

What is the relationship between the number of adults reporting sugary drink consumption and rates of obesity by neighborhood?

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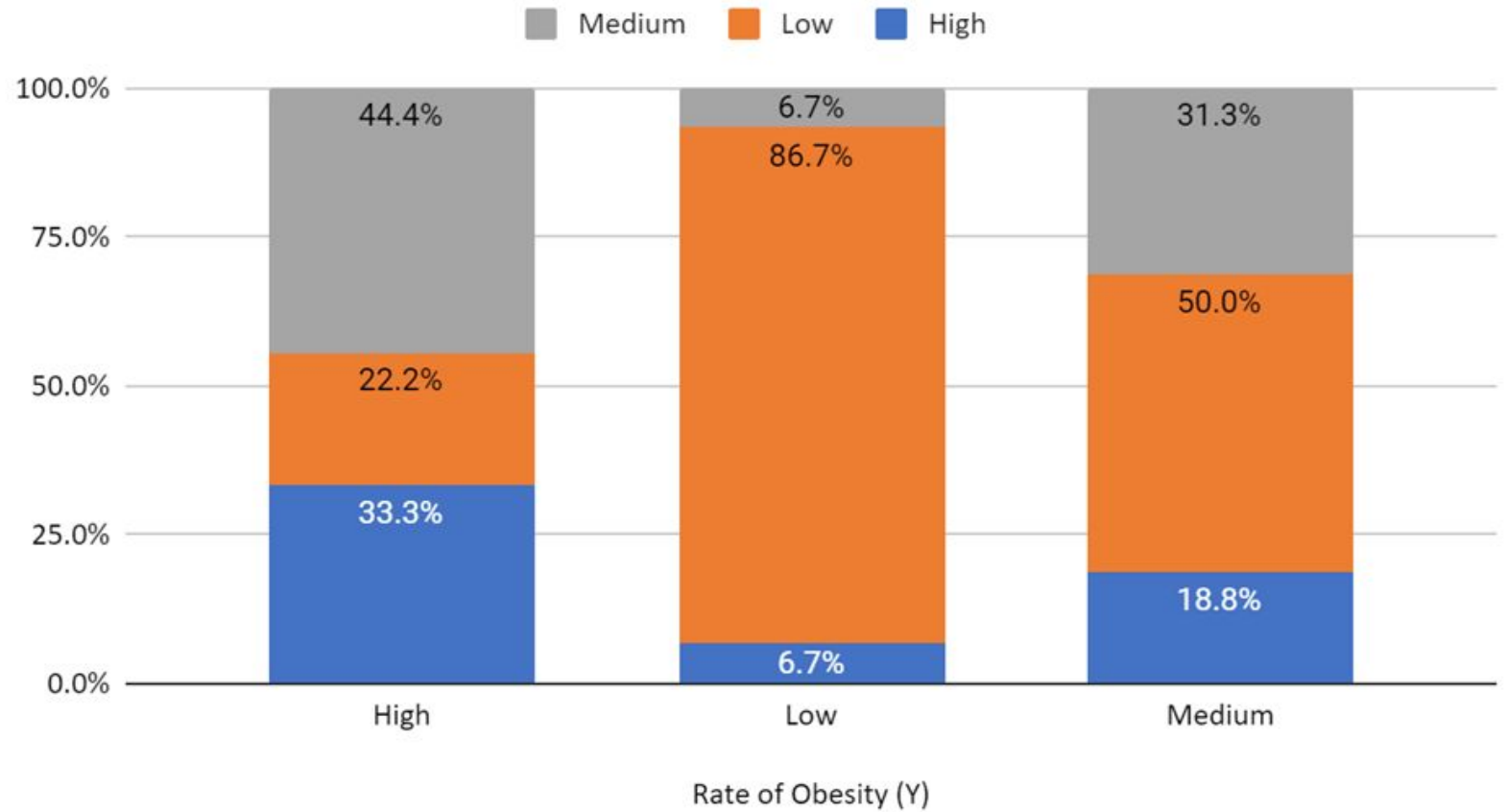
Introduction

The research investigates the connection between sugary drink consumption and obesity rates in adults across different neighborhoods in New York City. Motivated by the rising concern about obesity, the study utilizes data from the NYC Health and Environment Data Portal to analyze sugary drink consumption and obesity rates in various urban areas. The hypothesis suggests a positive correlation between higher sugary drink intake and increased obesity rates. The goal is to provide valuable insights into the dynamics of these variables and enhance understanding of the factors influencing obesity prevalence in urban settings.

Neighborhood Obesity Rates by the Rate of Sugary Drink Consumption:

Rate of Obesity (Y)	High	Low	Medium	Grand Total
High	33.3%	6.7%	18.8%	17.5%
Low	22.2%	86.7%	50.0%	57.5%
Medium	44.4%	6.7%	31.3%	25.0%
Grand Total	100.0%	100.0%	100.0%	100.0%

Rate of Obesity by the Percentage of Adults Reporting Sugary Drink Consumption



Source: NYC Health and Environment Data Portal

Note:

High = more than 30%, Med = 20.1-30%, Low = less than 20% for sugary drink consumption;

High = more than 33%, Med = 27.1-33%, Low = less than 27% for obesity rate.

Data Analysis

The data presented in the table indicates a clear relationship between sugary drink consumption and obesity rates in different neighborhoods. As sugary drink consumption increases, there is a corresponding increase in obesity rates. Specifically, neighborhoods with low sugary drink consumption tend to have low obesity rates, while those with medium consumption levels show a mix of medium and low obesity rates. In contrast, neighborhoods with high sugary drink consumption exhibit higher obesity rates, with a significant portion experiencing high obesity rates.

The percentages suggest a strong positive correlation between sugary drink consumption and obesity. While correlation does not imply causation, the findings provide robust evidence that higher sugary drink consumption is associated with elevated obesity rates. The link is plausible, considering that sugary drinks contribute substantially to added sugars and excessive calorie intake, which are known contributors to weight gain and obesity.

Discussion

Grummon and Golden (2021):

- Investigation: The authors examined the potential impact of implementing minimum price laws or taxes on sugary drinks in New York City.
- Findings: Using a microsimulation model, they projected that an 8-cent-per-ounce price floor would reduce average sugary drink consumption by 16.5 calories per day and obesity prevalence by 0.86 percentage points. Similar reductions were observed for a 10-cent-per-ounce floor and sugary drink taxes of 1 or 2 cents per ounce.
- Conclusions: Pricing policies, such as minimum price laws, could be effective in reducing sugary drink consumption and obesity in New York City.

Elfassy et al. (2018):

- Investigation: The study focused on the relationship between sugary drink consumption and obesity rates, examining trends in New York City from 2007 to 2015.
- Findings: Sugary drink consumption was linked to weight gain, diabetes, and health issues. While overall consumption declined, disparities persisted across race/ethnicity, income, and neighborhood characteristics.
- Conclusions: Targeted interventions are necessary to address these disparities and reduce sugary drink consumption and obesity.

Ruff et al. (2014):

- Investigation: The study aimed to assess the relationship between calorie intake, sugary drink consumption, and obesity among New York City adults.
- Findings: Sugary drinks accounted for 18.5% of total sugar intake among consumers and were strongly associated with obesity, with a 62% increase in the odds of obesity for each additional 10-ounce serving consumed per day.
- Conclusions: The findings underscore the significant role of sugary drinks in promoting obesity, emphasizing the need for interventions to curb sugary drink consumption.

In conclusion, a multi-faceted approach is recommended, including the implementation of minimum price laws, targeted interventions to address disparities, and public health campaigns to raise awareness about the health risks associated with sugary drink consumption. Additionally, ongoing monitoring and research are essential to assess the effectiveness of these interventions and refine strategies to combat the persistent issue of obesity linked to sugary drinks.

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