

Daily Consumption of Fruits And/or Vegetables per Day Is Lower among Adults Age 18+ in Higher Poverty Neighborhoods in NYC, 2019

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Access to healthy yet affordable food options is a social determinant of health that impacts low-income communities and other areas that are considered “food deserts.” Food deserts are areas that have limited access to nutritious and affordable food that are often impacted by economic and structural barriers.¹ According to the Food Empowerment Project, “an estimated 750,000 New York City residents live in food deserts, while about 3 million NYC residents live in places where stores that sell fresh produce are few or far away.”² By having the population of interest include different neighborhood poverty groups in NYC, ranging from high poverty to low poverty, we can see if food deserts potentially exist in some of these groups without having an explicit variable for it. For each neighborhood poverty group in NYC that will be evaluated, we plan to look at the daily consumption of fruits and/or vegetables among adults ages 18+. Our variables allow us to see if adults consume 0 servings, 1-4 servings, or 5+ servings of fruits and/or vegetables per day in various NYC neighborhoods with different poverty levels. The poverty levels of each neighborhood were less than 10%, 10-20%, 20-30%, and 30-100% of the population below the poverty line. Using data from the 2019 NYC Community Health Survey, this data brief hopes to examine the prevalence of food deserts in NYC by looking at various social determinants of health such as poverty and lack of access to fresh foods. More specifically, we will evaluate the presence of an association between the residential situations and poverty conditions of adults and their daily consumption of fruits and/or vegetables.

Daily Consumption of Fruit/Vegetable varies by Biological Sex, Age, and Presence of Children in Household

- Women consumed at least 1 serving of fruits and vegetables more than men (52% vs. 39%).
- Individuals 25-44 years old consumed the most fruits and vegetables (32%), similar to 45-64 year old respondents (30%), but higher than those 65+ (21%) and between 18-24 years old (6%).
- Individuals in households with children consumed less fruits and vegetables than those without children, and 1 and 4 servings (10% vs 49%) and in meeting the daily need (5% vs 26%).

Racial/Ethnic Demographic Disparities Exist across Different NYC Neighborhoods

- Residency in low poverty neighborhoods was higher among White New Yorkers (60%) compared to other race/ethnicity groups. Very high poverty neighborhoods disproportionately consisted of Hispanic (56%) and Black (31%) residents. The CHS ethnic/racial groups are exclusive, so Afro-Latinx people must choose only one group.

Daily Servings of Fruit and Vegetables/Neighborhood Poverty Level	Low Poverty	Medium Poverty	High Poverty	Very High Poverty
0 servings	103 (7.0%)	314 (8.7%)	225 (10.2%)	182 (14.2%)
1 to 4 servings	1072 (73.3%)	2751 (76.0%)	1681 (76.4%)	966 (75.5%)
5 or more servings	288 (19.7%)	557 (15.4%)	293 (13.3%)	132 (10.3%)
Total	1463 (100.0%)	3622 (100.0%)	2199 (100.0%)	1280 (100.0%)

Definitions:

Federal Poverty Level (FPL): a measure of annual household income that takes into consideration the number of individuals living in it. Falling below the FPL would determine eligibility for programs and benefits. The CHS use of the FPL threshold may mask the high costs of living in NYC.

Neighborhood poverty (based on ZIP code): percentage of the population living below the Federal Poverty Line (FPL). The Community Health Survey creates 4 categories on neighborhood income: low poverty (<10% of population below FPL); medium poverty (10 to 20% below FPL); high poverty (20 to 30% below FPL); very high poverty (30 to 100% below FPL).

Food deserts: geographic areas, often in urban neighborhoods, where residents are unable to access affordable, healthy food options. The options are often restricted or nonexistent due to a lack of grocery stores in a traveling radius.

Suggested daily serving: based on a 2,000 kcal diet, the suggested daily serving includes at least 2 cups of fruit and 2.5 cups of vegetables, and varies across each food.³

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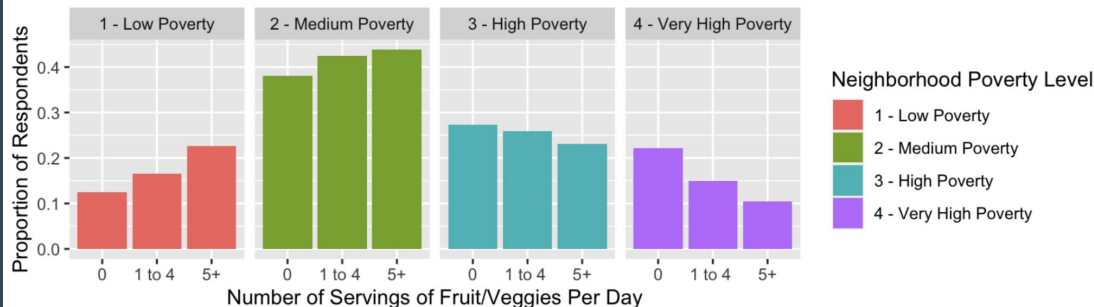
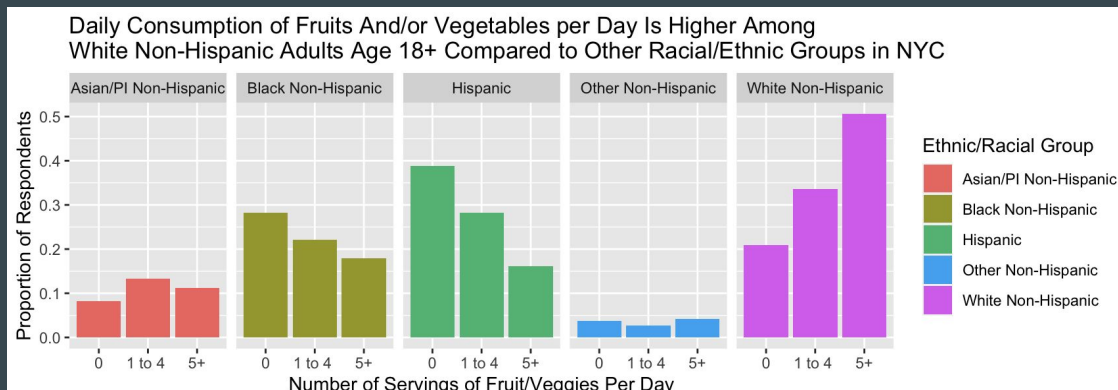


Figure 1 (left). An unweighted analysis of CHS 2019 data showed that for high and very high poverty neighborhoods, the proportion of respondents within each daily fruit/vegetable consumption category decreased as the number of fruit/vegetable servings increased. This contrasted with low and medium poverty neighborhoods which were increasingly represented as servings increased.

Figure 2 (right). An unweighted analysis of CHS 2019 data showed that the proportion of White Non-Hispanic adults increased as daily servings of fruit and/or vegetables increased, whereas Hispanic and Black Non-Hispanic groups were decreasingly represented.



Respondents in high or very high poverty neighborhoods consumed 0 servings of fruit/vegetables at higher rates*

- Neighborhoods with very high poverty have the highest proportion of respondents (14%) that consumed 0 servings of fruit or vegetables per day.
- High poverty neighborhoods have 10% of respondents that consumed 0 servings of fruit or vegetables per day.
- Compared with medium (9%) and low poverty neighborhoods (7%), a smaller proportion of residents in these neighborhoods consumed 0 servings of fruit/vegetables per day.

The majority of respondents in neighborhoods of all poverty levels consumed 1-4 servings of fruit/vegetables per day

- About 75% of respondents in neighborhoods across poverty levels consume 1-4 servings of fruit/vegetables a day.
- 1-4 servings is a wide range (1-8 cups), so this does not tell us much about variations of consumption within this subsection, which is a drawback of the survey data.

Respondents in low poverty neighborhoods are much more likely to consumed a “healthy” amount of fruits and vegetables

- According to the USDA definition, the suggested daily fruit/vegetable intake for a 2000 kcal diet is 2.5 cups of vegetables per day and 2 cups of fruit, well over 5 servings.
- Our data showed that in low poverty neighborhoods, 20% of respondents consumed over 5 servings of fruits/vegetables daily which is much higher than the 10% of respondents that live in very high poverty areas.
- High poverty (13%) and medium poverty (15%) have similar proportions of respondents who consumed “adequate” amounts of fruits/vegetable, reflecting an overall underconsumption of fruits and vegetables.

* All percentage values are sourced from the table on Page 1

Implications:

The disparity of fruit and vegetable consumption across poverty levels is the most apparent at both extremes: those that consumed 0 servings and 5+ servings daily. The proportionally higher levels of residents in very poor neighborhoods that consumed 0 servings of fruits and vegetables a day likely reflect the prevalence of food deserts previously outlined. This lack of access to affordable fruits and vegetables, which are essential to a healthy diet, directly contribute to inequitable health outcomes. Although the data reflects an overall underconsumption of fruits and vegetables, the specific inequities faced by minoritized groups must be addressed for co-liberation. The inequity is also apparent when looking at differences across racial groups, revealing ties to structural racism, gentrification, and a history of disinvestment in working class communities. This disparity must be addressed in order to move towards health equity and this requires increased investment into affordable healthy food options in these communities.

REFERENCES

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² Food Empowerment Project. “Food Deserts*.” Food Empowerment Project, 9 Dec. 2021, foodispower.org/access-health/food-deserts/#:%7E:text=New%20York%20City%20%E2%80%93%20An%20estimated,are%20few%20or%20far%20away.

³ U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015 – 2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <https://health.gov/our-work/food-nutrition/previous-dietary-guidelines/2015>.