental causes of the many disparities between low-class and high-class citizens. Social stratification is an inevitable result of our society's structure where some consume massive amounts of resources while others consume almost none. Our capitalist society is organized for maximum profit in production. Therefore, nutrition and food accessibility for low-income citizens is not a priority. Wealthier citizens have disproportionate access to resources, such as quality supermarkets, while the poor are unable to access healthy food and left at a grave disadvantage.

## METHODS

Several methods will be utilized to examine food access in Eatonville, Florida. First, a windshield survey and a search of business listings will be conducted to find all food stores in the city, as well as other food sources, such as food banks. Then a food store survey will be done to study the types of foods available, the quality, and the price. The food store survey is a condensed version of the USDA food store survey to measure food deserts used in previous Central Florida food gap studies (Wright & Morgan, 2011). It consists of fifteen basic food items that will be analyzed for availability, quality, and price. The findings from the Eatonville stores will then be compared with the closest full-service supermarket outside of the community to appraise the differences in access. Finally, residents of Eatonville will be surveyed to obtain a deeper understanding of food accessibility. Participants will be recruited outside of an Eatonville Boys and Girls club. The sample will be a convenience sample consisting of any Eatonville resident 18 years of age and older. They will be given a short survey to assess their perceptions of food access in their community, their nutritional knowledge, and their food buying practices. Data will be collected and entered into SPSS for evaluation.

## **MEASUREMENTS**

There are various measurements to consider, as there are different methods employed to analyze the state of food access in Eatonville, Florida. Both a food store survey and a resident survey will be conducted. For the food store survey, fifteen basic food items will be measured in three categories of availability, quality, and price. First, each item will be noted on whether it is available in each store or not. Second, the quality of each item will be noted based on a four-point scale of excellent, good, fair, or poor. Finally, the lowest price for each item of the same size and closest brand will be recorded and compared. The resident survey consists of 12 questions regarding the variables surrounding food accessibility. This includes food store satisfaction, shopping and eating habits, transportation use, nutritional knowledge, and social involvement. Questions like store satisfaction and social involvement will be measured on Likert scales, types of transportation and shopping habits on a nominal scale, and consumption and nutritional knowledge on an ordinal scale.

# FINDINGS

The food store survey was conducted in the two main food stores in Eatonville, FL and one store in a more affluent, neighboring area. After finding all food stores located in the area, the survey focused on the only two small grocery stores inside Eatonville and the closest full-service supermarket to compare availability, quality, and price. The store's locations are marked on the map (Table 1).

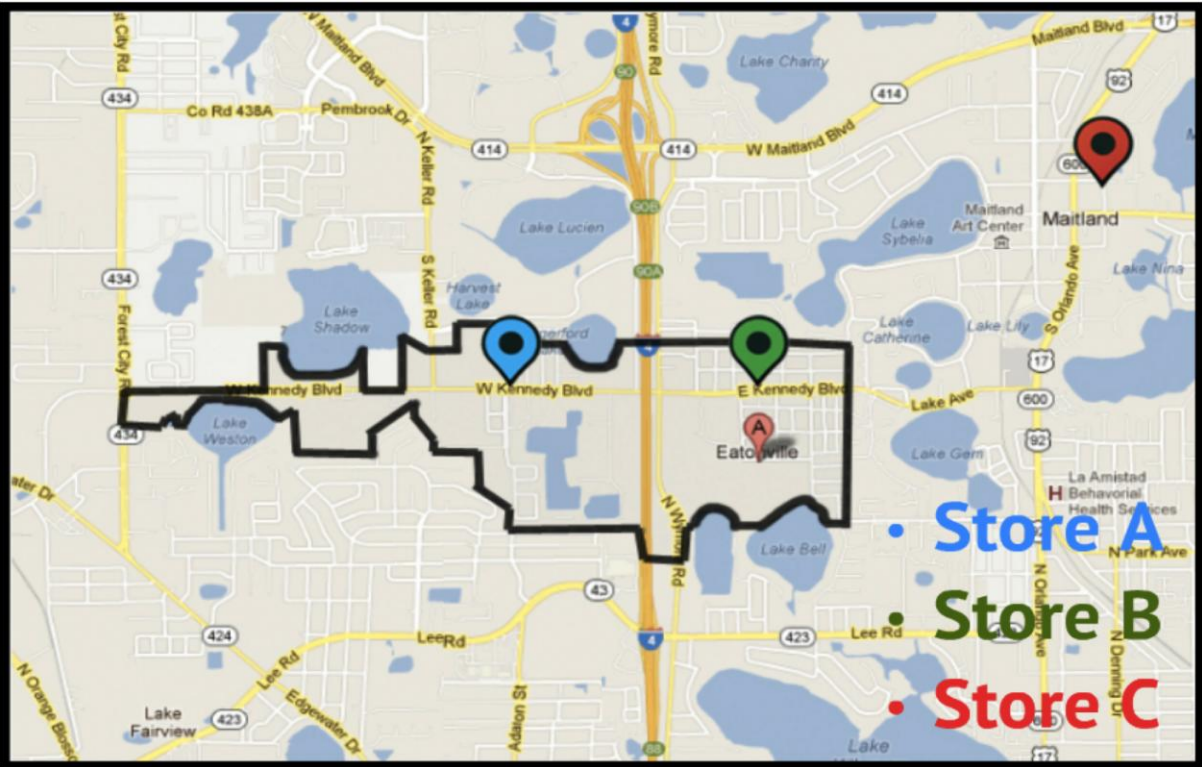


Figure 1: Grocery Store Map



The closest full-service supermarket was a Publix located 1.8 miles away from the center of Eatonville. The two small grocery stores inside Eatonville were labeled Store A and Store B, while the Publix was labeled Store C. Price, quality, and availability of fifteen basic food items were noted in each store. Table 2 shows the differences between the three stores in availability and price for very basic food items.

<b>Food</b>	<b>Store A</b>	<b>Store B</b>	<b>Store C</b>
Bananas	X	\$0.90	\$0.69
Carrots	X	\$1.50	\$0.99
Apples	X	X	\$1.99
Broccoli	X	X	\$2.69
Cheese	\$4.99	X	\$3.99
Chicken	\$3.00	X	\$1.79
Beans	\$0.99	\$1.29	\$0.89

Figure 2: Price Comparison

The small stores inside Eatonville had a limited selection with lower quality and higher prices. Eight out of the fifteen basic food items were not available in Store A, while seven were not available in Store B. Store A carried no fresh fruits or vegetables. Store B carried a very small selection of fresh fruits and vegetables but some were close to or clearly past expiration. For example, in Store B there were old carrots, priced fifty cents higher than at the full service grocery store. Quality was also noted in the food store survey on a scale from one for poor to four for excellent. The mean quality for

Store A was a 2.9, Store B a 3, and Store C a 4. Availability, quality, and price were all clearly superior in the full-service supermarket which is unfortunately less accessible for some residents.

A resident survey was also conducted to gain a deeper understanding of food accessibility. Fifty-two Eatonville residents took a short 12-question survey about their perceptions of food access, their shopping practices, and their consumption habits. The survey found that a majority of residents were dissatisfied with food availability in their town. One survey question asked respondents how satisfied they were specifically with the quality of the grocery stores in their town. Seventy-seven percent were in some degree unsatisfied with the food stores in their town, answering that they were somewhat satisfied, not very satisfied, or not satisfied at all (Table 3).

<b>Food Store Satisfaction</b>	
Very Satisfied	23% (12)
Somewhat Satisfied	19% (10)
Not Very Satisfied	35% (18)
Not Satisfied at All	23%(12)

Figure 3: Food Store Satisfaction

Another important variable in food accessibility is transportation. Respondents were asked what their primary mode of transportation was for grocery shopping. Sixty-nine percent of respondents used their own personal car for grocery shopping, while the

other 31% reported using a friend’s car, the bus, or a bicycle (Table 4). These forms of irregular transportation make it more difficult to access a full service grocery store on a regular basis. The distance to the store while walking or on a bicycle can also be more difficult with the lack of sidewalks along certain routes.

<b>Mode of Transportation</b>	
Personal Car	69% (36)
Friend’s Car	23% (12)
Bus	4% (2)
Bicycle	4% (2)

Figure 4: Mode of Transportation for Grocery Shopping

Other variables measured in the respondent survey were nutritional consumption and nutritional knowledge. Sixty-seven percent of respondents reported eating two or fewer servings of vegetables a day and 17% responded, “I don’t know” when asked what was the recommended daily servings of vegetables. This is not enough consumption of nutritious foods to maintain a healthy diet. When asked the reason why they do not consume more fruits and vegetables, one respondent answered, “Because prices are crazy.” Prices and dislike for vegetables were the two most common reasons for low consumption. Thirty-seven percent of respondents do not eat more vegetables because of the price, while 17% do not eat more because of taste preference (Table 5).

<b>Reasons R Does Not Eat More Vegetables</b>	
High Prices	37% (19)
Don't Like	17% (9)
Time	14% (7)
Other	12% (6)
Don't Know	14% (7)

Figure 5: Vegetable Consumption

As shown in previous research, an important factor in improving food access is a resident's attachment to and involvement in their community. Seventy-one percent of Eatonville respondents were involved in some community organization and 69% reported feeling strongly attached to their neighborhood, both which can increase a program's chances of success. Eatonville has some programs established to assist in providing healthy food. There are Second Harvest backed food banks and the Boys and Girls Club Kid's Café which serves afterschool meals. Also, the Fresh Fruit and Vegetable Program, (FFVP) provides healthier choices to kids three times a week in school. Although a closer look at the FFVP menu shows many items are canned which contain less nutritional value. Also, the Department of Agriculture's Summer Food Program serves breakfast and lunch each for an hour a day at USDA nutritional standards. These programs show a response to the need in Eatonville and they provide much needed services without which the need would be much greater. There are still

some residents who need more nutritious food, especially children, who should be consuming healthy food on a regular basis, not just at school and other intermittent times, but at home and at all times.

## **DISCUSSION**

This study found that food accessibility is a problem for some residents. There is less availability, lower quality, and higher prices at the food stores located in Eatonville. Some residents are dissatisfied with their town's food stores and face challenges of irregular transportation and low nutritional knowledge. These variables all compound to make it more difficult to access healthy food on a regular basis and to maintain a healthy diet and lifestyle.

This indicates the importance of developing new creative ways to increase food accessibility and for the continuance and expansion of established programs. There should be an increase in nutritional education in order to stress the importance of a healthy, balanced diet. Future research should be done with a larger generalizable sample and in depth examination of programs to increase benefits. Research should be done in all low-income areas to assess need and improve availability of healthy affordable food.

The invasive and chronic issue of poverty must be addressed in a new light, as it has been shown that our current system has failed to feed all people. There are so many severe consequences to food inequality it is important to consider many other options to our capitalistic food system. Innovative new ideas and changes in social policy at government and local levels must be made to ensure equal food access and therefore equal life opportunities for everyone.

## **APPENDIX A: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Amy M. Donley and Co-PI: Jerian M Benwell-Lybarger**

Date: **January 12, 2012**

Dear Researcher:

On 1/12/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Food Access in Eatonville, Florida  
Investigator: Amy M Donley, PhD  
IRB Number: SBE-11-08093  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 01/12/2012 04:52:33 PM EST

A handwritten signature in cursive script that reads "Joanne Muratori".

IRB Coordinator



## **APPENDIX B: EATONVILLE RESIDENT SURVEY**

You are being invited to take part in a research study. Whether you take part is up to you. You will be asked to complete a short, anonymous survey. You must be 18 years of age or older to participate.

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901

1. At what type of store do you do most of your grocery shopping?
  - a. Large Chain Supermarket
  - b. Small Grocery Store
  - c. Convenience Store
  - d. Other \_\_\_\_\_
  
2. How satisfied are you with the overall quality of food stores in your city? (Keeping in mind availability, price, quality, and cleanliness)
  - a. Very Satisfied
  - b. Somewhat Satisfied
  - c. Not Very Satisfied
  - d. Not Satisfied At All
  
3. What is your primary mode of transportation for food shopping?
  - a. Personal Car
  - b. Friend's Car
  - c. Bicycle
  - d. Walking
  - e. Other \_\_\_\_\_
  
4. Has transportation and/or distance traveled to the store been a problem in the past year?
  - a. Yes
  - b. No
  
5. Thinking about the foods you ate yesterday, about how many servings of vegetables did you consume? (A serving is one medium sized vegetable or one-half cup of vegetables)  
\_\_\_\_\_
  
6. How many servings of vegetables a day do you think is necessary to eat to stay healthy?  
\_\_\_\_\_
  
7. What do you think are the reasons you do not eat more fruit and vegetables?

- a. High prices
  - b. Takes too much time to prepare
  - c. Don't like vegetables
  - d. Other
8. Have you ever felt like you (or someone you know) needed more food than you had?
- a. Yes
  - b. No
9. How personally attached do you feel to your neighborhood/neighbors?
- a. Strongly Attached
  - b. Somewhat Attached
  - c. Not Very Attached
  - d. Not Attached At All
10. Are you involved with any community organizations?
- a. Yes
  - b. No
11. Would you participate in a community garden once a week?
- a. Yes
  - b. No
12. What is your opinion of a mobile farmer's market?
- a. It's a good idea; I would buy from a mobile market.
  - b. It's a bad idea; I wouldn't buy from a mobile market.
  - c. I don't know/ It depends

## **APPENDIX C: FOOD STORE SURVEY**

Food	Size	Price/Availability	Quality
Bananas	Per lb		
Carrots	Per lb		
Apples (Any Variety)	Per lb		
Potatoes (Any Variety)	Per lb		
Fresh Broccoli	Per lb		
Frozen Broccoli	16-oz Bag		
Milk (Whole)	1 Gallon		
Cheese (Cheddar)	Per lb/16-oz		
Margarine (Stick)	1-lb Box		
Eggs (Grade A, Large)	1 Dozen		
Chicken (Cut or Whole)	Per lb		
Beef (Round, Lean)	Per lb		
Beans (Kidney, Canned)	15.5-oz Can		
Spaghetti (Enriched)	1-lb Box		
Bread (Whole Wheat)	24 oz Loaf		

X means the item was not available.

Quality is noted on a 4-point scale of Excellent, Good, Fair, and Poor.

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