

**SUGARY DRINK CONSUMPTION VS NEIGHBORHOOD**

**OBESITY RATES FOR NYC**

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ECON 2505ID: Environmental Economics

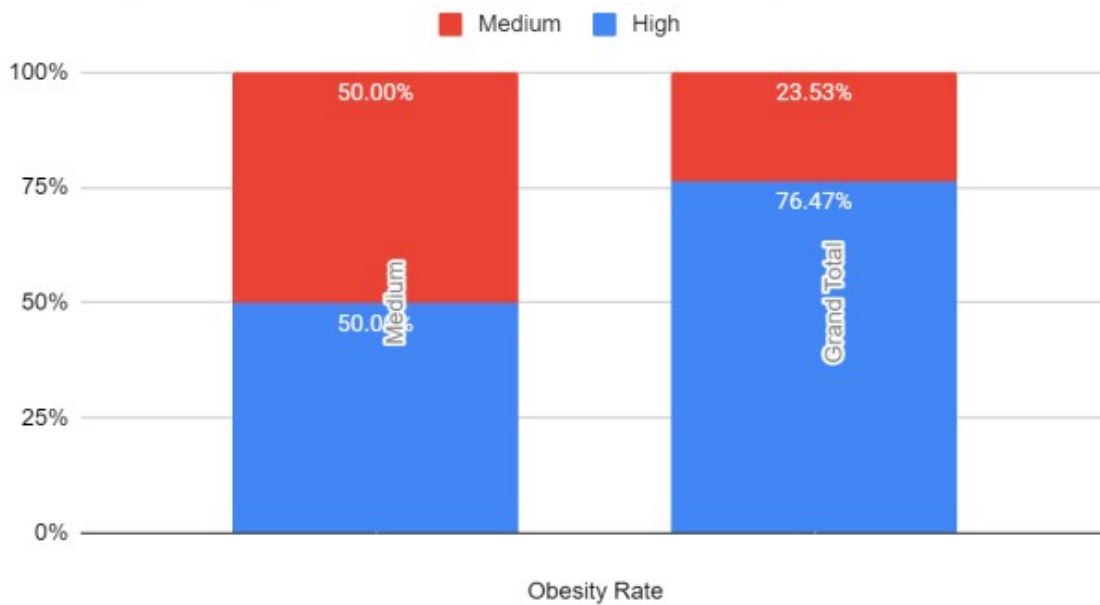
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Did you know that the United States of America is one of the fattest countries in the world? Obesity is ubiquitous in most American cities, particularly in New York City. As a New York City native, I am fully aware of all the food options that exist. Unfortunately, much of the food that is available is not healthy. Foods that contain high levels of sugar are popular amongst New Yorkers, especially drinks. Based on these two facts, it is possible that there is a relationship between consumption of sugary drinks and the obesity rates of New York City.

To identify a relationship between the consumption of sugary drinks and neighborhood obesity rates, both variables must be separated. The New York City Department of Health Environment and Health Data Portal analyzes the respective issues by district in each borough.

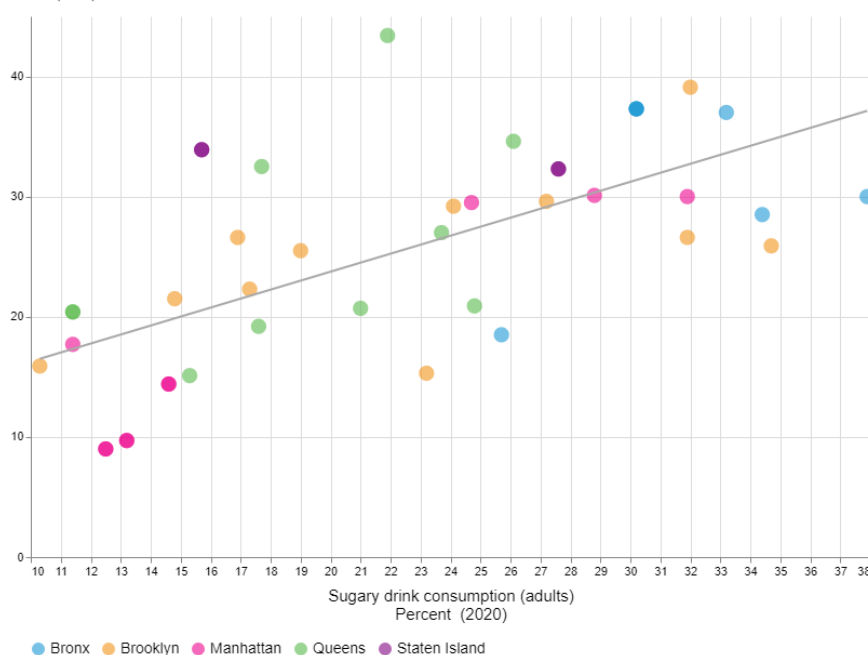
## obesity rate by rate of sugary drink consumption



Depending on the number of consumers per district, that district was ranked in three categories: low, medium, and high. The same rankings were classified in those districts when analyzing the obesity rate. Sugary drink consumption is typically higher in Manhattan, Downtown Brooklyn, West Queens, and South of the Bronx. Obese individuals were primarily found in districts that were closer to the inner city. After ranking the neighborhoods, the rankings were combined into a single chart that showed both the obesity rate and sweet drink consumption of all neighborhoods.

The figure below shows the trend between sugary drinking and obesity rates per neighborhood

Obesity (adults)  
Percent (2020)



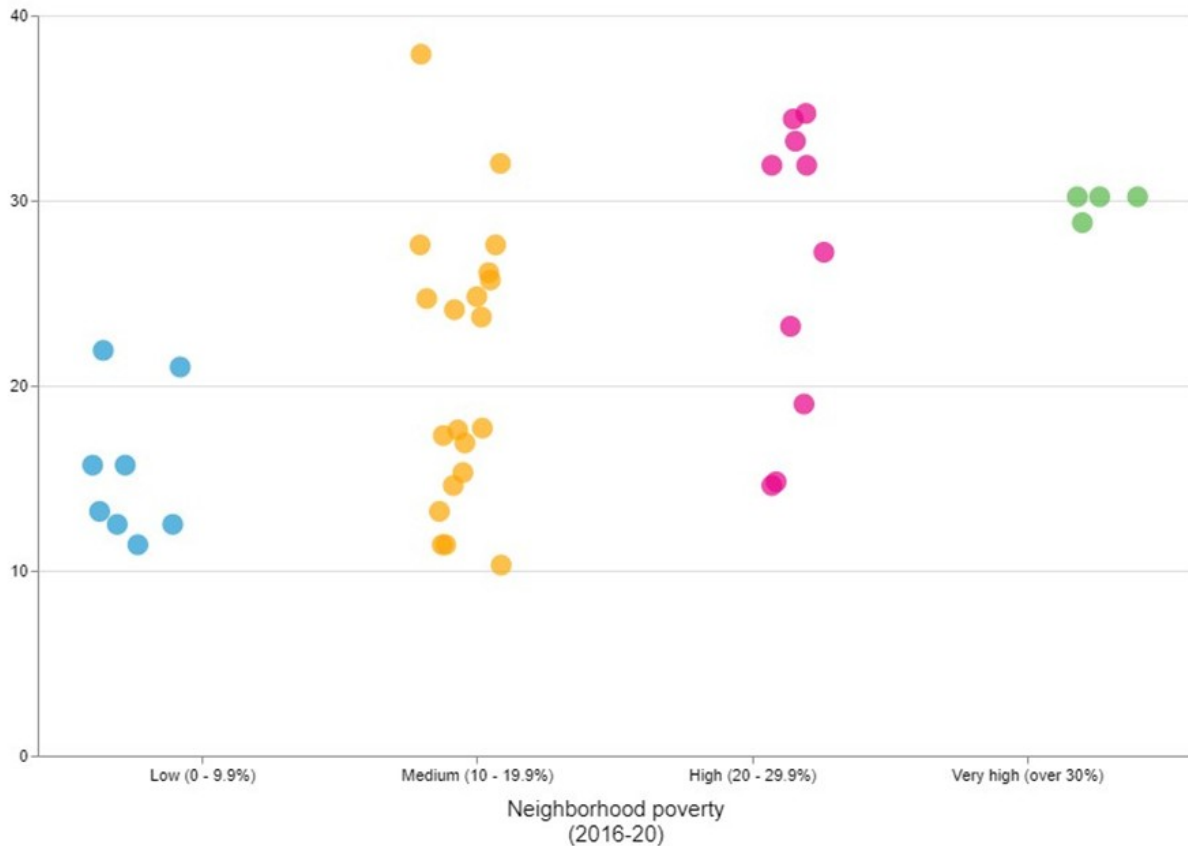
per borough. When the consumption is medium in an area, that same region is either medium or high in obese population. High drinking rates equate to a

high number of obese individuals. Therefore, there is a positive relationship between the people who are obese and those who consume sweetened beverages.

<i>COUNT of xvalues</i>	<i>Sugary Drink Consumption rate by Neighborhood</i>		
	High	Medium	Grand Total
High	19	7	26
Medium	1	7	8
<b>Grand Total</b>	<b>20</b>	<b>14</b>	<b>34</b>

Why is this trend happening? The Big Apple, so to speak, is notorious for its plethora of food sources across the city. Sugary drinks come in many forms such as juices, alcohol, sodas, milkshakes, and much more. Anything you are craving, you can find it across all the boroughs. About 800 pharmacies, corner stores, and grocery stores are shared in 12 zip codes, alone (Anjoian). The catch is that not all these foods are affordable. Those that are affordable are of lesser quality due to the amount of processing it takes to make them ready to eat. Beverages are an example of a quick food source that people gravitate to. Other beverages, like coffee or tea, can become sugary since a consumer can add the sugar on their own at no charge. According to a 2013 study, “Comparing Sugary Drinks in the Food Retail Environment in Six NYC Neighborhoods”, by Tamar Adjoian, Adjoian broke down how our environment links our

Sugary drink consumption (adults)  
Percent (2020)



behavior when making food decisions. Her study found that high consumption communities were selling sugar-filled liquids at low cost. In the scatter plot above, neighborhood poverty rates are measured against sugary drink consumption. The x-axis increases from left to right in how poor a neighborhood is while the y-axis measures the percentage of adults who drink the sugar. With the surge of low-income people comes a higher chance to consume glucose-filled drinks.

To build on this further, policies on controlling sugary drinks have had mixed results. In the 2012 article, “Soda Ban Explained”, by Casey Neistat, Neistat elaborates on Former Mayor Mike Bloomberg’s soda ban initiative called ‘Maximum Size for Sugary Drinks: Proposed Amendment of Article 81’. Bloomberg’s amendment had standards that would limit the amount of saccharine beverages drinks that are available across the city. Its core rule was to cap the

serving size to 16 ounces. However, this does not apply to mainstream chains such as 7-11 or Subway because they are regulated by their corporations. One may argue that the product is already prepared with sugar. However, some companies do not add sugar unless a customer articulates that request. An example of this is getting an 18-ounce iced coffee from Krispy Kreme. Servers do not put sugar in the coffee unless instructed to. Therefore, it is an exemption, even if the customer asks for five sugars mixed in. Other establishments have a counter in the dining area where customers can choose their sugar and the amount. Essentially, the amendment failed in banning sugary drinks. People can still walk from their local deli to a Burger King down the block and get a soda. What Bloomberg's plan proposed did bring awareness of human behavior in the city. We have an abundance of choices when it comes to our nutrition.

To add insult to injury, the Court of Appeals presiding over the "Soda Ban" not only struck down the bill but also built on the semi-immunity that corporations have when challenged about their products. In the article, "Limiting "Sugary Drinks" to Reduce Obesity — Who Decides?", by Wendy Mariner, Mariner elaborates on what went into the ruling of the "Portion Cap Rule". Judge Tingling, the Court of Appeals judge, contended that the bill was full of flaws that could not make in enforceable. One reason was that the Department of Health violated their powers by introducing legislation rather than working with the governing body. Even if the judge wanted to pass the bill, there were no laws in place that sustained the bill. Second reason was that the judge found many loopholes, mainly that the bill does not pertain to all food establishments in the city (previously stated in this report). Third, the Health Department relied on confidential patient data to support the bill by releasing medical information without patient consent. Tingling went a step further by advising the Department of Health by suggesting they make a tax hike on the sale of sugary beverages so that people will not buy them.

Judge Tingling was not the first judge in this position. In the 2004 documentary, “Super Size Me”, directed by Morgan Spurlock, Spurlock undergoes a month-long McDonalds binge where he consumes nothing except McDonalds every day. His aim was to test the effects that a fast-food diet can have on the human body. A component of his study was following the *Pelham V. McDonald’s Corporation* case in which two girls sued McDonald’s for causing their weight gain. Testimony from the case was based on the transparency of food corporations. Unfortunately, the plaintiffs lost the case because they could not connect their health problems back to what they ate at McDonalds. Between the Pelham verdict and rejection of the Bloomberg plan, it is not common for corporations to be held accountable. However, having transparency might be the intervention needed.

In the article, “Potential unintended consequences of graphic warning labels on sugary drinks: do they promote obesity stigma?”, by Hayward, Hayward conducted a study to observe how people respond to advertising on food labels. The study was to record the reactions of people towards a graphic warning label with a picture of an obese person on sugary drinks. Two groups of test subjects were shown the new label. One group was comprised of obese people who felt depressed at the sight of the graphic on the beverages. Another group was made up of healthy people who were revolted by the product because of that labeling change. Advertising the effects of a product seems to affect people’s choices when it comes to their diet.

All in all, there is a positive relationship between obesity rates and sugary drink consumption in New York City. Based on my findings, obesity does stem from drinking sugar-filled beverages. The reasons for this are that companies do not advertise the full effects of their goods and the goods are sold in poverty dense areas. Those companies, sadly, are not held



accountable. A solution would be for more food education so that consumers know what they are putting in their body. Hopefully, the general health of this city will get better.

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