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What Is The Relationship Between The Number Of Adults Reporting Sugary Drink Consumption And Rates Of Obesity By Neighborhood?

For many years, obesity has been a main topic within the United States. New York has been one of the cities where obesity rates are pretty high. What causes obesity? Well, many things such as food and activity. Unhealthy food can lead to being obese and not having enough exercise can have a big part of it. Along with food, there is another major cause for obesity, it is sugary drink consumption. Many prefer natural and healthy drinks, but on the other hand, many are consuming more sugary drinks such as, soda, fruit drinks, energy drinks and sweetened waters. Any source of liquid sugar can lead to high obesity rates and overall the rates have been increasing. The two variables studied for this research are adults reporting sugary drink consumption and rates of obesity by neighborhood. X variable being sugary drink consumption and Y variable being rates of obesity. I hypothesize that I will find a relationship between the two variables due to the fact that these two issues affect and influence among each other. Both variables have been collected from the New York City Health and Environment Data Portal. Based on the New York City Environment and Health Data Portal; Sugary Drink Consumption: High = more than 30%, med = 20.1 - 29.9%, low = less than 20%. Obesity Rate: High = more than 30%, med = 20.1 - 29.9%, low = less than 20%.

Obesity Rate (Y)	High	Low	Medium	Grand Total
High	57.1%	11.1%	27.3%	29.6%
Low		44.4%	18.2%	22.2%
Medium	42.9%	44.4%	54.5%	48.1%
Grand Total	100.0%	100.0%	100.0%	100.0%

Source: NYC Environment and Health Data Portal

Sugary Drink Consumption :

High = more than 30%

Med = 20.1 - 29.9%

Low = less than 20%

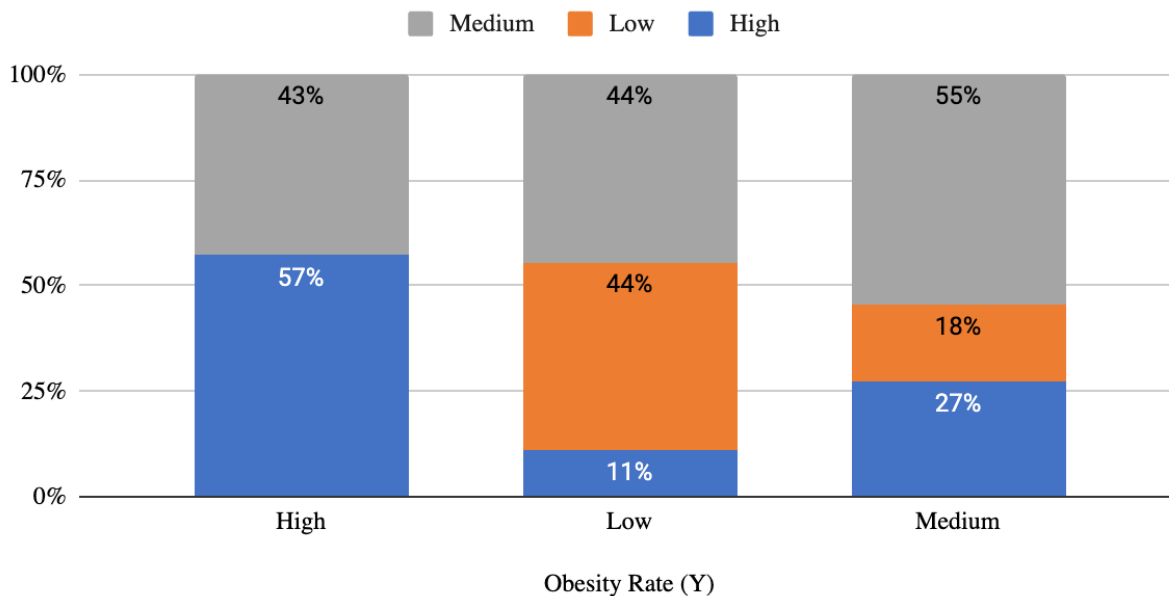
Rate of Obesity :

High = more than 30%

Med = 20.1 - 29.9%

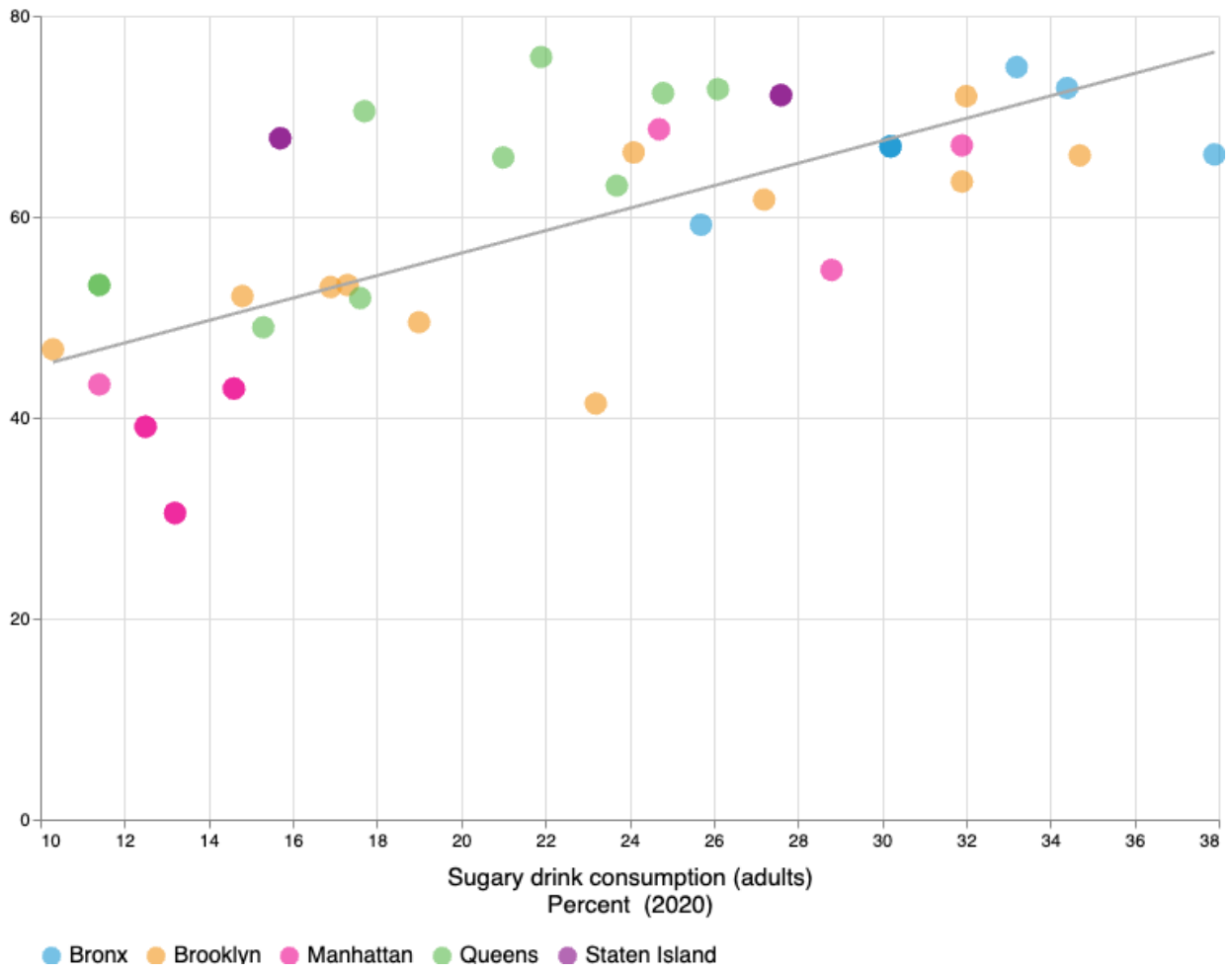
Low = less than 20%

Obesity Rate by Percentage of Adults Reporting Sugary Drink Consumption

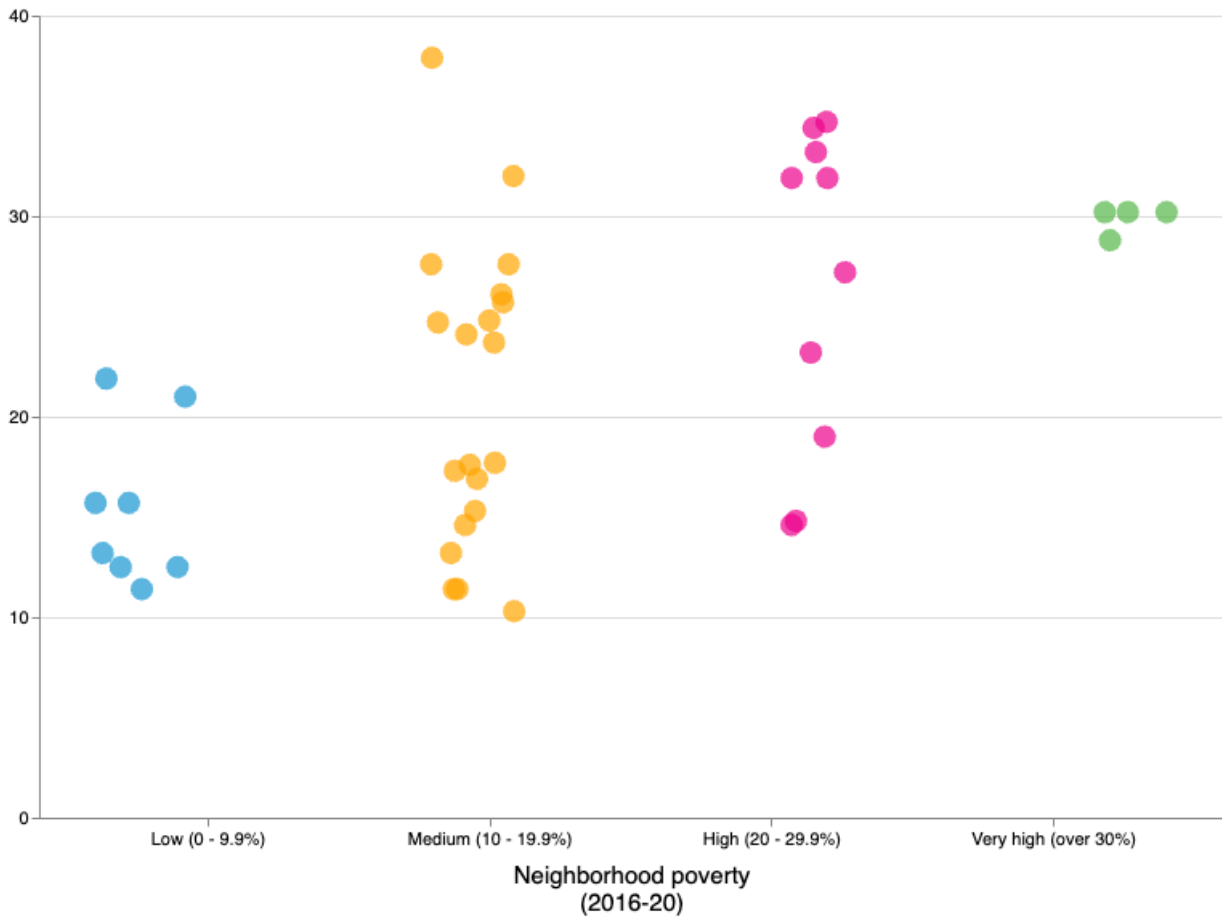


In neighborhoods where the percentage of sugary drink consumption is low, 44% have low obesity rates, 45% of those neighborhoods have medium obesity rates, and 11% have high obesity rates. In neighborhoods with a medium rate of sugary drink consumption, 18% had low obesity rates, 55% had a medium obesity rate, and 27% had a high obesity rate. However, where the rate of sugary drink consumption was high, 57% had a high obesity rate, 43% had medium obesity rates and there were not any low obesity rates. From this data, it can be concluded that there is a strong correlation between sugary drink consumption reported and obesity rates.

Overweight or obesity (adults) Percent (2020)



Sugary drink consumption (adults)
Percent (2020)



There is a positive relationship because as the percentage of neighborhood poverty increases, so the sugary drink consumption in adults increases as well. Also, as the percentage of sugary drink consumption increases, so does the obesity rate. There are disparities within sugary drink consumption by neighborhood poverty rate as each have different results. In low neighborhood poverty rates there is not a lot of sugary drink consumption, with 20% being the highest percentage of adults reporting sugary drink consumption. In medium neighborhood poverty rates there is a lot more sugary drink consumption, with almost 40% being the highest number of adults reporting sugary drink consumption. In high neighborhood poverty rates there is the highest rate of sugary drink consumption with 35% of adults reporting sugary drink

consumption. In very high neighborhood poverty rates there is about 30% of adults reporting sugary drink consumption.

There has been much research in regards to sugary drink consumption and obesity. Obesity can increase the risk of many different health issues such as heart disease, diabetes and joint problems and even cause cancer. The New York City Department of Health found that obesity rates have been increasing throughout time and they are finding different ways on how to prevent them. First, researching what causes obesity; such as lack of healthy stores around different areas. Obesity rates also vary across different ethnicities and groups. For example, obesity prevalence is highest among Black, American Indian or Alaska Native, and Hispanic adults and adults without a high school degree or equivalent (NYC Department of Health, n.d.). These groups experience persistent disparities in obesity caused by systemic and institutional barriers, such as lack of access to healthy, affordable foods and beverages, safe and convenient places for physical activity, and healthcare services. Particularly, the New York City Department of Health concluded that the environment where we live affects our food choices. Looking for different ways to stop obesity rates from growing higher is a great way to take action. More affordable healthy food choices will improve well-being and help reduce the risk of many health problems.

Though the environment we live in may influence our sugary consumption, another influence is our income. Nan Jiang et al., (2020) studied the trends in sugary drink consumption among adults in New York City. Their main findings were that both low- and middle-income status and living in a poor neighborhood were both predictors of sugary drink consumption. The increased availability of unhealthful foods and beverages in impoverished neighborhoods may

explain the finding of increased consumption among residents of these areas (Nan Jiang et al., 2020). For this reason, obesity rates are high among these neighborhoods in New York City and it keeps increasing for the lack of healthy choices to consume. Nan Jiang et al. (2020) concluded that sugary drinks remain the largest single source of added sugars in diets in the United States and by making adjustments to the environment to easily access healthy food and drink options could improve the diets of many residents.

The neighborhood social environment is critical in obesity prevention if change is to be applied. Shakira Suglia et al., (2016) studied that neighborhood poverty has been associated with obesity rates. Their main findings were that indeed a neighborhood plays a big role in obesity risk. Their findings were also about the obesity rates increasing based on neighborhoods. The neighborhood social environment, particularly constructs of social capital, collective efficacy, and crime, is associated with obesity among both adults and children (Shakira Suglia et al., 2016). In other words, there is a lack of activities, such as not having safe playgrounds where people can be active and poor environments that eventually cause obesity along with sugary consumption. Shakira Suglia et al., (2016) concluded that there should be more obesity prevention ideas and actions must be made to create a change.

To conclude, there is plenty of information showing the relationship between sugary drinks consumption and obesity rates. For instance, in the sugary drink consumption and obesity data, it appeared there was a direct relationship between high rates of sugary drinks consumption and high rates of obesity rate. These findings were similar to mine as they all concluded there is in fact a relationship between sugar consumption and obesity. Some recommendations that I would suggest to improve would have to be balancing our diet and engaging more in physical

activities. As for the city, they should make sugary drinks more expensive, or charge a fee, and as a result there would be less people buying these drinks. For every sugary drink, there should be warning labels along with the nutrition label being a bigger size. There should also be more ads that talk about the danger of consuming too many unhealthy drinks. These recommendations should help a little and hopefully more people consider healthy drinks from now on.

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