

**The Relationship Between Unhealthy Food Access (Ratio of Bodegas to Supermarkets) and
Neighborhood Poverty Rates**

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Abstract

The relationship between unhealthy food access and neighborhood poverty rates is an essential component in comprehending the socioeconomic dynamics influencing individuals' dietary choices and health outcomes. This abstract presents an overview of the interaction between these variables, based on research on the impact of poverty rates and food environments on public wellness from a variety of sources. Studies on initiatives to increase the availability of nutritious foods in underserved neighborhoods, the relationship between socioeconomic disadvantage and a lack of healthy food stores, and the efficiency of government programs are all associated with this research. Furthermore, it analyzes the discrepancies in food access based on poverty and race, the difficulties that those with low incomes face when getting healthy foods, and the need for governmental efforts to address environmental injustice associated with the risk of obesity. This abstract aims to present readers with a full understanding of the connection between poverty, food environments, and community health.

Keywords: Unhealthy food access, neighborhood poverty rates, bodegas, supermarkets, income, food insecurity, socioeconomic dynamics, dietary choices, food environments

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Data Analysis with Graphs

Relationship between Unhealthy Food Access and Poverty Rates				
Ratio of Bodega to Supermarkets				
Poverty Rate	High	Low	Med	Grand Total
High	66.70%	11.80%	36.40%	18.50%
Low		49%	45.50%	46.10%
Med	33.30%	39.21%	18.10%	35.40%
Grand Total	100%	100%	100%	100%

Ratio of bodegas to supermarkets

Low = 0 - 20

Med = 20.1 - 35

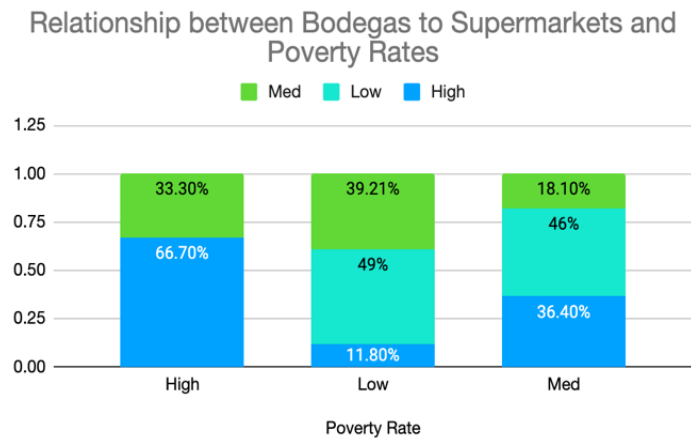
High = more than 35

Poverty Rate

Low = 0 - 13

Med = 13.1 - 25

High = over 25



According to data from the New York City Environment and Health Data Portal, there is a link between the ratio of bodegas to supermarkets and neighborhood poverty rates. The data categorizes the ratio of bodegas to supermarkets into three groups, with particular criteria for each. Poverty rates are similarly defined as low, medium, or high based on particular percentage ranges. Neighborhoods with a high ratio of bodegas to supermarkets, for example, have higher poverty rates, whereas neighborhoods with a low ratio of bodegas to supermarkets have lower poverty rates. According to the data, Bedford Stuyvesant (Bed-Stuy) has the highest ratio of

bodegas to supermarkets, at 57, with a high poverty rate of 33.2%. The Upper West Side has the lowest ratio of bodegas to supermarkets, at 3, with a low poverty rate of 13.7%. The correlation is supported by data, which shows that a high ratio of bodegas to supermarkets has a higher percentage of high poverty rates, whereas a low ratio of bodegas to supermarkets has a lower percentage of poverty rates.

The data additionally indicates that the classification of the ratio of bodegas to supermarkets and poverty rates corresponds to the New York City Environment and Health Data Portal's objectives. This alignment supports the categorization's accuracy as well as the relationship between the two variables. Overall, the data illustrates an established connection between unhealthy food access, reflected by the bodega-to-supermarket ratio, and neighborhood poverty rates. This connection emphasizes the significance of addressing imbalances in food accessibility and poverty to develop more equitable and healthier food environments for every community. The source used for this data and research is the New York City Environment and Health Data Portal, notably the Economic Conditions Data for NYC and Healthy Eating Data for NYC.

Introduction

The relationship between unhealthy food access and neighborhood poverty rates, as measured by the ratio of bodegas to supermarkets, is a major subject of research because it sheds light on the socioeconomic factors that influence individuals' dietary choices and health effects. The research focuses on the complex relationship between poverty and food environments in communities. Understanding how neighborhood poverty influences access to nutritious food options and dietary decisions is critical for addressing health inequities and developing effective strategies to promote healthier diets and reduce the risk of diet-related diseases. This

research project will explore the detailed connection between unhealthy food access, neighborhood poverty rates, and their impact on community health, providing an in-depth analysis of the socioeconomic dynamics impacting individuals' dietary choices and health outcomes. The data categorizes the ratio of bodegas to supermarkets into three categories, identifying specific criteria for each. Poverty rates are similarly defined as low, medium, or high based on specific percentage ranges.

Unhealthy Food Access

Research on unhealthy food access in neighborhoods often focuses on corner stores, such as bodegas and their impact on residents' dietary choices. Dannefer et al. (2012) explores into this topic, specifically addressing the advocacy for increase of healthy foods at local corner stores in New York City. Their research brings light to the importance of transforming corner stores into "Healthy Bodegas" to give communities access to nutritious goods. It is said that "Researchers have pointed to the potential for increasing consumption of healthy foods by making environmental changes in retail food outlets, including corner stores. In urban settings, these changes may be particularly relevant because corner stores are regularly frequented by neighborhood residents (Dannefer et al., 2012)." Establishing programs like these provides important insights into the details of unhealthy food availability, especially in low-income communities. It states, "A study in Philadelphia, Pennsylvania, revealed that children frequenting corner stores near their schools bought an average of 357 calories per visit and mostly purchased energy-dense products with little nutritional value such as chips, candy, and sugary drinks (Dannefer et al., 2012)." The data from such research aids in categorizing the ratio of bodegas to supermarkets, which contributes to a deeper knowledge of how these various food sources influence dietary choices and health outcomes. Researchers aim to encourage healthy diets by

replacing goods in bodegas, but residents' self-discipline and ability to adapt to healthier food purchases in communities will also be required. The research presented here emphasizes the need to tackle unhealthy food access in corner stores and its influence on community health, particularly in places where access to healthy food options is limited.

The Socioeconomic Dimensions of Food Insecurity

To understand the relationship between unhealthy food access and neighborhood poverty rates, it is necessary to concentrate on the larger socioeconomic impact of food insecurity. Miller (2022) addresses food insecurity in the United States in-depth, focusing on its effect on health. As mentioned in the source, the “Lack of access to healthy, safe, and affordable food, and to safe outdoor spaces, contributes to hunger, diet-related diseases, and health disparities,” according to the conference’s website (Miller, 2022).” Understanding the inequalities in access to healthful foods across different financial classes is critical for interpreting the link between poverty rates and dietary preferences. Researchers believe the COVID-19 pandemic disrupted access to food and meals for many individuals, including children, causing additional risks for health issues. Reports stated, “Nearly 30% of the world population — or 2.3 billion people — were food insecure in 2021, according to the United Nation’s report on the state of food security and nutrition, published in July 2022. That’s 350 million more people compared to before the COVID-19 pandemic began (Miller, 2022).” The COVID-19 pandemic not only contributed an increase in food insecurity, but it additionally contributed to poverty. During this time, many people lost their jobs or were laid off. Miller's research overview offers valuable insights into the multifaceted aspects of food insecurity, highlighting its implications for community health. By integrating this broader perspective, the research project aims to unravel the complex interplay between socioeconomic factors and unhealthy food access. A clear highlight summarizing those

affected is stated by “Rates of food insecurity were higher among certain groups, including single women with children, Black and Hispanic individuals, and households with income below the federal poverty line, which was \$27,479 annually for a family of four in 2021 (Miller, 2022).” This comprehensive understanding of the socioeconomic dimensions of food insecurity is essential for developing targeted interventions and policies aimed at addressing health disparities and promoting equitable access to healthy food options for all communities, regardless of income. By developing such an open eye, the research team hopes to shed light on the subtle link between socioeconomic factors and the availability of unhealthy food. Having full knowledge of the socioeconomic aspects of food insecurity is critical for establishing targeted policies and programs aimed at resolving inequality in health and increasing equitable access to healthy food resources for all communities.

The Connection Between Poverty, Food Access, and Health Issues

Poverty, access to healthy food, and health outcomes go beyond dietary choices and include illnesses such as diabetes. The research article published on NewsRx states, “We retrieved neighborhood-level aggregated data on poverty and access to healthy food from PolicyMap, a geographic information system. We retrieved individual-level data from a clinical research database. Access to healthy food was operationalized at the individual level by reported use of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (NewsRx, 2022).” This relationship is further investigated in NewsRx (2022), with a specific focus on diabetes self-management in women who received perinatal nurse visits to their homes. This study underscores the intricate relationships among neighborhood poverty, access to healthy food, and health conditions, shedding light on the broader health disparities established in poor communities. While conducting a research analysis, researchers said “We found no relationship

between neighborhood-level poverty and neighborhood-level access to healthy food with women's glycemic control (NewsRx, 2022),” another health concern. It was then followed by these statements, “However, at the individual level, use of the WIC program was associated with glycemic control ($p = .034$). Participants who reported not using this program were two times more likely to have poor glycemic control than those who did ($OR = 2.045$, 95% confidence interval [1.003, 2.045]) (NewsRx, 2022).” By incorporating such health-focused studies into the research project, it seeks to bridge the gap between unhealthy food access, neighborhood poverty rates, and their impact on community health, providing a holistic perspective on the socioeconomic dynamics influencing individuals' health outcomes. The content of this article focuses on the health of pregnant women, particularly those in low-income neighborhoods who may be unaware of services that can assist them. This research emphasizes the need to address the complex interplay between poverty, healthy food access, and health outcomes, particularly in the context of managing chronic conditions like diabetes.

Conclusion

In conclusion, the relationship between unhealthy food access and neighborhood poverty rates is a significant area of research that sheds light on the socioeconomic factors that influence dietary choices and health effects. Not only does this study focus on the relationship between food access and poverty rates, but it goes beyond in connection with health. Each researcher conducted a study that dived into unhealthy food access, poverty rates, and their impact on community health, developing the sources used to support my data. Understanding the complexity of these issues is essential for addressing health inequities and establishing successful strategies to promote healthier diets and lower the risk of diet-related issues. Furthermore, studies focusing on corner stores and their impact on dietary choices, the broader socioeconomic

impact of food insecurity, and the relationship between poverty, healthy food access, and health outcomes provide a thorough knowledge of this issue's multifaceted character. Such broad research is essential for developing targeted interventions and policies aimed at encouraging equitable access to healthy food options for all communities, regardless of income. The research I've conducted has clearly been confirmed and supported by the chosen sources included in this paper. With similar information in each source, all sources conclude that there is limited healthy food access in communities where individuals with low income reside. Based off my own data, it was evident that neighborhoods near me, including mine were in the medium-high category. From Church Avenue/Linden Boulevard to Church Avenue/East 98th Street, there are 7-8 corner stores/bodegas to 3 grocery stores (1 supermarket, 2 small local food markets). This information is essential to my knowledge, keeping me aware of the potential issues going on around me.

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