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# Feeding Fordham: How Fordham University Students and Local Bronx Residents are Affected by Their Location in an Urban Food Desert

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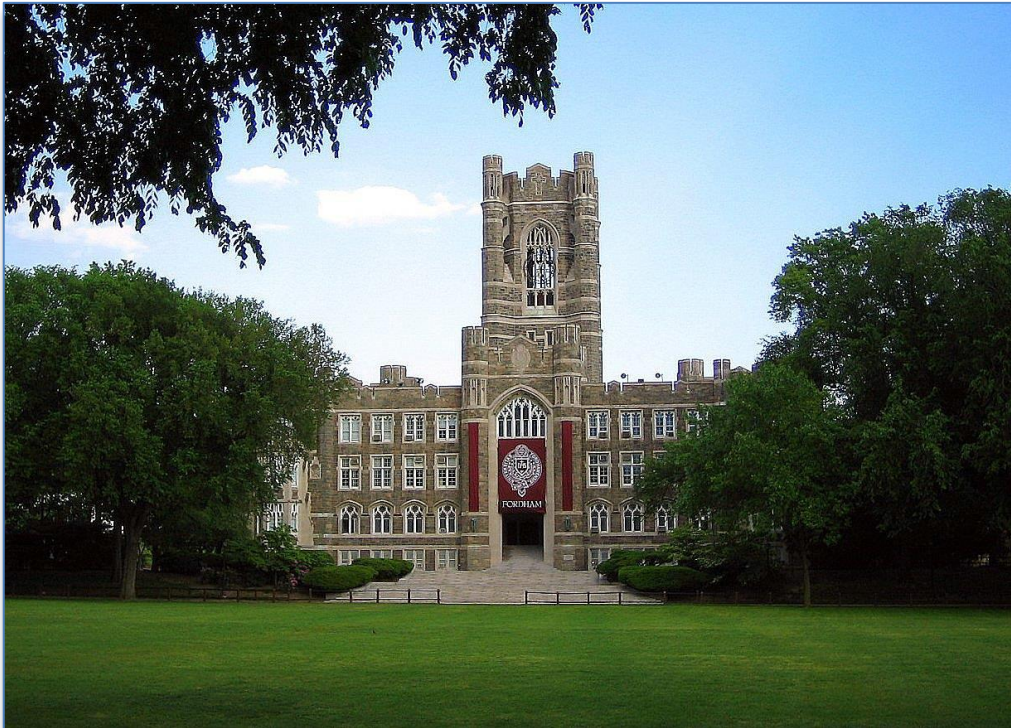
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# **Feeding Fordham**

**How Fordham University Students and Local Bronx  
Residents are Affected by Their Location in an Urban  
Food Desert**



**Jane Wynne  
Fordham University  
Environmental Policy Senior Thesis  
May 7, 2014**

## **Abstract**

My thesis examines the health and nutrition conditions in the Bronx, New York and the extent to which this location changes the diet and well-being of Fordham University students who live on or around Rose Hill's campus. Upon entering college, there are undoubtedly social and personal changes as young adults gain independence from their parents and forge their own path. Once parents stop stocking the fridge and students are forced to make their own choices when it comes to food and diet, there are often drastic changes made. In addition, many students' activities levels will vary in college as school sports may take a back seat to academics. On the contrary, college athletes find themselves training and exercising even more rigorously. To complicate matters further, Fordham University's Rose Hill campus in the Bronx, New York makes healthy living even more challenging with a pizza place on every block, snack-filled bodegas on every corner, and less-than-adequate grocery stores. Since there are so many factors involved, this thesis discovers why the Bronx has become an urban food desert, the extent to which students are affected by their location in the Bronx, and what can be done to improve nutritional conditions in this area and other low-income neighborhoods across the country.

In addressing this topic, the three disciplines used are environmental history of the Bronx and Fordham College at Rose Hill, environmental economics contributing to the issue, and public health policies in the United States that encourage healthy habits. Fordham University students were surveyed to get their input on diet, exercise, health, and lifestyle changes. Additionally, information is presented on the lack of nutritious dining options available near Fordham's campus and explanations as to why urban areas experience nutrition disparities. Although government interventions have attempted to make New Yorkers healthier by implementing public policy, these attempts have fallen short. My thesis purposes plausible and effective solutions for food deserts across the country.

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## **Introduction**

I first became interested in Bronx health disparities after moving to an off-campus apartment this past June. Without a meal plan or on-campus dining at my fingertips, I was forced to venture out into the neighborhood to buy food and groceries. After exploring my options, I found myself traveling home to Stamford, Connecticut for groceries at the Fairway Market near my family's house. I became frustrated because I wanted to support local Bronx stores and grocers, but was forced to search outside the area for organic food products.

Fordham University's location in the Bronx, New York creates a very unique atmosphere for students and residents alike. Fordham students like me come from all over the country and are immersed in Bronx culture during the four or more years they attend this university.

Living on their own, students make decisions every day on what foods to buy, prepare, eat, etc. In the Bronx, the plethora of delis, pizza places, fast food joints, and bodegas in such close proximity to campus makes this decision more difficult. While this may be hard for students to manage, these nutritional conditions are the same for local Bronx residents.

Unhealthy, cheaper options that are readily available are easier to pick over more expensive, inaccessible healthy foods. Considering these circumstances, it is illogical that Bronx families and residents share the same health struggles as transitioning college students.

In this paper, I plan to address the connection between diet and health in Fordham University students and Bronx residents. In order to discover Fordham students' thoughts on eating and exercise habits, potential health changes since entering college, and food options in the Bronx, I surveyed one hundred students through an online survey. This survey, titled "Health Changes for Fordham University Students," was approved by the Institutional Review Board and sent out to the undergraduate student pool. Appendix I includes the survey that was sent to the students and Appendix II presents the outcome of the survey questions. Chapter 1 contains some of these results and discusses the reasons that college students

struggle with diet and other health matters, such as the “freshmen fifteen.” These college health issues are a juxtaposition of the nutritional and dietary problems Bronx residents face every day. Here, I will explore the problem of food insecurity in the Bronx, New York and its location as a modern food desert. In Chapter 2, the history of Fordham’s campus and the Bronx reveals the changes that have been made to this neighborhood. The transition of the Bronx from a thriving farmland to a nutritionally-barren city says much about the environmental decline this area has experienced. In the third chapter, environmental economics explains the injustice Bronx residents experience and how difficult it is to be healthy under such grim conditions. This chapter delves further into the financial issues behind the unavailability of better nutrition and the reason healthier foods are more expensive than less healthy options. Chapter 4 shows the steps that have been taken to improve this public health issue by policymakers and regulators in the jurisdictions of the United States, New York, and Fordham University. This section also discusses the extent to which these regulations have been effective. Lastly, Chapter 5 addresses the policy recommendations that could more directly deal with this issue. These proposed solutions work to end nutritional inequalities in the Bronx and other food deserts across the country.

## **Chapter 1. The Freshmen Fifteen is Not Just for Freshmen Anymore**

We've all heard of the "freshman fifteen" – those extra pounds students gain during the first few months of college. The transition from high school to college is certainly a stressful one, making it even more difficult to keep the pounds off. In the dining hall, endless buffet lines of French fries, cookies, ice cream, and other goodies pose as constant temptations. Although all college students have to face this struggle, Fordham University students living in the Bronx experience a new side to the problem. Outside the gates of campus, the entire Bronx population of 1.408 million people recognizes this challenge to eat healthily with limited income and resources. In this neighborhood, the problem of gaining weight from eating cheap, unhealthy, easy-to-access food is shared by men, women, adolescents, and children alike. In both the lives of Fordham students and Bronx residents, mental and physical stress plays a crucial role in health complications. For college students, this stress comes from adjusting to a new life in an unfamiliar place. In the Bronx, residents bear the stress of earning a living in an economically-challenged neighborhood. These stressors alongside the readily available, calorie-ridden food options make the perfect combination for unhealthy eating habits.

The famous "freshman fifteen" is the idea that students will gain fifteen pounds during their first year of college. There are many reasons why college students are prone to—sometimes even expected to—gain weight. One suggestion is that the freedom for students to choose their own food options, rather than having their parents chooses for them, results in poor health decisions. A thesis study done by a Virginia Polytechnic Institute and State University student concluded that college students that with a high intake in fruits and non-fried vegetables, frequent breakfast consumption, and high-activity levels were less likely to

gain weight their freshman year.<sup>1</sup> However, many students do not comply with these necessary components of a healthy lifestyle. In the “Health Changes for Fordham University Students” survey, 56 percent of students agreed that eating healthily has been more difficult since entering college. While the recommended amount of fruits and vegetables in a 2,000 calorie diet is four to five servings a day,<sup>2</sup> the survey revealed that 62 percent of Fordham students did not eat at least one serving of vegetables and 66 percent did not have at least one serving of fruits daily. Additionally, only half of students reported eating breakfast every day. Studies have shown that instead of the “freshman fifteen,” these dietary infractions accumulate over students’ four years, causing weight gain and unhealthy habits. According to a journal in *Social Science Quarterly*, students steadily gain weight over their college years, with an average of nine pounds for women and twelve to thirteen pounds for men.<sup>3</sup> Although it may not be exactly fifteen pounds that college students gain, many diet transitions occur during these years that could result in a less healthy lifestyle.

Mental and physical stress attributes to weight fluctuations, as well. Stress can be defined as “any highly challenging emotional or physiological event or series of events that result in adaptive and maladaptive processes required to regain homeostasis and/or stability.”<sup>4</sup> In this event, the body registers the stress and activates the hypothalamus, or a part of the brain that mediates endocrine, autonomic, and behavioral functions.<sup>5</sup> The hypothalamus triggers the adrenal glands to release a hormone called cortisol.<sup>6</sup> While cortisol is usually

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<sup>1</sup> Kelly McGrath, “Dietary Patterns Associated with Weight Changes in College Students,” (Master of Science thesis, Virginia Polytechnic Institute and State University, January 22, 2007), <http://scholar.lib.vt.edu/theses/available/etd-02042007-204402/unrestricted/KellyMcGrathThesis3.6.07.pdf>.

<sup>2</sup> U.S. Department of Agriculture and U.S. Department of Health and Human Services, “Dietary Guidelines for Americans 2010,” *Dietary Guidelines*, December 2010, 83, accessed March 31, 2014, <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>.

<sup>3</sup> Kim Palmer, “‘Freshman 15’ Weight Gain Is a Myth: Study” *Reuters*, November, 1, 2011, accessed March 30, 2014, <http://www.reuters.com/article/2011/11/01/us-college-weight-idUSTRE7A055O20111101>.

<sup>4</sup> Kelly D. Brownell and Mark S. Gold, *Food and Addiction* (New York: Oxford University Press, 2012), 59.

<sup>5</sup> University of Wisconsin Madison, “Hypothalamus,” *Neuroscience Research Page*, last modified January 21, 2006, <http://www.neuroanatomy.wisc.edu/>.

<sup>6</sup> Chris Kresser, “10 Ways Stress Makes You Fat and Diabetic,” *Health for the 21<sup>st</sup> Century*, accessed March 23, 2014, <http://chriskresser.com/10-ways-stress-makes-you-fat-and-diabetic>.



released throughout the day, stress releases higher levels and disrupts this hormone's natural rhythm. This process is what raises blood sugar, creates hunger and cravings, reduces the ability to burn fat, causes hormone imbalances, makes it more difficult for cells to absorb glucose, and increases the rate at which fat is stored.<sup>7</sup> Clinical research has shown that high levels of stress temporarily decreases behavioral and emotional control and increases impulsivity, including eating a greater amount of rich and fatty foods.<sup>8</sup> Many people turn to consuming carbohydrates because they temporarily raise levels of serotonin, a neurotransmitter that affects emotions and eases anxiety.<sup>9</sup> For this reason, many stressed college students will reach for a slice of pizza, a bag of chips, or whatever junk foods they can get their hands on.

In the Bronx, these snacks are readily available on every block, street, and corner. Figure 1 shows the area next to Fordham's campus. This area from Cambreleng Avenue to Bathgate Avenue and from Fordham's entrances to 187<sup>th</sup> Street is where most off-campus students live. The four pizza places, four fast food establishments, six restaurants, eight bodegas or convenience stores, and fifteen delis/markets are marked. Since 44.5 percent of the 5,671 Fordham undergraduates live off campus, over two thousand students walk by these locations to and from class every day.<sup>10</sup> In the "Health Changes for Fordham University Students" survey, I included questions about students' location in the Bronx and the quality of the food choices around them. According to their responses, 52.22 percent agreed that proximity to fast food chains, bodegas, and pizza places makes it difficult to choose healthy options. In addition, students expressed their disappointment with local grocery stores – 81.1 percent of students noticed more accessible health food stores with better quality items in

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<sup>7</sup> Kresser, "10 Ways Stress Makes You Fat and Diabetic."

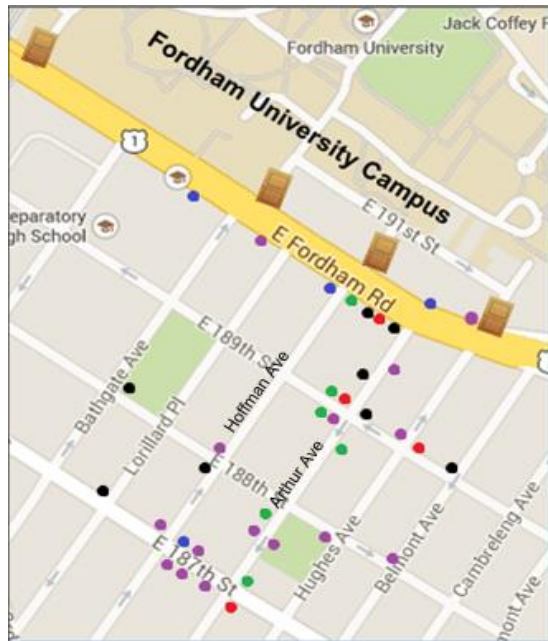
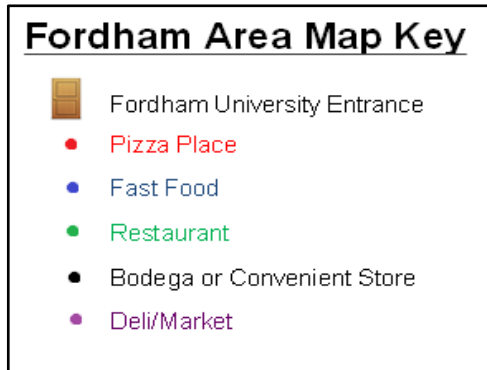
<sup>8</sup> Brownel and Gold, *Food and Addiction*, 60.

<sup>9</sup> "Why Anxiety and Stress Might Be Causing Your Weight Gain," *Fit Day*, accessed March 23, 2014, <http://www.fitday.com/fitness-articles/fitness/weight-loss/why-anxiety-and-stress-might-be-causing-your-weight-gain.html#b>.

<sup>10</sup> Fordham University, "Fordham Facts," *Discover Fordham*, accessed March 30, 2014, [http://www.fordham.edu/discover\\_fordham/facts\\_26604.asp](http://www.fordham.edu/discover_fordham/facts_26604.asp).

other areas of New York City. Unfortunately, students do not always have the time, energy, or money to travel to other neighborhoods or boroughs for healthy snacks or organic foods.

**Figure 1**



Fordham University students may struggle with their diet and health in the Bronx, yet they are not alone. Adults in the area also try to make do with available resources in order to feed their families. According to the Bronx District Public Health Office, 80 percent of adolescents and 96 percent of adults eat fewer than the recommended five servings of fruits and vegetables a day.<sup>11</sup> This nutritional gap in the Bronx has resulted in the highest obesity rate in the city with residents 85 percent more likely to be obese than people in Manhattan.<sup>12</sup> Figure 2 shows the disparities in obesity rates of the South Bronx, the Bronx borough, and New York City.<sup>13</sup> This chart shows how Bronx rates surpass New York City’s obesity rates in every age group. In the South Bronx, one in four adults is obese, and two in three are overweight.<sup>14</sup> Even compared to the rest of the state, these numbers are high. While New York State’s rate for overweight or obese adults is 59.3, Bronx County exceeds this with a

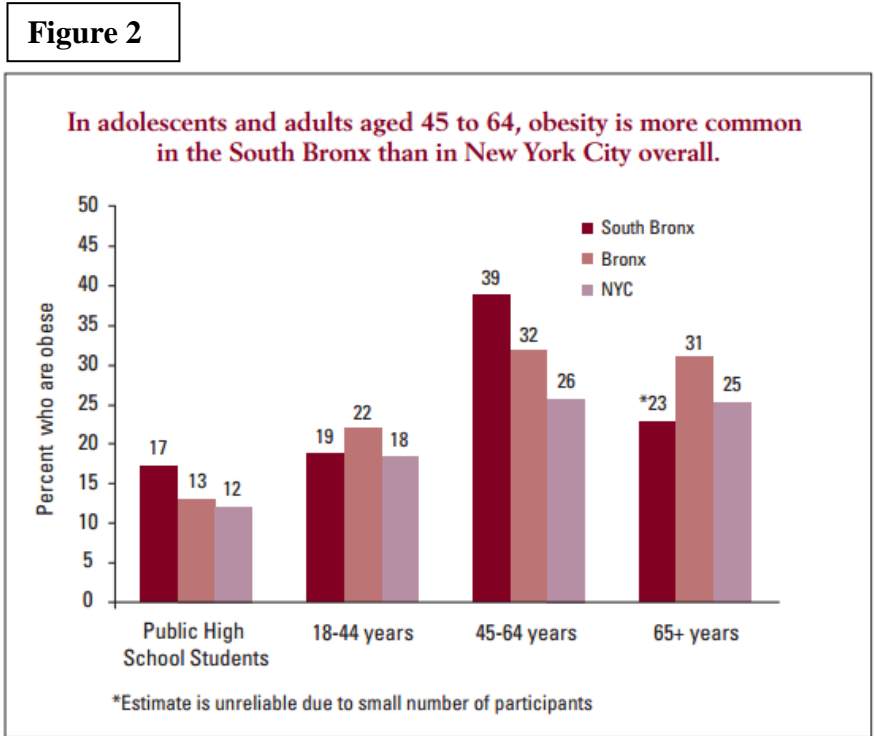
<sup>11</sup> Bronx District Public Health Office, “Obesity in the South Bronx: A Look Across Generations,” *New York City Department of Health and Mental Hygiene*. accessed April 1, 2014, <http://www.nyc.gov/html/doh/downloads/pdf/dpho/dpho-bronx-obesity.pdf>.

<sup>12</sup> Sam Dolnick, “The Obesity-Hunger Paradox,” *The New York Times*, March 12, 2010, accessed March 30, 2014, [http://www.nytimes.com/2010/03/14/nyregion/14hunger.html?\\_r=0](http://www.nytimes.com/2010/03/14/nyregion/14hunger.html?_r=0).

<sup>13</sup> Bronx District Public Health Office, “Obesity in the South Bronx: A Look Across Generations.”

<sup>14</sup> Bronx District Public Health Office, “Obesity in the South Bronx: A Look Across Generations.”

rate of 68 percent.<sup>15</sup> Although hunger and obesity are thought to be opposites, in areas with low accessibility to nutritious foods and high availability of cheaper, high calorie foods, the outcome is an unhealthy, overweight population.



From observing neighborhoods like the Bronx, the connection between malnutrition and obesity has gained recognition. Experts like Joel Berg, the executive director of the New York City Coalition Against Hunger, identify that “hunger and obesity are often flip sides to the same malnutrition coin.”<sup>16</sup> For this reason, rather than using “hunger” to describe the nutrition issues in these areas, groups like the World Health Organization and the U.S. Department of Agriculture have started to use the term “food security.” The World Food Summit of 1996 stated that food security occurs “when all people at all times have access to sufficient safe nutritious food to maintain a healthy and active life.”<sup>17</sup> This is built on the three pillars of food availability, food use, and food access. A survey from the Department of

<sup>15</sup> New York State Department of Health, “Obesity Statistics for Bronx County,” last modified October 2011, <http://www.health.ny.gov/statistics/prevention/obesity/county/bronx.htm>.

<sup>16</sup> Dolnick, “The Obesity-Hunger Paradox.”

<sup>17</sup> World Health Organization, “Food Security,” *Trade, foreign policy, diplomacy and health*, 2014, accessed April 1, 2014, <http://www.who.int/trade/glossary/story028/en/>.

Agriculture in 2008 found that 14.6 percent of Americans had low to very low food security.<sup>18</sup> The locations that lack food security have recently been called “food deserts.” First used in Scotland, this term describes “a geographic area, particularly lower-income neighborhoods and communities, where access to affordable, quality, and nutritious foods is limited.”<sup>19</sup> Mark Winne, former Executive Director of the Hartford Food System, compares this concept of a food desert to a landscape that has been decimated by a natural disaster.<sup>20</sup> Nature responds quickly to fill the void with various scattered, less attractive plants, resulting in a random assortment of flora with an irregular growth pattern. In the same way, low-income, minority neighborhoods are filled with low-quality, less desirable food options.

The extent to which an area is a food desert is often measured in terms of access. Food access is defined as the availability and affordability of healthy foods, including both physical and economic access to good nutrition.<sup>21</sup> Availability is measured in the time cost associated with shopping for food. For example, a fast food place that is a five minute walk compared to a grocery store that is a twenty minute bus ride. Affordability is the price difference between healthy foods like fruits and vegetables and less healthy foods, such as fast food and soda. In America, a surprising number of neighborhoods have insufficient food access. Using Dun & Bradstreet data, a recent study revealed that 74 percent of zip codes nationwide do not have a supermarket.<sup>22</sup> Unfortunately, the Bronx is one of the worst cases of inadequate food access in America. Data from the County Health Rankings & Roadmaps gives each county a food environment index, which measures proximity to grocery store, income level, access to food, and food insecurity.<sup>23</sup> On a scale of 0 (worst) to 10 (best), the Bronx County received a 6.5.

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<sup>18</sup> Dolnick, “The Obesity-Hunger Paradox.”

<sup>19</sup> Paula Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, (Washington, D.C.: National Academies Press), 2009, accessed April 1, 2014.  
<http://site.ebrary.com.avoserv.library.fordham.edu/lib/fordham/docDetail.action?docID=10315884>.

<sup>20</sup> Mark Winne. *Closing the Food Gap*. (Boston: Beacon Press, 2008), 93.

<sup>21</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 12.

<sup>22</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 12.

<sup>23</sup> “Bronx (BR) County Snapshot,” *County Health Rankings & Roadmaps*, accessed March 30, 2014, <http://www.countyhealthrankings.org/app/new-york/2014/rankings/bronx/county/outcomes/overall/snapshot>.

In comparison, Manhattan received a 7.9 on the scale. In 2011, a *News One* article lists New York City—specifically the Bronx—as one of America’s worst nine urban food deserts. According to this article, a study conducted in 2008 by the New York Department of City Planning estimated that as many as three million New Yorkers live in communities with inadequate access to supermarkets.<sup>24</sup> Figure 3 shows all food retailers and farmer’s markets in the South Bronx.<sup>25</sup> This image shows only six farmers’ markets and many neighborhoods with minimal food retailers available. In the areas without a food retailer nearby, residents are forced to travel by foot, bus, or train if they wish to buy groceries.

Unfortunately, Fordham University is not the only college affected by its location in a neighborhood with limited food access. In the past decade, southern Dallas has been labeled as a food desert because of its lack of grocery stores, minimal gardens, and the unavailability of fresh produce.<sup>26</sup> Paul Quinn College in Dallas, Texas is an excellent example of a college affected by food insecurity and has an inspiring story of how they turned this around. Like many other colleges have done to save money, Paul Quinn eliminated their football team program in order to increase their budget for other aspects. Recognizing their location in a food desert, President Michael Sorrell decided to put the two-acre football field to good use and transformed this land into a farm.<sup>27</sup> The WE Over Me Farm began in 2010 as a partnership between Paul Quinn College and PepsiCo’s Food for Good Initiative and has since produced over 3,000 pounds of fresh, organic food. This produce is served to students on campus, made available to the community and nearby residents, sold to local restaurant

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<sup>24</sup> NewsOne Staff, “America’s Worst 9 Urban Food Deserts,” *NewsOne*, September 22, 2011, accessed April 1, 2014, <http://newsone.com/1540235/americas-worst-9-urban-food-deserts/>.

<sup>25</sup> New York City Coalition Against Hunger, “Food Access in Low-Income New York,” 2006, accessed April 2, 2014. [http://nyccah.org/files/map\\_report.pdf](http://nyccah.org/files/map_report.pdf).

<sup>26</sup> Jason Whitely, “Dallas’ Southern Half Labeled ‘Food Desert,’” *WFAA*, November 11, 2011, <http://www.wfaa.com/news/local/Dallas-southern-half-labeled-a-food-desert-133653798.html>.

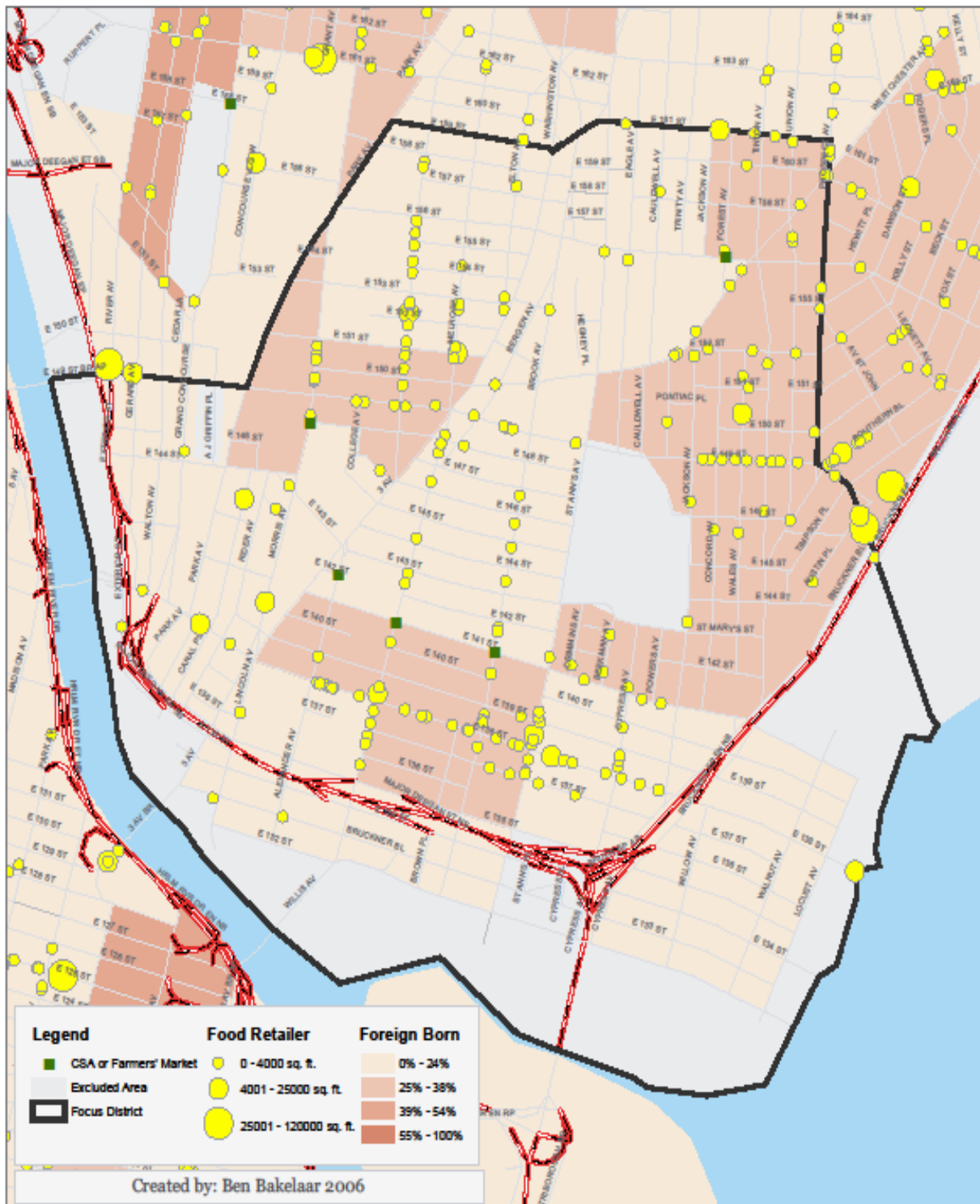
<sup>27</sup> “From Football Field to Farm,” *MSN*, accessed May 3, 2014. <http://rediscover.msn.com/city/32243559/feature/32244234>.

Figure 3



## Bronx Community District 1 South Bronx - Foreign Born

Map 2 - Displaying farmers' markets, community supported agriculture (CSA), and food retailers



chefs, and given to community churches and food pantries.<sup>28</sup> With the closest grocery store four miles from campus, Paul Quinn College has made a huge difference in its community by providing accessible, fresh food.<sup>29</sup> As a historically Black college, Paul Quinn has also further studied race, economics, and health in this food desert. For example, during their 2013 spring break, twelve college students remained on campus and lived the luxury-free lifestyle of a Dallas resident.<sup>30</sup> This included walking or taking the bus to the grocery store, shopping at nearby convenience stores, and living off the daily WIC allowance to study the lifestyle of low-income minorities. The story of this college food desert improving its surrounding neighborhood proves that it is possible for other schools, like Fordham University, to make a difference.

## **Chapter 2. Environmental History: From Farm to Food Desert**

While Fordham and the Bronx currently struggle with healthy food access, this area was once a flourishing farmland. The area of the Bronx was first discovered in 1609 by Henry Hudson when he sailed his ship, the *Half Moon*, down the Hudson River.<sup>31</sup> In 1639, Jonas Bronck, his wife, and several of his indentured servants became the first settlers.<sup>32</sup> During this time, they lived on his farm, which was positioned between 151<sup>st</sup> Street, Harlem River, and the Bronx River.<sup>33</sup> After Jonas Bronck died in 1643, Bronck's River became the

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<sup>28</sup> "WE Over Me Farm," *Paul Quinn College*, accessed May 3, 2014.

[http://www.pqc.edu/index.php?option=com\\_content&view=article&id=92:the-we-over-me-farm&Itemid=374](http://www.pqc.edu/index.php?option=com_content&view=article&id=92:the-we-over-me-farm&Itemid=374).

<sup>29</sup> "From Football Field to Farm."

<sup>30</sup> Marybeth Gasman, "Walking in Another's Shoes: Paul Quinn College, Food Deserts and an Alternative Spring Break," *Huffington Post*, February 21, 2013, [http://www.huffingtonpost.com/marybeth-gasman/walking-in-anothers-shoes\\_b\\_2721544.html](http://www.huffingtonpost.com/marybeth-gasman/walking-in-anothers-shoes_b_2721544.html).

<sup>31</sup> Lloyd Ultan and Gary Hermalyn, "The Birth of the Bronx 1609-1900." (New York: The Bronx Historical Society, 2000), ix.

<sup>32</sup> "Bronx Chronology," *The Bronx County Historical Society*. 2008, accessed April 3, 2014, <http://www.bronxhistoricalsociety.org/chrono.html>.

<sup>33</sup> Maarten de Kadt, "Lloyd Ultan's History of the Bronx River," *The Bronx River Alliance*, November 16, 2002, accessed April 3, 2014, <http://bronxriver.org/?pg=content&p=abouttheriver&m1=9&m2=58>.

Bronx River and the surrounding area later became the Bronx.<sup>34</sup> In the years that followed, the Bronx remained a frontier and its residents farmed and raised livestock to sell at New York City markets. Bronx farmers also concentrated on growing wheat to make flour to sell to the West Indies.<sup>35</sup> By the eighteenth century, this area became more settled, but was still primarily agricultural – even the weavers, millers, blacksmiths, and tradesmen were involved in farming. The Bronx continued to be mostly rural as farms took over the land from the late eighteenth century into the early nineteenth.<sup>36</sup> “Wheat was the major crop until shortly after the opening of the Erie Canal when competition from Midwest grain forced the farmers near Manhattan to change.”<sup>37</sup> Another event that began to transform the Bronx was the construction of the first mainland railroad, which brought a surge of people eager to settle wherever these train stations were built.<sup>38</sup> One of these railroad-based settlements that soon developed into a suburb was the region of Fordham.

The history of Fordham at Rose Hill dates all the way back to colonial times when the governor gave John Archer a patent for the Manor of Fordham in 1671.<sup>39</sup> Extending from the Bronx River to the Harlem River, this beautiful land “was an idyllic, rural retreat at the outskirts of a great port city.”<sup>40</sup> In 1838, Archbishop John Hughes purchased the hundred-acre farm in order to create a seminary where, three years later, St. John’s College was founded. It was not until 1907 that the name was changed to Fordham University after the college was granted a university charter by the State of New York.<sup>41</sup> In the late 1800s, the northern part of campus was Rose Hill Farm, which encompassed the area that is now

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<sup>34</sup> De Kadt, “Lloyd Ultan’s History of the Bronx River.”

<sup>35</sup> Ultan and Hermalyn, “The Birth of the Bronx 1609-1900,” 7.

<sup>36</sup> Ultan and Hermalyn, “The Birth of the Bronx 1609-1900,” 58.

<sup>37</sup> Ultan and Hermalyn, “The Birth of the Bronx 1609-1900,” 59.

<sup>38</sup> Ultan and Hermalyn, “The Birth of the Bronx 1609-1900,” 62.

<sup>39</sup> “Bronx Chronology.”

<sup>40</sup> Allan S. Gilbert and Roger Wines, “From the Earliest to Latest Fordham: Background History and Ongoing Archaeology,” *Fordham: The Early Years*, accessed April 2, 2014, <https://myfiles.fordham.edu/users/evanburen/4302/FordhamEarliestYears-Del.pdf>.

<sup>41</sup> Fordham University, “A History of FCRH,” *Fordham College at Rose Hill*, accessed April 1, 2014, [http://www.fordham.edu/academics/colleges\\_\\_graduate\\_s/undergraduate\\_colleg/fordham\\_college\\_at\\_r/history\\_70734.asp](http://www.fordham.edu/academics/colleges__graduate_s/undergraduate_colleg/fordham_college_at_r/history_70734.asp).



Fordham Prep field, Fordham gymnasium, and the college cemetery.<sup>42</sup> The Jesuit brothers cultivated the crops, oversaw the workers, and managed the entire process. Located where Fordham Prep field is today was once a pasture with up to forty cows. Also situated on this farmland was an orchard that grew apples, pears, and cherries, a garden that grew tomatoes, potato and corn, and a vineyard with grapes that were used for the church wine. The cultivated produce helped feed students and faculty, funded the cost to run the campus, and kept tuition stable.<sup>43</sup> It was not until the early years of the 20<sup>th</sup> Century that this agricultural endeavor was abandoned.

Although this land started as a pleasant countryside, Rose Hill and the Bronx surrounding it have much changed since then. The Bronx first began its great expansion in the late 1800s when immigrants moved to the area for work. During this time, the Bronx Zoo hired Italians to be gardeners and the Botanical Gardens employed Irish immigrants.<sup>44</sup> With the completion of multiple railroad lines constructed by the Inter Borough Rapid Transit Company, the Bronx began its transition from a suburb to an urban community. Immigrants continued to flood the area and by 1930, the Bronx population was 49 percent European Jews.<sup>45</sup> From the years 1900 to 1931, the population in the Bronx increased from 201,000 to 1,265,000.<sup>46</sup> While the Bronx housing of 1934 proved to be better than other boroughs with 99 percent of residents owning private bathrooms, 95 percent with central heating, and over 97 percent with hot water, this soon changed after World War II.<sup>47</sup> After the war, 170,000 people were displaced by Manhattan slum clearing and moved into Bronx neighborhoods.<sup>48</sup> Rent control was put in place to prevent rents from skyrocketing and to maintain affordable

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<sup>42</sup> Gilbert and Wines, "From the Earliest to Latest Fordham: Background History and Ongoing Archaeology."

<sup>43</sup> Gilbert and Wines, "From the Earliest to Latest Fordham: Background History and Ongoing Archaeology."

<sup>44</sup> De Kadt, "Lloyd Ultan's History of the Bronx River."

<sup>45</sup> De Kadt, "Lloyd Ultan's History of the Bronx River."

<sup>46</sup> "The Bronx in Brief," *The Bronx Historical Society*, 2010, accessed February 17, 2014, <http://www.bronxhistoricalsociety.org/bxbrief>.

<sup>47</sup> "The Bronx in Brief."

<sup>48</sup> "The Bronx in Brief."

housing in the Bronx. During this time, a majority of white people moved to the suburbs, an event referred to as the “white flight.”<sup>49</sup> A growing number of Puerto Ricans and other minorities moved into the neighborhood. From here, conditions continued to worsen in the decades to follow.

While the construction of the Cross Bronx Expressway in 1963 was supposed to redevelop the area as part of New York City’s urban renewal project, it had a devastating impact on the Bronx. This highway displaced thousands of homes, decreased property value, and left numerous apartments abandoned as families moved to the suburbs.<sup>50</sup> Since the World War II rent control policies were still in place, landlords had no motivation to upkeep their properties, making desirable housing options even more scarce and vacancies more common.<sup>51</sup> Many apartment and business owners began to burn their buildings down to collect the insurance money. By the 1970s, Bronx quality of life had rapidly declined as “arson fires, rampant crime and poverty... made the borough a national symbol of urban decay.”<sup>52</sup> Beginning with President Jimmy Carter’s visit in 1977, the South Bronx gradually became a location for politicians to go to show their concern for the urban poor. As the Figure 4 shows, Jimmy Carter’s trip exposed the uninhabitable conditions of this neighborhood that had become destroyed and desolate.<sup>53</sup> His visit was followed by Ronald Regan’s campaign to show how little Carter had done to improve the area in 1980, Jesse Jackson in 1985, and Bill Clinton in 1997. Across America, the Bronx became known as one of the worst slums in the country.

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<sup>49</sup> Megan Roby, “The Push and Pull Dynamics of the White Flight: A Study of the Bronx Between 1950 and 1980,” *The Bronx County Historical Society Journal*, 2008, accessed April 4, 2014, <http://www.bronxhistoricalsociety.org/M.Roby.pdf>.

<sup>50</sup> “History of the South Bronx,” *TheBX.net*, accessed April 3, 2014, [http://thebx.net/info/\\_history\\_south\\_bronx.php](http://thebx.net/info/_history_south_bronx.php).

<sup>51</sup> “The Bronx in Brief.”

<sup>52</sup> Hiu, Winnie Hiu, “Fighting the Image of the ‘Burning’ Borough,” *The New York Times*, June, 3 2013, [http://www.nytimes.com/2013/06/03/nyregion/the-bronx-struggles-to-shed-burning-borough-image.html?\\_r=0](http://www.nytimes.com/2013/06/03/nyregion/the-bronx-struggles-to-shed-burning-borough-image.html?_r=0).

<sup>53</sup> “When Jimmy Carter Visited the South Bronx,” *Ephemeral New York Blog*, last modified July 28, 2012, <http://ephemeralnewyork.wordpress.com/2012/07/28/when-jimmy-carter-visited-the-south-bronx/>.

**Figure 4**



Luckily, the borough began to improve in the mid-1980s. The Ten-Year Plan became a turning point for the Bronx by creating much better conditions in low-income neighborhoods. This \$5.1 billion investment worked to renovate, rebuild, or upgrade 253,000 units in an attempt to redevelop the abandoned parts of New York City.<sup>54</sup> By the 1990s, 30,000 housing units had been refurbished, crime was reduced by 25 percent, 522 new businesses had moved into the area, and construction was increased by \$2.6 billion.<sup>55</sup> The Bronx had improved to such an extent that it received the “All-American City” award by the National Civic League in 1997. This award is given to ten cities each year based on community challenges, citizen participation, and success in realizing the community’s goals. After these developments, the Bronx reputation improved and residents began to return to the area. From 1980 to 2012, the Bronx added 240,000 residents—a 20 percent increase.<sup>56</sup> Because of its redevelopment, the Bronx was transformed from a modern American slum to a model for urban renewal.

While the Bronx has drastically developed, its location as a food desert shows that there is still room for improvement. Once vast farmlands, the Bronx and Rose Hill have

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<sup>54</sup> Michael H. Schill, et. al., “Revitalizing Inner-City Neighborhoods: New York City’s Ten-Year Plan,” *New York University*, Fannie Mae Foundation, 2002,

[http://furmancenter.org/files/publications/Revitalizing\\_Inner\\_City\\_Neighborhoods.pdf](http://furmancenter.org/files/publications/Revitalizing_Inner_City_Neighborhoods.pdf).

<sup>55</sup> F. Romall Smalls, “The Bronx Is Named an ‘All-American’ City,” *The New York Times*, July, 20, 1997, <http://www.nytimes.com/1997/07/20/nyregion/the-bronx-is-named-an-all-america-city.html>.

<sup>56</sup> Thomas P. DiNapoli and Kenneth B. Bleiwas, “An Economic Snapshot of the Bronx,” *New York State*, June 2013, <http://www.osc.state.ny.us/osdc/rpt4-2014.pdf>.

turned into a nutrient-barren city. Since the land of the Bronx once grew crops and grazed cows, this borough needs to return to its roots and start providing healthy foods. Cases like the Hunt's Point Food Market stand as a beacon of hope to improve the Bronx's access to nutritious foods. The Hunt's Point Food Market first opened in 1965 as a venue for fruit and vegetable dealers.<sup>57</sup> After surviving the blow of the 1970s' urban deterioration, the Hunts Point Cooperative Market continues to serve New Yorkers today by supplying meat, fish, and 60 percent of the city's produce.<sup>58</sup> Unfortunately, markets like this are rare in the Bronx and existing ones struggle to stay open. In 2010, the Hunts Point Produce Market became so fed up with New York City's lack of funding and ignored requests for negotiations that the produce operators threatened to move to New Jersey.<sup>59</sup> Even though New York City officials have finally granted the market a subsidy, this struggle to keep local produce establishments open reflects the priorities of the officials and the lack of urgency to improve health conditions through government funding. The history of the Bronx clearly displays this continuous struggle with poverty, unemployment, and poor living conditions that have contributed to public health issues like food insecurity. Explained in the following chapter is the role of this economic instability and financial unkempt in the formation of communities into food deserts.

### **Chapter 3. Environmental Economics: The Price of Being Healthy**

As every self-sustaining adult knows and Fordham students have come to learn, eating healthily is not cheap. Although we would all love to have vegetables with every meal, choosing the healthy option becomes more difficult when a burger is half the price of a salad.

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<sup>57</sup> "The Bronx in Brief."

<sup>58</sup> "NYC Produce Terminal Markets in Hunts Point," *Terminal Markets*, accessed April 3, 2014, <http://www.terminalmarkets.com/huntspoint.htm>.

<sup>59</sup> Charles V. Bagli, "Hunts Point Market Deal Runs Into a New Obstacle," *The New York Times*, September 5, 2012, <http://www.nytimes.com/2012/09/06/nyregion/hunts-point-produce-cooperative-says-city-commission-is-interfering-with-business.html>.

College students and working parents alike understand the value of the dollar and do what they can to save their wallets. But at what cost is it to their health? In the Bronx, even for those who can afford it, organic food is rarely ever an option. Grocery stores are often lacking high-quality goods and products. Across the world, this problem of paying for health is a huge issue, especially when many health problems can be avoided with good nutrition and exercise. Economics and health are intrinsically connected in terms of dietary choices and opportunities. In order to improve the health of a population, poverty and inequality first need to be reduced. Because of government agricultural subsidies, prices are skewed in such a way that the cheapest option for lower income populations is a Big Mac. Government funding supports the overproduction of junk food and meat, yet leaves fruit and vegetable farmers to fend for themselves. In addition, this economic burden is not equally distributed since racial minorities are most affected by the health consequences these subsidies cause.

American college students are pretty much known for not having money. With classes and extracurricular activities, most students struggle to make time to have a job during the school year. Nonetheless, a 2013 study of 1,000 students revealed that 4 out of 5 students are working part-time—an average of 19 hours per week—while attending college.<sup>60</sup> Even though parents may chip in, the survey showed that 80 percent of students' spending money is from their own funds, not their parents. In terms of food and groceries, parents only cover 35 percent of food costs, leaving the rest to students. For Fordham University students, a high number of underclassmen live on Rose Hill campus and purchase a meal plan. According to the university website, an unlimited meal plan costs a student \$2,995 a semester.<sup>61</sup> For this amount of money, one would think that the healthy food options would be endless. However, Fordham Dining Services has had some problems in the past couple of years. In 2011, three

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<sup>60</sup> Tyler Kingkade, "Most College Students Work Part-Time Jobs, But Few Pay Their Way Through School: Poll," *The Huffington Post*, August, 7, 2013, [http://www.huffingtonpost.com/2013/08/07/college-students-jobs\\_n\\_3720688.html](http://www.huffingtonpost.com/2013/08/07/college-students-jobs_n_3720688.html).

<sup>61</sup> "Rose Hill Dining Plans." *Fordham University Dining Services*. Accessed April 4, 2014. <https://fordham.sodexomyway.com/dining-plans/index.html>.

of Fordham dining facilities failed the health department inspection. Following this event, *The Princeton Review* deemed Fordham the college with the worst food in the country in 2012.<sup>62</sup> Although shortly after the incident dining establishments received an “A” and conditions greatly improved, some students remain skeptical. Those who live off campus, or choose to eat off campus due to the health inspection controversy, venture out into the Bronx for their meals. With so many pizza places, delis, and bodegas nearby, students on a tight budget are more prone to reach for cheaper, less healthy options.

A comprehensive study in the *British Medical Journal* found that eating healthily can cost as much as \$550 more per year, or \$1.50 more per day.<sup>63</sup> Although this price is very small compared to the cost of chronic diseases and health complications that cheaper foods create in the long run, health foods are not ideal for students trying to be financially savvy. Despite the fact that many students choose unhealthy selections because of financial reasons, those who decide to go the healthier route are left with few options. In Bronx grocery stores, few to no organic produce or other foods are sold. In the “Health Change for Fordham Students” survey, 43.33 percent of students said that they had to travel outside of the Bronx for good-quality grocery items. People who wish to consume pesticide-free fruits and vegetables or antibiotic-free meat are often forced to travel to the nearby borough of Manhattan. Since most students do not have a car, some Rose Hill students take the Ram Van to Lincoln Center to do their grocery stopping at the Whole Foods in Columbus Circle. This intercampus van running from Fordham’s Rose Hill campus to the Lincoln Center campus costs \$3 each way. Aside from the Ram Van, other travel options available to students include a \$5 roundtrip subway ride or a \$12.50 Metro North train ride. These travel costs on

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<sup>62</sup> “The College with the Worst Food in America,” *CBS News*, August 22, 2012, <http://www.cbsnews.com/news/the-college-with-the-worst-food-in-america/>.

<sup>63</sup> Carey Polis, “Eating Healthy vs. Unhealthy Will Cost You \$550 More Per Year Study Reveals,” *The Huffington Post*, December 5, 2013, [http://www.huffingtonpost.com/2013/12/05/eating-healthy-vs-unhealthy\\_n\\_4383633.html](http://www.huffingtonpost.com/2013/12/05/eating-healthy-vs-unhealthy_n_4383633.html).

top of grocery costs can really add up, making it difficult for students to do this frequently, if at all.

Like college students, money is a pressing issue for Bronx residents, especially when it comes to buying groceries. A survey by the Food Research and Action Center in January 2010 stated that “nearly 37 percent of residents of the 16<sup>th</sup> Congressional District, which encompasses the South Bronx, said they lacked money to buy food at some point in the past 12 months.”<sup>64</sup> Unfortunately, the rest of the Bronx economic statistics are just as grim. The Bronx has 29.3 percent of its residents living below the poverty line, the highest rate in New York City, and an unemployment rate of 12.7 percent.<sup>65</sup> For those unable to afford food, 29 percent of the population in 2009 used Food Stamps or Supplemental Nutrition Assistance Program (SNAP).<sup>66</sup> This was a 37 percent increase since the year 2007. Among counties with more than half a million people, the Bronx ties Hidalgo County, Texas for the largest number of people receiving food stamps.<sup>67</sup> These economic issues are a massive factor in the health disparities of the Bronx. Residents wondering where their next meal will come from are not concerned with how healthy it will be. Studies have “emphasized the importance of health and nutrition for productivity and economic growth” of a population.<sup>68</sup> While healthy food options in these low-income neighborhoods should be increasing to improve the health of its residents, Figure 5 shows otherwise.<sup>69</sup> From 1997 to 2008, access to food options in low-income areas either decreased or increased by a smaller amount than high income neighborhoods.<sup>70</sup> The underlying structural and economic problems that create food deserts in

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<sup>64</sup> Dolnick, “The Obesity-Hunger Paradox.”

<sup>65</sup> “New York City Poverty Rate Rises as Gap Between Rich And Poor Widens,” *The Huffington Post*, September 20, 2012, [http://www.huffingtonpost.com/2012/09/20/nyc-poverty-rate-rises-gap-rich-poor-income-inequality\\_n\\_1899675.html](http://www.huffingtonpost.com/2012/09/20/nyc-poverty-rate-rises-gap-rich-poor-income-inequality_n_1899675.html).

<sup>66</sup> Matthew Bloch et. al., “Food Stamp Usage Across the Country,” *The New York Times*, November 28, 2009, <http://www.nytimes.com/interactive/2009/11/28/us/20091128-foodstamps.html>.

<sup>67</sup> Bloch et. al., “Food Stamp Usage Across the Country”

<sup>68</sup> Guillem Lopez-Casasnovas, Berta Rivera, and Luis Currais. *Health and Economic Growth*, (Cambridge, MA: The MIT Press, 2005), 169.

<sup>69</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 13.

<sup>70</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 13.

the Bronx and other locations must be addressed in order to improve the health of its inhabitants.

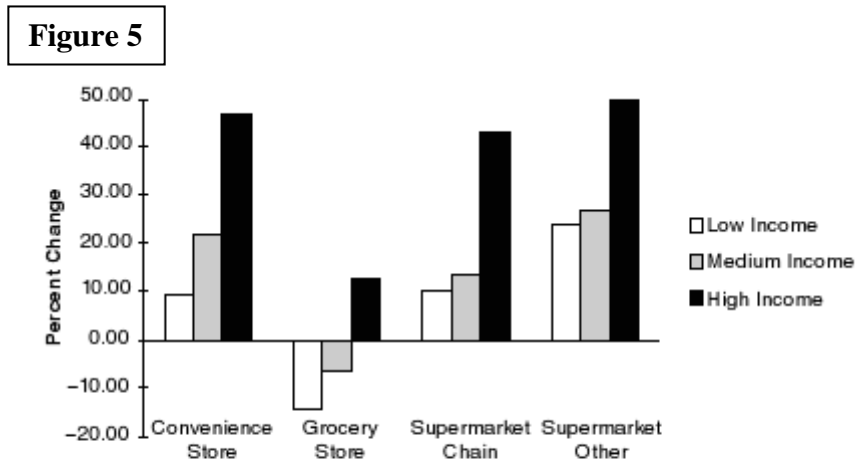


FIGURE 2-1 Change in food store availability by income, 1997-2008.  
 SOURCE: Lisa M. Powell, ImpacTeen Project, University of Illinois at Chicago.  
 Data drawn from Dun & Bradstreet, 1997 and 2008.

The Bronx nutritional and health issues are part of a bigger problem in the United States. From the year 2011 to 2012, 34.9 percent of Americans – or over 78 million adults – were obese.<sup>71</sup> The average person now consumes 190 calories a day from soda and sugary drinks, 120 more calories than in the 1970s.<sup>72</sup> Today compared to the 1970s, the average 18-year-old is 15 pounds heavier, the average woman in her 60s is 20 pounds heavier, and the average man in his 60s is 25 pounds heavier. While the government recommends 1,600 calories a day for the average woman and 2,200 calories for the average man, it was reported in 2000 that daily calorie intake was 1,877 for women and 2,618 for men – almost 300 extra calories.<sup>73</sup> Overall, the average American is 23 pounds heavier than his or her ideal body weight.<sup>74</sup> At this rate, researchers predict that today’s children will be the first generation to

<sup>71</sup> Cynthia L. Ogden et. al., “NCHS Data Brief,” *Centers for Disease Control and Prevention*, October 2013, <http://www.cdc.gov/nchs/data/databriefs/db131.htm>.

<sup>72</sup> David Leonhardt, “Sodas a Tempting Tax Target,” *The New York Times*, May 19, 2009, <http://www.nytimes.com/2009/05/20/business/economy/20leonhardt.html>.

<sup>73</sup> Cathy Newman, “Why Are We So Fat?” *National Geographic*, accessed April 5, 2014, <http://science.nationalgeographic.com/science/health-and-human-body/human-body/fat-costs/#page=3>.

<sup>74</sup> Sherry Rauh, “Is Fat the New Normal?” *WebMD*, accessed April 4, 2014, <http://www.webmd.com/diet/features/is-fat-the-new-normal>.



have a lower life expectancy than their parents.<sup>75</sup> Weight gain is a simple equation: more calories in than calories out equals a person gaining weight. This was the case thirty, fifty, one hundred years ago and continues to be true today. What has changed to make Americans so much fatter? Recent studies have highlighted government spending as a factor in the obesity epidemic. With \$5 billion spent annually on funding corn crops, government subsidies may be the cause of more expensive health foods and cheaper junk food in the United States.<sup>76</sup>

Government intervention in food markets dates back to the Great Depression. The Agricultural Adjustment Act of 1933 was a major New Deal program “to rescue farmers from the disastrous effects of growing too much food— far more than Americans could afford to buy.”<sup>77</sup> This farm-relief bill was designed to reestablish agricultural prosperity, avoid overproduction, and raise prices by offering to pay the farmers for their surplus corn. For the most part, this stayed in place until the 1970s, when political and business leaders campaigned for laissez-faire economics in an attempt to undo the New Deal farm programs. A system of direct payments to farmers began to replace the New Deal loans and although these were designed to ensure that farmers received the target price for a bushel of corn, it removed the price floor under the grain. Each subsequent farm bill lowered corn prices and crop profits. The United States spent \$84.4 billion on corn subsidies from 1995 to 2012, continuing this trend of falling corn prices and declining farm income.<sup>78</sup> In October of 2005, Iowa State University estimated that a bushel of corn cost close to \$2.50 to grow but sold for only \$1.45.<sup>79</sup> This loss of profit has resulted in impoverished farmers and environmental

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<sup>75</sup> Michael Pollan, “The Way We Live Now: The (Agri)Cultural Contradictions of Obesity,” *The New York Times*, October 12, 2003, <http://www.nytimes.com/2003/10/12/magazine/the-way-we-live-now-10-12-03-the-agri-cultural-contradictions-of-obesity.html>.

<sup>76</sup> Pollan, *The Omnivore’s Dilemma: A Natural History of Four Meals*, 54.

<sup>77</sup> Michael Pollan, *The Omnivore’s Dilemma: A Natural History of Four Meals*, (New York: Penguin Group, 2007), 49.

<sup>78</sup> “United States Summary Information,” *EWG Farm Subsidies*, accessed April 8, 2014, <http://farm.ewg.org/region.php?fips=00000>.

<sup>79</sup> Pollan, *The Omnivore’s Dilemma: A Natural History of Four Meals*, 53.

degradation. Farmers today produce as much corn as possible in an attempt to make a living, lowering its value and their income even further.

The overabundance of corn produced by desperate farmers has helped contributed to America's obesity epidemic. The surplus of corn is made into corn sweeteners, various processed foods, and any other food product manufacturers can possibly create.<sup>80</sup> Because it is so cheap, corn sweeteners like high fructose corn syrup are found in hundreds of beverages, breads, cereals, pastries, condiments, candy bars, cookies, pasta, dairy products, canned goods, salad dressings, soups, snacks, and even cough syrup.<sup>81</sup> Although it is still uncertain whether high fructose corn syrup is more harmful than any other sugar, its prevalence in an overwhelming number of foods has certainly contributed to the overconsumption of sugar in the United States. The average American consumes 22.2 teaspoons of sugar per day – 16.2 teaspoons more than the recommended amount.<sup>82</sup> The low price of this corn syrup has also decreased the prices of these unhealthy foods, as seen in Figure 6.<sup>83</sup> This chart of price changes from 1978 to 2008 shows that vegetables are 41 percent more expensive and fruit is 46 percent more expensive, while sodas are 33 percent cheaper, butter is 29 percent cheaper, and beer is 15 percent cheaper.<sup>84</sup> With these price trends, it is getting more expensive for Americans to be healthy. The 2006–2007 Annual Report of the President's Cancer Panel stated, "Current agricultural and public health policy is not coordinated—we heavily subsidize the growth of foods (e.g., corn, soy) that in their processed forms (e.g., high fructose corn syrup, hydrogenated corn and soybean oils, grain-

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<sup>80</sup> Pollan, "The Way We Live Now: The (Agri)Cultural Contradictions of Obesity."

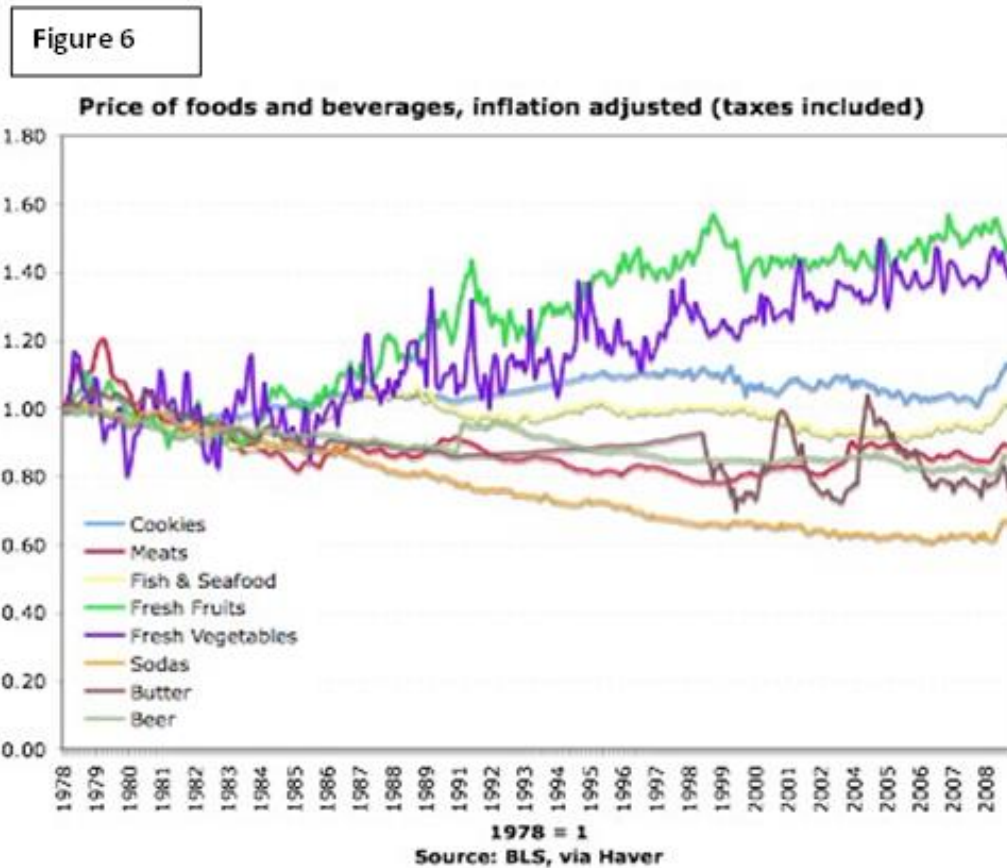
<sup>81</sup> "List of Foods That Contain High Fructose Corn Syrup," *Celestial Healing Wellness Center*, accessed April 5, 2014, [http://www.celestialhealing.net/Food\\_contain\\_HFCS.htm](http://www.celestialhealing.net/Food_contain_HFCS.htm).

<sup>82</sup> Emily Main, "Your Recommended Sugar Intake: Less Than a Soda Per Day," *Rodale News*, August 25, 2009, last modified March 5, 2014, [http://www.rodalenews.com/recommended-sugar-intake?siteID=TnL5HPStwNw-bzPxth21hlotz\\_UpGZpJUQ](http://www.rodalenews.com/recommended-sugar-intake?siteID=TnL5HPStwNw-bzPxth21hlotz_UpGZpJUQ).

<sup>83</sup> Catherine Rampell, "Why a Big Mac Costs Less Than a Salad," *The New York Times*, March 9, 2010, [http://economix.blogs.nytimes.com/2010/03/09/why-a-big-mac-costs-less-than-a-salad/?\\_php=true&\\_type=blogs&\\_r=0](http://economix.blogs.nytimes.com/2010/03/09/why-a-big-mac-costs-less-than-a-salad/?_php=true&_type=blogs&_r=0).

<sup>84</sup> David Leonhardt, "What's Wrong With This Chart?" *The New York Times*, May 20, 2009, <http://economix.blogs.nytimes.com/2009/05/20/whats-wrong-with-this-chart/>

fed cattle) are known contributors to obesity and associated chronic diseases, including cancer.<sup>85</sup> In order to ensure a healthier country, these subsidies need to be altered to promote a better diet.



Apart from the manufacturing of sweeteners, the surplus corn is fed to animals for meat production, as well. Cheaper corn feed encourages meat producers to raise more cattle, sometimes as many as 500,000 cattle in one feed yard.<sup>86</sup> Between 1995 and 2009, programs such as the Livestock Compensation Program, the Emergency Livestock Feed Assistance, and the Livestock Assistance Program provided a total of \$3.5 billion in support to livestock business.<sup>87</sup> Moreover, funds to dairy producers during the same years totaled \$4.8 billion in

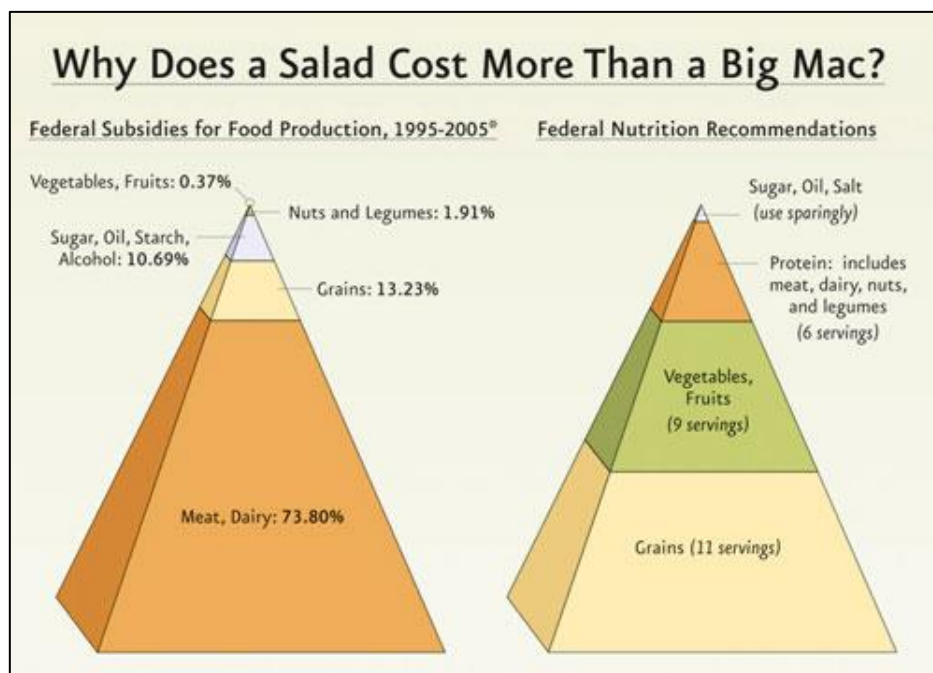
<sup>85</sup> “Health vs. Pork: Congress Debates the Farm Bill,” *Physicians Committee for Responsible Medicine*, accessed April 5, 2014, <http://www.pcrm.org/good-medicine/2007/autumn/health-vs-pork-congress-debates-the-farm-bill>.

<sup>86</sup> Paul Schwenesen, “‘Big Meat’ and Big Government,” *Property and Environment Research Center*, accessed April 6, 2014, <http://perc.org/articles/big-meat-and-big-government>.

<sup>87</sup> “Government Support for Unhealthy Foods,” *Physicians Committee for Responsible Medicine*, accessed April 6, 2014, <http://pcrm.org/health/reports/agriculture-and-health-policies-unhealthful-foods>.

various subsidies.<sup>88</sup> This government backing is why a burger is less expensive than a salad, discouraging Americans from making healthy diet choices and causing meat consumption to be at a record high. In 2000, each American consumed an annual average of 7 pounds more red meat, 46 pounds more poultry, and 4 pounds more fish than in the 1950s.<sup>89</sup> Figure 7 displays the federal subsidies versus the government’s recommended diet for Americas, exposing their hypocrisy in the “do what we say, not what we do” mentality.<sup>90</sup> A majority of government funding goes to corn, soybean, rice, and wheat production, while a negligible amount goes to fruit and vegetable farmers. Instead of supporting strictly grains, meat, and dairy crops, subsidies should reflect what is recommended for Americans to eat.

**Figure 7**



Although federal subsidies are a probable reason why the American public has become more overweight, not all individuals involved in this obesity epidemic are treated equal. Statistics and economic research show that low-income minorities like African

<sup>88</sup> “Government Support for Unhealthy Foods.”

<sup>89</sup> “Profiling Food Consumption in America,” *United States Department of Agriculture*, accessed April 7, 2014, <http://www.usda.gov/factbook/chapter2.pdf>.

<sup>90</sup> Rampell, “Why a Big Mac Costs Less Than a Salad.”

Americans, Hispanics, and Asians bear the brunt of this nutrition struggle. As mentioned in the first chapter, a study revealed that 74 percent of zip codes nationwide do not have a supermarket.<sup>91</sup> After comparing this information to the U.S. Census data on race, ethnicity, and income, it was determined that Whites have twice as much access to chain supermarkets as African Americans.<sup>92</sup> With 39.1 percent of its population being Black or African American, the Bronx is a prime example of this problem.<sup>93</sup> Figure 8 shows the health disparities in White, Black, and Hispanic residents of New York City.<sup>94</sup> In all income levels, Hispanics and Blacks have higher rates of obesity. According to the New York City Department of Health and Mental Hygiene, one in four Black New Yorkers are obese.<sup>95</sup> Furthermore, mortality in 2001 was almost three times higher for Black New Yorkers than for White New Yorkers.<sup>96</sup> Clearly, economics is not the only issue in this health struggle. The concept of food justice originated from this idea of environmental injustice and race affecting food access. Food justice is “ensuring that the benefits and risks of where, what, and how food is grown and produced, transported and distributed, and accessed and eaten are shared fairly.”<sup>97</sup> These numbers show that minorities are more affected by nutritional disparities than Whites regardless of income and that more needs to be done to ensure food justice.

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<sup>91</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 12.

<sup>92</sup> Whitacre, *The Public Health Effects of Food Deserts: Workshop Summary*, 12.

<sup>93</sup> United States Census Bureau, “American Fact Finder,” *U.S. Department of Commerce*, 2010, accessed April 2, 2014.

[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_DP\\_DPDP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1).

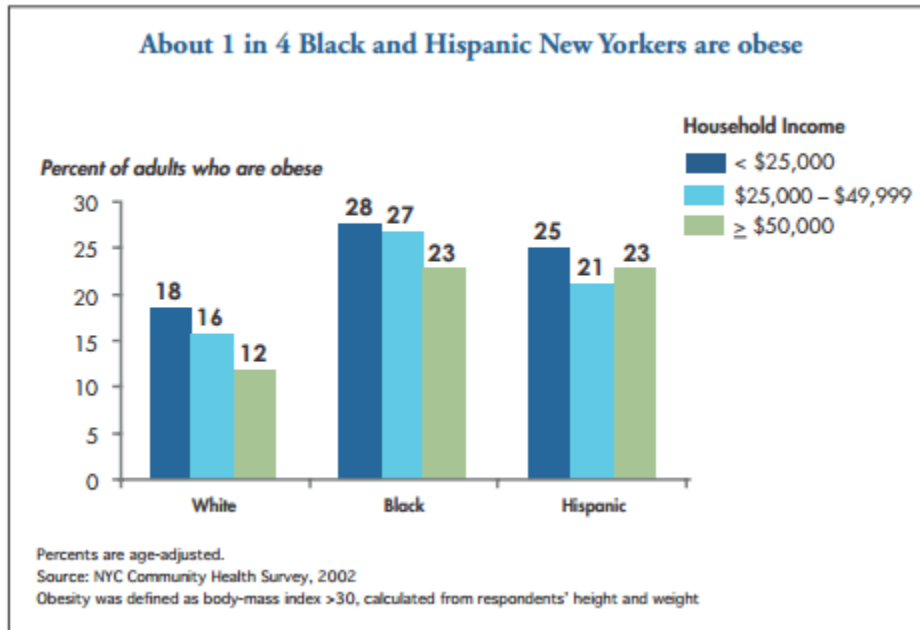
<sup>94</sup> New York Department of Health and Mental Hygiene, “Health Disparities in New York City.”

<sup>95</sup> New York Department of Health and Mental Hygiene, “Health Disparities in New York City,” 2004, accessed February 26, 2014, [http://graphics8.nytimes.com/packages/pdf/nyregion/20081002\\_SOM.pdf](http://graphics8.nytimes.com/packages/pdf/nyregion/20081002_SOM.pdf).

<sup>96</sup> New York Department of Health and Mental Hygiene, “Health Disparities in New York City.”

<sup>97</sup> Robert Gottlieb and Anupama Joshi. *Food Justice*. (Cambridge, MA: The MIT Press, 2013), 6.

**Figure 8**



## **Chapter 4. Public Health Policy: New York State Intervenes**

Despite the fact that the United States government has funded crops that encourage unhealthy eating, not all government action has promoted overweight Americans. Recently, state and local governments have tried to help the obesity epidemic through legislation that works toward increasing food security and making shoppers aware of their food choices and purchases. Policies that have helped reach this agenda include the Food, Conservation, and Energy Act of 2008, Healthy Food Financing Initiative, the Let's Move! Campaign, and the Obama Administration's proposal of new food labels. Through these regulations, legislators hope to address the problem of food insecurity and obesity in the most urgent places, like New York City. Likewise, New York has made its own point to help raise consumer awareness, encourage citizens to make healthier choices, and reduce calorie intake. These efforts include a law requiring calorie counts on menus, a proposed bill for a tax on sodas, and a proposal to limit soda size. Last but not least, American universities have shown initiative to provide organic, local, nutritious foods for their students. Fordham University is one of these colleges that work towards being more sustainable and responsible when it comes to food, nutrition, and diet.

In the United States, the rising rate of obesity has caught the attention of legislators and called for government action. As explained in the previous chapter, almost all federal food subsidies have gone to corn, soybean, wheat, cotton, and rice crops, while very few go to fruit and vegetable crops. The Food, Conservation, and Energy Act of 2008 included, for the first time, \$1.3 billion in funding to fruits, vegetables, and nuts crops for more than ten years.<sup>98</sup> The act increased programs that support local agriculture and added more government farm acreage for fruit and vegetable crops. Additionally, it requested that The Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA) studied food deserts in America. Their findings were published in the “Access to Affordable and Nutritious Food: Measuring and Understanding Their Consequences” report.<sup>99</sup> This study showed “that greater availability of fast food restaurants and lower prices of fast food restaurant items are related to poorer diet.”<sup>100</sup> After identifying the sources and reasons residents in these food deserts experience health disparities, it proposed solutions to work toward food security in these low-income communities. Two of these recommendations include opening more grocery stores and improving the quality of items in convenience stores.

Due to this study, in 2010 President Obama released the details of the Healthy Food Financing Initiative (HFFI), a new program that called for over \$400 million of investments for businesses, food retailers, supermarkets, farmers markets, and other food stores. Modeled after the successful 2004 Pennsylvania Fresh Food Financing Initiative, the HFFI supports projects that increase affordable food in communities and access to healthy food options

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<sup>98</sup> “Solving the Problem of Childhood Obesity Within A Generation,” *White House Task Force on Childhood Obesity Report to the President*, May 2010,

[http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce\\_on\\_Childhood\\_Obesity\\_May2010\\_FullReport.pdf](http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf)

<sup>99</sup> U.S. Department of Health and Human Services, “CED Data Healthy Food Financing Initiative,” *Office of Community Services*, January 8, 2011, <http://www.acf.hhs.gov/programs/ocs/resource/healthy-food-financing-initiative-0>.

<sup>100</sup> U.S. Department of Agriculture, “Food Access and Its Relationship to Diet and Health Outcomes,” *Access to Affordable and Nutritious Food: Measuring and Understanding Their Consequences*, accessed April 12, 2014, [http://www.ers.usda.gov/media/242606/ap036d\\_1\\_.pdf](http://www.ers.usda.gov/media/242606/ap036d_1_.pdf).

through a variety of programs in the USDA.<sup>101</sup> The initiative plans to address the problem of food deserts across the country and help the 29.7 million Americans in low-income communities that do not have access to a supermarket.<sup>102</sup> The HFFI's initial goal was to eliminate all food deserts in seven years. Since its launch, over \$500 million dollars' worth of grants and tax credits have been distributed for the HFFI, including \$9.4 million from the Community Economic Development program at the Department of Health and Human Services and \$22.3 million from the Treasury Department's Community Development Financial Institution Program.<sup>103</sup> The HFFI not only works to improve diet and food access in low-income neighborhoods, but also calls national attention to the problem of food deserts.

First Lady Michelle Obama has done her part to raise awareness of the United States' obesity epidemic, as well. On February 9, 2010, she released news of her Let's Move! Campaign to end childhood obesity by informing parents, providing healthier food in schools, and ensuring food access for families.<sup>104</sup> As part of this effort, President Obama formed the Task Force on Childhood Obesity, an action plan that works towards returning to the 1970s' childhood obesity rate of 5 percent by 2030.<sup>105</sup> The full report includes a definition of a food desert, explains how this leads to poor health, and provides a list of seventy recommendations in an effort to make Americans aware of food deserts as a public health issue and work towards a solution. One of its goals is to increase American food supply of fruits and

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<sup>101</sup> "A Health Food Financing Initiative: An Innovative Approach Improving Health and Sparking Economic Development," *Policy Link*, accessed April 10, 2014, [http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/HFFI\\_ADVOCACY\\_20131014.PDF](http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/HFFI_ADVOCACY_20131014.PDF).

<sup>102</sup> "A Health Food Financing Initiative: An Innovative Approach Improving Health and Sparking Economic Development."

<sup>103</sup> "A Health Food Financing Initiative: An Innovative Approach Improving Health and Sparking Economic Development."

<sup>104</sup> "Regis & Kelly Welcome Michelle Obama to Raise Obesity Awareness," *Boomer Health & Life*, February 8, 2011, [http://www.thirdage.com/news/regis-kelly-welcome-michelle-obama-raise-obesity-awareness\\_2-8-2011](http://www.thirdage.com/news/regis-kelly-welcome-michelle-obama-raise-obesity-awareness_2-8-2011).

<sup>105</sup> "Childhood Obesity Task Force Unveils the Problem of Childhood Obesity Within a Generation," *The White House*, May 11, 2010, <http://www.whitehouse.gov/the-press-office/childhood-obesity-task-force-unveils-action-plan-solving-problem-childhood-obesity->



vegetables by 70 percent or 450 pounds per person by the year 2020.<sup>106</sup> In February 2011, the one year progress report on the Task Force on Childhood Obesity stated that a proposal for approximately \$25 million to finance food desert involvements in urban neighborhoods was pending in Congress.<sup>107</sup> This initiative continues to work to diminish food deserts in American communities.

The First Lady’s initiative to make changes in the United States has been accompanied by other legislation working to promote better nutrition habits for Americans. On the fourth year anniversary of the Let’s Move! Campaign, Michelle Obama helped the Food and Drug Administration announce their next project to help Americans stay healthier. On February 27, 2014, the Obama Administration proposed new food labels

**Figure 9**



SOURCE: FDA/CBS

for over 700,000 packaged foods.<sup>108</sup> The new food label, shown in Figure 9, would include bold, easier to read calories, grams of added sugar and where they came from, more realistic serving sizes that reflect portions people actually eat, removal of “calories from fat,” and vitamin D and potassium in the place

<sup>106</sup> Jerry Hagstrom, “Obesity Report Could Spur Policy Shift,” *The Progressive Farmer*, accessed March 3, 2014, [http://www.dtnprogressivefarmer.com/dtnag/view/ag/printablePage.do?ID=NEWS\\_PRINTABLE\\_PAGE&bypassCache=true&pageLayout=v4&vendorReference=0f4971e5-73db-4414-a3b8-39bac7e6ddf6\\_\\_1273700849261&articleTitle=Obesity+Report+Could+Spur+Policy+Shift&editionName=DTNAgFreeSiteOnline](http://www.dtnprogressivefarmer.com/dtnag/view/ag/printablePage.do?ID=NEWS_PRINTABLE_PAGE&bypassCache=true&pageLayout=v4&vendorReference=0f4971e5-73db-4414-a3b8-39bac7e6ddf6__1273700849261&articleTitle=Obesity+Report+Could+Spur+Policy+Shift&editionName=DTNAgFreeSiteOnline).

<sup>107</sup> Melody C. Barnes, “White House Task Force on Childhood Obesity One Year Progress,” *Task Force on Childhood Obesity*, February 2011, [http://www.letsmove.gov/sites/letsmove.gov/files/Obesity\\_update\\_report.pdf](http://www.letsmove.gov/sites/letsmove.gov/files/Obesity_update_report.pdf).

<sup>108</sup> Kim Painter, “Proposed Food Labels Stress Calories, Sugar, Portions,” *USA Today*, February 27, 2014, <http://www.usatoday.com/story/news/nation/2014/02/27/nutrition-labels-fda-obama/5841747/>.

of vitamin A and C. Motivated by new findings in diet and nutrition and concerns about the rising obesity rates, this would be the first change to nutrition labels in over two decades. Michelle Obama stated that a consumer “should be able to walk into a grocery store, pick an item off the shelf and tell whether it’s good for your family.”<sup>109</sup> The proposal reveals the importance of American consumers’ decisions to purchase foods based on the new information that would be displayed. The new user-friendly labels could be a step in the right direction in helping Americans, including New Yorkers with less access to high-quality foods, make better health choices.

In New York, similar efforts have been made to encourage shoppers to make more informed, health-conscious decisions about their food purchases. In 2008, the New York City Board of Health unanimously agreed to require restaurants with fifteen chains or more to post calories on their menu.<sup>110</sup> Effective March 13, 2008, this new law was implemented in order to allow consumers to make more informed choices and reduce their caloric intake. New York City became the first U.S. jurisdiction to create this legislation. Since a third or more of New Yorkers’ calories are consumed away from home and just one hundred extra calories a day adds up to ten pounds in a year, New York City legislators wanted to ensure people knew how many calories they were eating at each meal.<sup>111</sup> Approximately four weeks after the law was in place, a study showed that 54 percent of people in New York City reported noticing the calorie labels on menus and 27.7 percent of people said it influenced their decisions.<sup>112</sup> Although many studies since have raised controversial questions as to whether menu labeling

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<sup>109</sup> Painter, “Proposed Food Labels Stress Calories, Sugar, Portions.”

<sup>110</sup> Nkechi Nneji, “NY Orders Calories Posted on Chain Menus,” CNN, January 22, 2008, <http://www.cnn.com/2008/HEALTH/diet.fitness/01/22/calories.menus/index.html?iref=mpstoryview>.

<sup>111</sup> New York City Department of Health and Mental Hygiene, “The Requirement to Post Calorie Counts on Menus In New York City Food Service Establishments,” 2008, [http://www.nyc.gov/html/doh/downloads/pdf/cdp/calorie\\_compliance\\_guide.pdf](http://www.nyc.gov/html/doh/downloads/pdf/cdp/calorie_compliance_guide.pdf).

<sup>112</sup> Brian Elbel, “Calorie Labeling And Food Choice: A First Look At The Effects On Low-Income People In New York City,” *Health Affairs*, June 2009, accessed April 14, 2014, <http://content.healthaffairs.org/content/28/6/w1110.full>.

actually lowers calorie consumption, this law is a step in the right direction in terms of informing Americans about their caloric intake.

Another step New York has taken to influence residents' dining choices is the proposed soda tax law and soda size limit. In December 2008, New York Governor Paterson proposed an 18 percent tax on soda and sugared drinks that are less than 70 percent juice.<sup>113</sup> This penny-per-ounce tax on soda would raise \$404 million in revenue that could be used for obesity prevention programs across New York. Aside from raising revenue, this "obesity tax" would ideally discourage New Yorkers from drinking sugary drinks and force them to make healthier choices. Similar to the growing tax on cigarettes decreasing the number of smokers, those who choose to drink unhealthy beverages would pay the price. For low-income populations, like Fordham students and Bronx residents, it might be an incentive to reach for a bottle of water instead of a sugary sports drink. In the same way, a bill was proposed by the New York City Board of Health in 2013 to limit the size of sodas businesses can sell to fewer than 16 ounces.<sup>114</sup> This bill would apply to everywhere sodas are sold, except in grocery stores and convenience stores that are under the state's jurisdiction. For the past couple of years, groups like the Alliance for a Healthier New York and the New York Academy of Medicine have been working to get a statewide ban on big sodas. Like the soda tax, limiting the size of sodas has been another strategy to decrease obesity rates in the city.

American universities have recently been adding to efforts to support fresh, organic, local food sources in an attempt to improve students' health. A *USA Today* article from 2006 revealed that college students were more enticed by universities that were dedicated to

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<sup>113</sup> David Paterson, "Commentary: Why We Need An Obesity Tax," *CNN Health*, last modified December 18, 2008, accessed April 14, 2014, <http://www.cnn.com/2008/HEALTH/12/18/paterson.obesity/>.

<sup>114</sup> Micheal M. Grynbaum, "New York Soda Ban to Bo Before State's Top Court," *The New York Times*, October 17, 2013, <http://www.nytimes.com/2013/10/18/nyregion/new-york-soda-ban-to-go-before-states-top-court.html>.

sustainable food initiatives.<sup>115</sup> Students began “pushing campus dining standards to be measured more by the food’s origins, not its volume.”<sup>116</sup> Universities like Harvard and Yale have made an effort to serve organic, local foods on their campuses in response. In just two years, Yale increased its student food budget from \$2.10 to \$2.94 per meal after including at least one organic entrée per day.<sup>117</sup> Close to half of the country’s 15 million students now have organic foods available on their college campus.<sup>118</sup> Fordham University has joined this organic-friendly group of colleges. Recently, Fordham Hospitality Services has worked with Sodexo in order to provide a more sustainable dining environment for students. Some policies include “offering free trade coffee in the Marketplace, removing trays from the kitchen to reduce water waste, and purchasing food from local growers.”<sup>119</sup> According to the College Sustainability Report Card, Fordham University received a C+ as an overall grade.<sup>120</sup> However, this data was collected in summer of 2010 and Fordham has since formed a Community Supported Agriculture (CSA). In April 2012, St. Rose’s Garden CSA was formed from eight raised beds installed on Rose Hill’s campus.<sup>121</sup> This volunteer-run garden provides students the opportunity to purchase locally-grown, organic produce for a fraction of the price of supermarkets. For about \$2 a pound, six to eight pounds of fresh fruits and vegetables are available to students each week. Since 56 percent of students in the “Health Changes for Fordham University Students” survey said that they cook at home three or more times a week, St. Rose’s Garden is certainly a step in improving Fordham students’ ability to

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<sup>115</sup> Bruce Horovitz, “More University Students Call for Organic, ‘Sustainable’ Food,” last modified September 27, 2006, [http://usatoday30.usatoday.com/money/industries/food/2006-09-26-college-food-usat\\_x.htm?POE=click-refer](http://usatoday30.usatoday.com/money/industries/food/2006-09-26-college-food-usat_x.htm?POE=click-refer).

<sup>116</sup> Horovitz, “More University Students Call for Organic, ‘Sustainable’ Food.”

<sup>117</sup> Horovitz, “More University Students Call for Organic, ‘Sustainable’ Food.”

<sup>118</sup> Horovitz, “More University Students Call for Organic, ‘Sustainable’ Food.”

<sup>119</sup> “Food Services at Fordham,” *Fordham University*, accessed May 2, 2014, [http://www.fordham.edu/campus\\_resources/campus\\_facilities/facilities\\_managemen/sustainability/green\\_campus\\_initiat/food\\_service\\_80287.asp](http://www.fordham.edu/campus_resources/campus_facilities/facilities_managemen/sustainability/green_campus_initiat/food_service_80287.asp).

<sup>120</sup> “Fordham University,” *The College Sustainability Report Card*, accessed May 2, 2014, <http://www.greenreportcard.org/report-card-2011/schools/fordham-university>.

<sup>121</sup> “St. Rose’s Garden + CSA,” *Fordham Sustainability*, accessed May 2, 2014, <http://fordhamsustainability.wordpress.com/st-roses-csa/>.

cook and eat healthier meals. Hopefully, it is the first step of many in Fordham's movement towards offering students a healthier alternative to the off-campus pizza and junk food options.

## **Chapter 5. Conclusion: Shifting the Focus from the Consumer to the Source**

As a Fordham University student and a resident of the Bronx, I witness the frustration of traveling so far to go to a decent grocery store for organic food or fresh produce. For meager college kids to complain about the condition of food stores says a lot about how bad the situation has truly become. The recent law to post calories and the bill to decrease soda sizes may cut a couple hundred calories, but these policies do not get to the root of the problem. These legislations simply put the blame on consumers in an effort to reduce calorie consumption. While it is not necessarily a bad thing to make Americans aware of the calories in their oversized food and drinks, this strategy will not fix the institutionalized issues that create a food desert. The real problem is with the food access and security in the Bronx and this should be dealt with before any soda ban. In order to live healthy lifestyles, residents in food deserts must first be given the tools to do so. I propose a practical and possible method of dealing with the Bronx as a food desert. My suggestions include: an agricultural subsidy reform, a statewide plan of action to improve food access in these low-income neighborhoods, a system of health and nutrition education, and efforts by local residents to promote and support CSA and farmer markets. Many of these propositions have cases of how they have proved effective in certain places and I hope to apply these successful strategies to other areas. For Fordham University, I recommend expanding their CSA initiative by extending their services to the larger Bronx community. By using its money and resources for the greater good, Fordham can single-handedly improve conditions in its neighborhood.

First, the government needs to deal with the issue of unfair federal subsidies and the negative effects these have on farmers. As previously mentioned, agricultural subsidies are a large part of the economic aspect of why junk foods are so much cheaper than healthier options. Cutting down soda size will not improve grocery stores or make them more convenient; nor will it make more nutritious food, like fruits and vegetables, cheaper and easier to access. However, a better distribution of federal funding to support crops that Americans need to be healthy would certainly help improve these conditions. The Food, Conservation, and Energy Act of 2008 is a step in the right direction, albeit the first step in a long journey to provide Americans with more fruits and vegetables. By including for the first time \$1.3 billion for fruits, vegetables, and nuts crops, the government opened up a new door to cheaper, healthier foods from these crops.<sup>122</sup> In addition, the use of terms such as “food desert” and “food security” in the USDA’s report “Access to Affordable and Nutritious Food: Measuring and Understanding Their Consequences” was a monumental stride in the struggle for food access.<sup>123</sup> Having a term in which to define and identify the problem is necessary in order to find a solution, but these improvements are only the beginning. In order to find a permanent solution, the USDA and federal funding must continue to work towards an influx of cheaper, healthier foods instead of continuing to pour their money into crops like corn that create unhealthy, calorie-ridden food.

Next, state involvement in addressing food deserts is a crucial aspect of the solution. Some states have already started to motivate grocery store owners to move to neighborhoods with low food security. Pennsylvania is a national frontrunner in improving conditions in its state. As mentioned in the previous chapter, the Pennsylvania Fresh Food Financing Initiative (FFFI) was so successful that it inspired the Obama Administration’s Healthy Food Financing Initiative of 2010. The FFFI is managed by a partnership between “a community

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<sup>122</sup> “Solving the Problem of Childhood Obesity Within A Generation.”

<sup>123</sup> U.S. Department of Health and Human Services, “CED Data Healthy Food Financing Initiative.”

development financial institution” called The Reinvestment Fund and a non-profit organization called Food Trust.<sup>124</sup> The initiative gained support from important legislators like State Representative Dwight Evans, and the Pennsylvania General Assembly funded the project \$30 million over three years.<sup>125</sup> The FFFI provides grants and loans to attract qualified supermarkets and fresh food retailers to urban and rural low-income communities and helps them with startup costs and problems. Its objectives include reducing diet-related diseases, stimulating investment in economic unstable neighborhoods, diminishing financial obstacles for supermarkets in low-income areas, and creating jobs for local residents.<sup>126</sup> Since its launch in 2004, the FFFI has added or improved 83 grocery stores across Pennsylvania, which has led to “5,000 full- and part-time jobs, 1.5 million square feet of grocery retail space, and expanded food access for more than 400,000 residents.”<sup>127</sup> The success of this initiative has caused other states, such as California and New York, to look into replicating the program in their own cities. If this strategy continues to prove effective, states could more easily solve the problem of food deserts.

Similar to state intervention, local government involvement has shown to help conditions in urban areas. In Chicago, Illinois, urban food deserts have caused overweight residents with higher instances of diet-related diseases like diabetes.<sup>128</sup> Food market expert Mari Gallagher uses the term food balance to define an area with equal access to grocery stores, fast food outlets, and other venues. Her food balance equation is “distance to the

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<sup>124</sup> “Pennsylvania Fresh Food Financing Initiative,” *Institute for Local Self-Reliance*, May 10, 2010, <http://www.ilsr.org/rule/financing-local-businesses/3005-2/>.

<sup>125</sup> “Access to Healthy Food,” *Policy Link*, accessed May 3, 2014, [http://www.policylink.org/site/c.lkIXLbMNJrE/b.7634045/k.7FB1/A\\_Case\\_Study.htm](http://www.policylink.org/site/c.lkIXLbMNJrE/b.7634045/k.7FB1/A_Case_Study.htm).

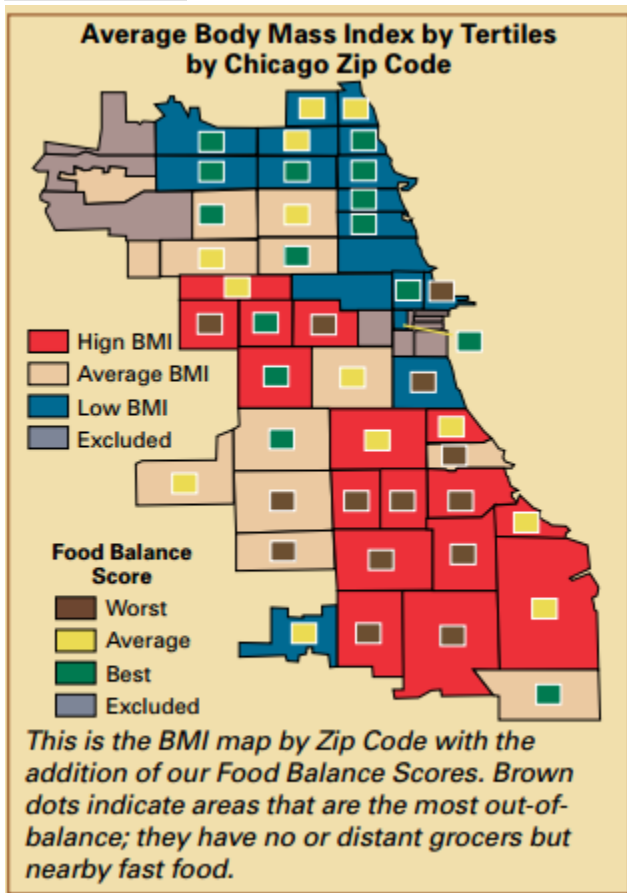
<sup>126</sup> Dwight Evans, “Report on Issues From the House Appropriations Committee,” March 4, 2010, [http://www.ncsl.org/documents/labor/workingfamilies/PA\\_FFFI.pdf](http://www.ncsl.org/documents/labor/workingfamilies/PA_FFFI.pdf).

<sup>127</sup> “Access to Healthy Food.”

<sup>128</sup> Mari Gallagher, “Examining the Impact of Food Deserts on Public Health in Chicago,” accessed May 3, 2014. [http://www.marigallagher.com/site\\_media/dynamic/project\\_files/Chicago\\_Food\\_Desert\\_Report.pdf](http://www.marigallagher.com/site_media/dynamic/project_files/Chicago_Food_Desert_Report.pdf).

closest grocer divided by the distance to the closest fast food restaurant for each block, tract, and Community Area in the City of Chicago.”<sup>129</sup>

**Figure 10**



Taken from Gallagher’s 2006 study, Figure 10 shows the correspondence between high body mass index and the large number of areas with low food balance scores in Chicago. To help improve these conditions, Chicago Mayor Rahm Emanuel began to take action in June 2011. In two years, Mayor Emanuel’s new legislation expanded the maximum size of community gardens, allowed for urban farms to sell their products at farmer markets, and authorized fifty produce carts.<sup>130</sup> The result was 14 new or improved stores in Chicago food deserts, 14 fresh produce carts (half of which were in food deserts), 15 acres of urban farms, 253,000 pounds of

fresh fruits and vegetables, and 32 weekly stops made by two mobile produce buses.<sup>131</sup> Since the beginning of the city’s efforts, the number of low-income residents living in food deserts declined by 21 percent.<sup>132</sup> Mayor Emanuel’s success in improving Chicago’s food access can prove as a model for other cities with food deserts. Mayors and other local government leaders can make a big difference in improving the conditions for their residents.

<sup>129</sup> Gallagher, “Examining the Impact of Food Deserts on Public Health in Chicago.”

<sup>130</sup> Fran Spielman, “City’s Food Deserts Drying Up as Healthy Choices Move In,” *Chicago Sun-Times*, last modified September 17, 2013, [http://www.suntimes.com/news/21952654-418/citys-food-deserts-drying-up-as-healthy-choices-move-in.html#.U2gZs\\_1dWHM](http://www.suntimes.com/news/21952654-418/citys-food-deserts-drying-up-as-healthy-choices-move-in.html#.U2gZs_1dWHM).

<sup>131</sup> Spielman, “City’s Food Deserts Drying Up as Healthy Choices Move In,”

<sup>132</sup> Office of the Mayor of Chicago, “Mayor Emanuel Announces Release of Food Desert Data and Interactive Efforts to Combat Food Deserts in Chicago,” August 27, 2013, <http://www.cityofchicago.org/content/dam/city/depts/mayor/Press%20Room/Press%20Releases/2013/August/08.37.13FoodDesert.pdf>.



While many government plans focus on increasing access to supermarkets, studies have shown that adding more grocery stores does not always mean residents make healthier choices. A particular study tracked thousands of people in a number of large cities for fifteen years. This research “found that people didn’t eat more fruits and vegetables when they had supermarkets available in their neighborhoods.”<sup>133</sup> People who work in food desert communities have suggested that lack of public education is a cause of this. Gwen Flynn, director of community health and education at Community Health Councils in Los Angeles, says that a comprehensive plan is needed to change what people eat.<sup>134</sup> This plan would include government and private funding for healthy foods, along with community education. Public education on nutrition provides people with the knowledge to live a healthier lifestyle and make better diet choices. One way states and cities can teach the community is through public programs. With 1.1 million students in about 1,800 schools across New York City, reaching out to public school children and their parents about the importance of good nutrition could make a huge difference.<sup>135</sup> Programs such as the NY Coalition for Healthy School Food (NYCHSF) and CookShop have already started this initiative in New York Public Schools. NYCHSF is a nonprofit organization that provides volunteers in the kitchen and educators in the classroom to inform children about healthy eating.<sup>136</sup> Similarly, CookShop reaches out to 30,000 New Yorkers in all five boroughs through cooking and nutrition information workshops.<sup>137</sup> Improving and adding more of these programs can provide the public with the tools they need to use grocery stores and diminish malnutrition and obesity in food deserts. For example, Public School 29 in Brooklyn has utilized Wellness

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<sup>133</sup> Daniela Hernandez, “Access to Grocers Doesn’t Improve Diets, Study Finds,” *Los Angeles Times*, July 17, 2011, <http://articles.latimes.com/2011/jul/17/health/la-he-food-deserts-20110712>.

<sup>134</sup> Hernandez, “Access to Grocers Doesn’t Improve Diets, Study Finds.”

<sup>135</sup> New York City Department of Education, “About Us,” accessed May 4, 2014, <http://schools.nyc.gov/AboutUs/default.htm>.

<sup>136</sup> NY Coalition for Health School Food, “About Us,” accessed May 4, 2014, <http://www.healthyschoolfood.org/about.htm>.

<sup>137</sup> Food Bank for New York City, “CookShop,” accessed May 4, 2014, <http://www.foodbanknyc.org/cookshop>.

in the Schools, a nonprofit organization that places culinary school students in New York City public schools.<sup>138</sup> Through this program, PS 29 is able to provide tastier and healthier options for their students, such as vegetarian meals and a salad bar. If more public schools made use of programs like this, the result would be healthier, nutritional-educated children.

Although public policy and government can help food deserts, local residents do not always have to rely on government intervention and can take matters into their own hands. One way citizens can do this is through community supported agriculture (CSA) and local gardens. Dating back to the 1800s, CSAs involve purchasing a share of the season's harvest, which directly connects local farmers and neighboring consumers and provides an understanding of where and how food is produced.<sup>139</sup> The Holcomb Farm CSA in Hartford, Connecticut is an example of a successful community farm that has improved food availability in the neighborhood. While it started in 1993 as a five acre farm, Holcomb Farm CSA is now a twenty-five acre farm that produces 150,000 pounds and 100 different varieties of fruits and vegetables to 25 towns and cities.<sup>140</sup> Between 30 to 40 percent of this produce goes to 1,200 low-income residents in Hartford. Although skeptics would say that New York City could never provide a farm like this with such limited space, an organization called Just Food supports community gardens and locally-grown foods in the city. Since 1995, Just Food has assisted CSAs, farmers' markets, and community-run pantry programs across New York City.<sup>141</sup> As Figure 3 shows, there are only six marked CSAs and farmers' markets in the South Bronx. Using organizations like Just Food, the Bronx can build more gardens in its community to provide fresh produce for its residents.

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<sup>138</sup> Lesley Alderman, "Putting Nutrition at the Head of the School Lunch Line," *The New York Times*, November 5, 2010, [http://www.nytimes.com/2010/11/06/health/06patient.html?\\_r=0](http://www.nytimes.com/2010/11/06/health/06patient.html?_r=0).

<sup>139</sup> Winne. *Closing the Food Gap*, 137.

<sup>140</sup> Winne. *Closing the Food Gap*, 142.

<sup>141</sup> Just Food, "About Us," accessed May 5, 2014, <http://www.justfood.org/about-us>.

In terms of Fordham’s contribution to the Bronx as a food desert, more should be done to help the community and improve the health of students. As mentioned in Chapter 1, schools like Paul Quinn College prove that schools can make a substantial difference for its surrounding neighborhood. Fordham St. Rose’s Garden CSA is a crucial step in the movement to help not just students, but also Bronx residents. By expanding this community garden, Fordham students could sell the produce to the surrounding Bronx community. Although some may argue that space is an issue, there is certainly enough grassy area to create a community garden on Rose Hill’s campus. For example, the area in front of Walsh

Library is a spacious grass-filled area with ample room for a garden. Figure 11 shows this lawn in front of Fordham’s library and in Figure 12, its location on campus is circled in red.<sup>142</sup> Since students who wish to spend time outside usually find themselves on Martyr’s lawn or Edward’s Parade, this area is

**Figure 11**

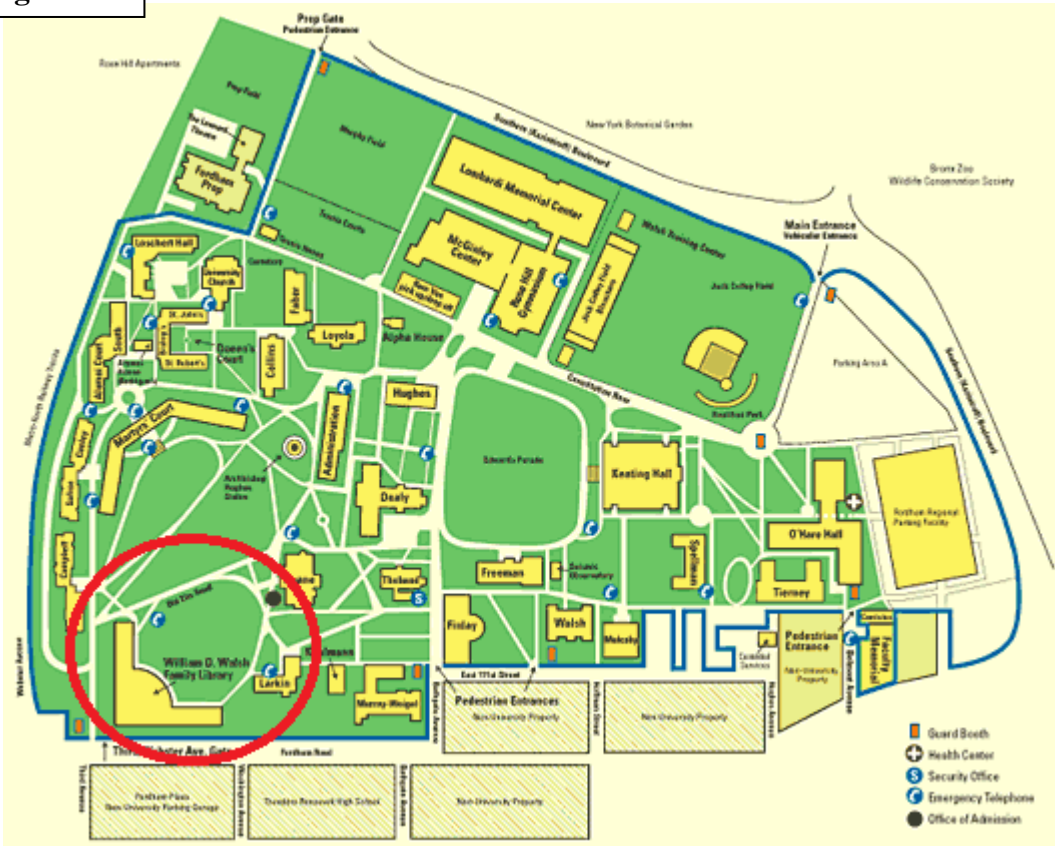


vacant a majority of the time. By transforming this space into a valuable farm that produces fresh fruits and vegetables, Fordham University can return to its rural roots and provide a healthier lifestyle for its students and Bronx neighbors.

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<sup>142</sup> Fordham University, “Venue,” accessed May 6, 2014, [http://www.fordham.edu/academics/colleges\\_\\_graduate\\_s/graduate\\_\\_profession/arts\\_\\_sciences/student\\_resources/graduate\\_student\\_ass/gsa\\_conference\\_inequ/location/](http://www.fordham.edu/academics/colleges__graduate_s/graduate__profession/arts__sciences/student_resources/graduate_student_ass/gsa_conference_inequ/location/).

**Figure 12**



As a Fordham University senior, I can proudly say that I have gotten to know and love the Bronx, New York. From its origins as a farmland to its transition into a metropolis, the Bronx and Rose Hill have a rich and unique history. Once a desolated urban slum in the 1970s, the Bronx adopted a mission of urban renewal and successfully redefined itself as a thriving borough of New York City. Although the Bronx is currently facing a struggle with food access and obesity, I have no doubt that the Bronx will improve conditions like it has in the past. Unfortunately, the Bronx is not the only community experiencing this problem. Across America, other rural and urban residents are both malnourished and overweight as they are forced to buy their food from convenience stores or delis because of the unmanageable distance of the nearest grocery store. In the same way, Fordham University is not the only college affected by its location in a neighborhood that lacks food security. From history to economics to legislation, it is evident that countless factors are involved in the creation and dissolution of a food desert. For this reason, the practical and feasible solutions above could help solve this issue across the country. The government can help its citizens by

redirecting subsidies to healthier crops, creating state initiatives to implement more grocery stores and educate the public, and working on a local level to provide more fresh produce. Americans can also make an effort and take their health and nutrition in to their own hands through community supported agriculture. In schools like Fordham University and Paul Quinn College, students and faculty can do their part to help the community surrounding their campus. By working together, Bronx inhabitants, Fordham students, and others affected by food deserts across America can improve conditions for their health and diet.

# Appendix I

## Health Changes for Fordham University Students Survey

### Health Changes in Fordham University Students

#### Personal Information

Thank you for participating in my ten-question survey. For my senior thesis, I am looking to find out how dietary and exercise habits have changed for Fordham students since entering college. By participating in and submitting this survey, you are consenting to using this information in my data. Please keep in mind that there is no right or wrong answer and all information is kept anonymous.

#### 1. Please select your gender:

- Male  
 Female

#### 2. Please indicate your year:

- Freshman  
 Sophomore  
 Junior  
 Senior

#### 3. Please indicate whether you live on campus, in the Bronx, or commute:

- I live on campus  
 I live in the Bronx  
 I do not live in the Bronx and commute to Fordham

If you selected that you do not live in the Bronx, please include where you commute from:

#### 4. Evaluate the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I find eating healthily and exercising to be very important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to be health conscious when ordering take-out or at a restaurant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When organic foods are available, I choose them over non-organic options.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have to worry about eating healthily and exercising until I get older.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proximity to a gym or fitness center has a big impact on my exercising habits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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## Health Changes in Fordham University Students

### Fitness Habits

#### 5. How often do you carry out each action?

	Never	1 - 2 times a week	3 - 4 times a week	5 - 6 times a week	Every day
Exercise at the Fordham fitness center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise at an off-campus gym	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise outdoors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise in a team sport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attend an exercise class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Change in Fitness and Eating Habits

#### 6. Since entering college, please select all that apply:

- I exercise less frequently
- Exercising is less convenient now
- I exercise about the same as I did before college
- I exercise more frequently
- Exercising is more convenient now
- I eat less healthily
- Eating healthily is more difficult now
- My eating habits have not changed since entering college
- I eat more healthily
- Eating healthily is easier now



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## Health Changes in Fordham University Students

### Eating Habits

#### 7. How often do you usually carry out each action?

	Never	1-2 times a week	3-4 times a week	5-6 times a week	Every day
Eat breakfast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat 3 meals a day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat right before bed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat after 12:00 am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat at least one serving of vegetables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat at least one serving of fruit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat seafood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat poultry, beef, or pork	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat eggs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat dairy products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat bread or wheat products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat organic food options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat fried food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat chocolate, candy, or dessert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink at least eight 8-ounce glasses of water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink soda or soft drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink fruit juice containing sugar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink coffee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink tea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drink alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





## Health Changes in Fordham University Students

### Meal Options

#### 8. How often do you get your meals from the following places?

	Never	1–2 times a week	3–4 times a week	5–6 times a week	Every day
The Fordham dining hall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Another on-campus dining option (Cosi, the Grille, Dagger John's, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Order for pick-up or delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dine in at a restaurant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cook for yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat a home-cooked meal (made for you by a parent or family member)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Food Options in the Bronx

#### 9. Please select all that apply to the Bronx, New York.

- It is difficult to find nutritious food in the neighborhood.
- I have no problem finding healthy food at nearby grocery stores and markets.
- Organic foods are not available in my local grocery stores.
- Proximity to fast food chains, bodegas, and pizza places makes it difficult to choose healthy options.
- In other areas of New York City, I notice more accessible health food stores with better quality items.
- I have to travel outside of the Bronx to buy good-quality food items.
- The Bronx grocery stores are just as good as any other grocery stores I have visited.



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## Appendix II

### Health Changes for Fordham University Students Survey Results

#### PAGE 1: Personal Information

Q1 Customize Export ▾

**Please select your gender:**

Answered: 100 Skipped: 0

Answer Choices	Responses	
▼ Male	23.00%	23
▼ Female	77.00%	77
Total		100

Q2 Customize Export ▾

**Please indicate your year:**

Answered: 98 Skipped: 2

Answer Choices	Responses	
▼ Freshman	17.35%	17
▼ Sophomore	18.37%	18
▼ Junior	10.20%	10
▼ Senior	54.08%	53
Total		98

Q3 Customize Export ▾

**Please indicate whether you live on campus, in the Bronx, or commute:**

Answered: 100 Skipped: 0

Answer Choices	Responses	
▼ I live on campus	40.00%	40
▼ I live in the Bronx	42.00%	42
▼ I do not live in the Bronx and commute to Fordham	18.00%	18
Total		100

[Comments \(16\)](#)

## Evaluate the following statements.

Answered: 100 Skipped: 0

	Strongly Disagree	Disagree	Agree	Strongly Agree	Total	Average Rating
I find eating healthily and exercising to be very important.	0.00% 0	5.00% 5	40.00% 40	55.00% 55	100	3.50
I try to be health conscious when ordering take-out or at a restaurant.	6.00% 6	22.00% 22	63.00% 63	9.00% 9	100	2.75
When organic foods are available, I choose them over non-organic options.	8.16% 8	40.82% 40	33.67% 33	17.35% 17	98	2.60
I do not have to worry about eating healthily and exercising until I get older.	50.00% 50	45.00% 45	3.00% 3	2.00% 2	100	1.57
Proximity to a gym or fitness center has a big impact on my exercising habits.	7.00% 7	19.00% 19	44.00% 44	30.00% 30	100	2.97

Q5

Customize

Export ▼

## How often do you carry out each action?

Answered: 100 Skipped: 0

	Never	1 - 2 times a week	3 - 4 times a week	5 - 6 times a week	Every day	Total	Average Rating
Exercise at the Fordham fitness center	37.00% 37	25.00% 25	18.00% 18	15.00% 15	5.00% 5	100	2.21
Exercise at an off-campus gym	83.84% 83	9.09% 9	7.07% 7	0.00% 0	0.00% 0	99	1.23
Exercise outdoors	35.35% 35	53.54% 53	8.08% 8	1.01% 1	2.02% 2	99	1.79
Exercise in a team sport	71.72% 71	18.18% 18	2.02% 2	6.06% 6	2.02% 2	99	1.46
Exercise at home	43.43% 43	32.32% 32	15.15% 15	7.07% 7	2.02% 2	99	1.90
Attend an exercise class	69.00% 69	27.00% 27	3.00% 3	1.00% 1	0.00% 0	100	1.36

## PAGE 4: Change in Fitness and Eating Habits

Q6

Customize

Export ▼

## Since entering college, please select all that apply:

Answered: 100 Skipped: 0

Answer Choices	Responses
I exercise less frequently	36.00% 36
Exercising is less convenient now	36.00% 36
I exercise about the same as I did before college	21.00% 21
I exercise more frequently	39.00% 39
Exercising is more convenient now	30.00% 30
I eat less healthily	29.00% 29
Eating healthily is more difficult now	56.00% 56
My eating habits have not changed since entering college	13.00% 13
I eat more healthily	38.00% 38
Eating healthily is easier now	11.00% 11
Total Respondents: 100	

Q7

Customize

Export ▾

## How often do you usually carry out each action?

Answered: 100 Skipped: 0

	Never	1-2 times a week	3-4 times a week	5-6 times a week	Every day	Total	Average Rating
▼ Eat breakfast	2.00% 2	16.00% 16	19.00% 19	13.00% 13	50.00% 50	100	3.30
▼ Eat 3 meals a day	0.00% 0	17.00% 17	26.00% 26	18.00% 18	39.00% 39	100	3.22
▼ Eat right before bed	22.68% 22	47.42% 46	20.62% 20	7.22% 7	2.06% 2	97	2.09
▼ Eat after 12:00 am	40.40% 40	47.47% 47	8.08% 8	2.02% 2	2.02% 2	99	1.74
▼ Eat at least one serving of vegetables	0.00% 0	12.00% 12	27.00% 27	23.00% 23	38.00% 38	100	3.26
▼ Eat at least one serving of fruit	0.00% 0	23.00% 23	28.00% 28	15.00% 15	34.00% 34	100	3.11
▼ Eat seafood	47.00% 47	45.00% 45	8.00% 8	0.00% 0	0.00% 0	100	1.61
▼ Eat poultry, beef, or pork	13.00% 13	18.00% 18	37.00% 37	21.00% 21	11.00% 11	100	2.67
▼ Eat eggs	9.00% 9	36.00% 36	24.00% 24	22.00% 22	9.00% 9	100	2.55
▼ Eat dairy products	4.00% 4	15.00% 15	26.00% 26	18.00% 18	37.00% 37	100	3.14
▼ Eat bread or wheat products	5.00% 5	8.00% 8	18.00% 18	27.00% 27	42.00% 42	100	3.24
▼ Eat organic food options	29.29% 29	40.40% 40	15.15% 15	8.08% 8	7.07% 7	99	2.08
▼ Eat fried food	24.24% 24	59.60% 59	13.13% 13	2.02% 2	1.01% 1	99	1.93
▼ Eat chocolate, candy, or dessert	5.00% 5	41.00% 41	33.00% 33	12.00% 12	9.00% 9	100	2.58
▼ Drink at least eight 8-ounce glasses of water	9.00% 9	15.00% 15	15.00% 15	16.00% 16	45.00% 45	100	3.12
▼ Drink soda or soft drinks	44.00% 44	39.00% 39	13.00% 13	3.00% 3	1.00% 1	100	1.74
▼ Drink fruit juice containing sugar	35.00% 35	43.00% 43	17.00% 17	3.00% 3	2.00% 2	100	1.89
▼ Drink coffee	36.36% 36	7.07% 7	15.15% 15	11.11% 11	30.30% 30	99	2.51
▼ Drink tea	29.00% 29	35.00% 35	13.00% 13	12.00% 12	11.00% 11	100	2.18
▼ Drink alcohol	22.00% 22	45.00% 45	24.00% 24	7.00% 7	2.00% 2	100	2.13

Q8

Customize

Export

## How often do you get your meals from the following places?

Answered: 100 Skipped: 0

	Never	1-2 times a week	3-4 times a week	5-6 times a week	Every day	Total	Average Rating
The Fordham dining hall	52.00% 52	14.00% 14	4.00% 4	20.00% 20	10.00% 10	100	2.22
Another on-campus dining option (Cosi, the Grille, Dagger John's, etc.)	44.44% 44	27.27% 27	12.12% 12	12.12% 12	4.04% 4	99	2.04
Order for pick-up or delivery	35.00% 35	50.00% 50	13.00% 13	2.00% 2	0.00% 0	100	1.82
Dine in at a restaurant	47.47% 47	49.49% 49	3.03% 3	0.00% 0	0.00% 0	99	1.56
Cook for yourself	24.00% 24	20.00% 20	10.00% 10	18.00% 18	28.00% 28	100	3.06
Eat a home-cooked meal (made for you by a parent or family member)	45.00% 45	17.00% 17	7.00% 7	11.00% 11	20.00% 20	100	2.44

Q9

Customize

Export ▾

## Please select all that apply to the Bronx, New York.

Answered: 90 Skipped: 10

Answer Choices ▾	Responses ▾
▾ It is difficult to find nutritious food in the neighborhood.	44.44% 40
▾ I have no problem finding healthy food at nearby grocery stores and markets.	38.89% 35
▾ Organic foods are not available in my local grocery stores.	35.56% 32
▾ Proximity to fast food chains, bodegas, and pizza places makes it difficult to choose healthy options.	52.22% 47
▾ In other areas of New York City, I notice more accessible health food stores with better quality items.	81.11% 73
▾ I have to travel outside of the Bronx to buy good-quality food items.	43.33% 39
▾ The Bronx grocery stores are just as good as any other grocery stores I have visited.	13.33% 12
Total Respondents: 90	

[Comments \(11\)](#)

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