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Cognitive Difficulty in the Five Boroughs of New York City, 2000-2019

Marjorine Henriquez-Castillo

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Cognitive Difficulty in the Five Boroughs of New York City, 2000-2019

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LATINO DATA PROJECT

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The Center for Latin American, Caribbean and Latino Studies is a research institute that works for the advancement of the study of Latin America, the Caribbean, and Latinos in the United States in the doctoral programs at the CUNY Graduate Center. One of its major priorities is to provide funding and research opportunities to Latino students at the Ph.D. level.

The Center established and helps administer an interdisciplinary specialization in Latin American, Caribbean and Latino Studies in the Masters of Arts in Liberal Studies program.

The Latino Data Project was developed with the goal of making information available on the dynamically growing Latino population of the United States and especially New York City through the analysis of extant data available from a variety of sources such as the U.S. Census Bureau, the National Institute for Health, the Bureau of Labor Statistics, and state and local-level data sources.

All Latino Data Project reports are available at <http://clacls.gc.cuny.edu>

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Executive Summary

This report uses the U.S. Census Bureau data¹ between 2000 to 2019 to examine the percentage of people with cognitive difficulty reported in 2000, 2010, and 2019 among residents in New York City. Specifically, residents from the five boroughs in New York City—Bronx, Brooklyn, Manhattan, Queens, and Staten Island—were included in this analysis. Cognitive difficulty is defined as experiencing difficulty concentrating, remembering, or making a decision due to a physical, mental, or emotional condition.

The report details the percentage of the population with cognitive difficulty and sociodemographic trends across the five boroughs. It specifically examines differences in cognitive difficulty by borough and sex, age, household income (adjusted for inflation to 2019 Dollars), nativity status, race/ethnicity, and among the five largest Latino national subgroups² in New York City.³

The percentage of people with cognitive difficulty remained relatively stable in New York City at around 5% between 2000 and 2019. Although this percentage in 2000 was similar across the five boroughs, by 2019, Manhattan had the highest percentage of people with cognitive difficulty (5.9%). In Staten Island, only 2.1% of the population reported cognitive difficulty—the lowest across all timepoints.

Overall levels of cognitive difficulty were similar for males and females, but differences were observed by borough. Males in most boroughs had a slightly higher percentage of cognitive difficulty when compared to females across the three timepoints. The exception was Queens, where slightly more women reported cognitive difficulty than men. The percentage of males reporting cognitive difficulty substantially increased from 2000 to 2019 from 5.4% to 8.9% and more than halved among females from 5.4% to 2.3% in Manhattan.

Younger people reported less cognitive difficulty when compared to older age groups—between 2000 and 2019. Rates of cognitive difficulty decreased in general among people 59 years old and younger but increased among those 60 years old and older. A comparison by age and borough was not included in the report due to unreliable estimates of unweighted data.

Similar percentages of the population with cognitive difficulty were found among all household income brackets in the period analyzed in this report. Most household income groups reported a cognitive difficulty rate of around 5% in 2000, which slightly increased in 2010, and then decreased again by 2019. Differences in cognitive difficulty by household income and borough were also not included in this report because of unreliable estimates of unweighted data.

¹ This study uses the American Community Survey PUMS (Public Use Microdata Series) data for all years considered here released by the Census Bureau and reorganized for public use by the Minnesota Population Center, University of Minnesota, IPUMSusa, (<https://usa.ipums.org/usa/>). See Public Use Microdata Series Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek. IPUMS USA: Version 10.0 [2000 2010 2019]. Minneapolis, MN: IPUMS, 2020. <https://doi.org/10.18128/D010.V10.0>

² The five largest Latino subgroups in the NYC Metro Area are Mexicans, Puerto Ricans, Dominicans, Colombians, and Ecuadorians. For technical details of how the Latino subgroups are defined contact the CLACLS directly.

³ For this report, results are limited to overall trends only in cognitive difficulty rates by age, household income, and the five largest Latino groups in the city. This is due to the small sample size and unreliable estimates in the unweighted data by borough for the 2019 data.

Foreign-born individuals reported slightly higher cognitive difficulty percentages when compared to domestic-born people and the rates remained relatively stable between 2000 and 2019. Few differences in cognitive difficulty rates were observed among people from the Bronx, Brooklyn, and Queens. In Manhattan, the percentage of foreign-born people reporting cognitive difficulty almost doubled from 5.4% in 2000 to 9.7% in 2019, which was the highest percentage across all timepoints. In Staten Island, the rates between 2000 and 2019 almost halved from 5.3% to 2.0% among domestic-born people and from 5.8% to 2.3% among the foreign born.

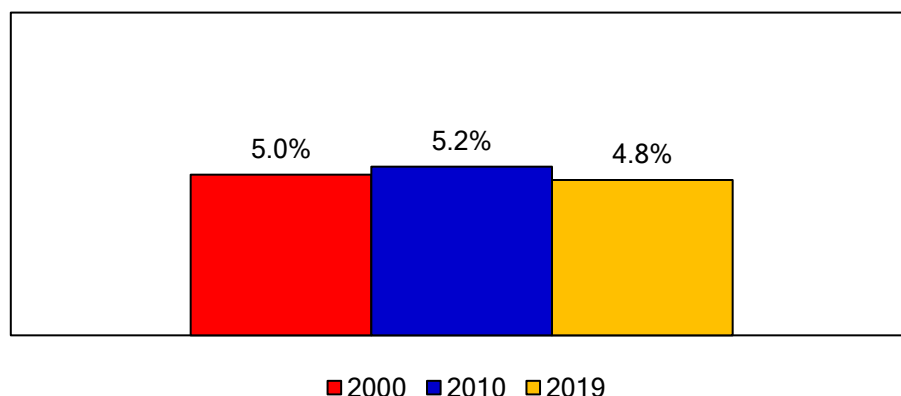
Although similar cognitive difficulty rates among racial/ethnic groups were observed, there were differences in cognitive difficulty across the five boroughs. Overall, Non-Hispanic whites reported a slightly higher percentage of cognitive difficulty, but by 2019, Asians reported the highest at 5.3%, and non-Hispanic blacks the lowest at 4.5%. By 2019, Non-Hispanic whites and Asians had the highest cognitive difficulty in the Bronx (5.4%), non-Hispanic blacks in Brooklyn (6.5% by 2019), Latinos in Manhattan (13.3% in 2019), and Asians in Queens (5.0%) and Staten Island (6.3%).

Significant differences were observed among the five largest Latino subgroups in New York City. Cognitive difficulty among Puerto Ricans consistently increased across the three timepoints, but it remained relatively stable among Mexicans and Colombians, while decreasing among Ecuadorians and Dominicans. By 2019, rates of cognitive difficulty among Puerto Ricans increased to the highest overall at 8.5%, whereas Dominicans (1.7%) and Ecuadorians (0.5%) decreased to the lowest percentages of cognitive difficulty across all timepoints. Analysis of the five largest Latino subgroups by borough was not included in this report due to sampling issues.

Overall Cognitive Difficulty Trends by Borough

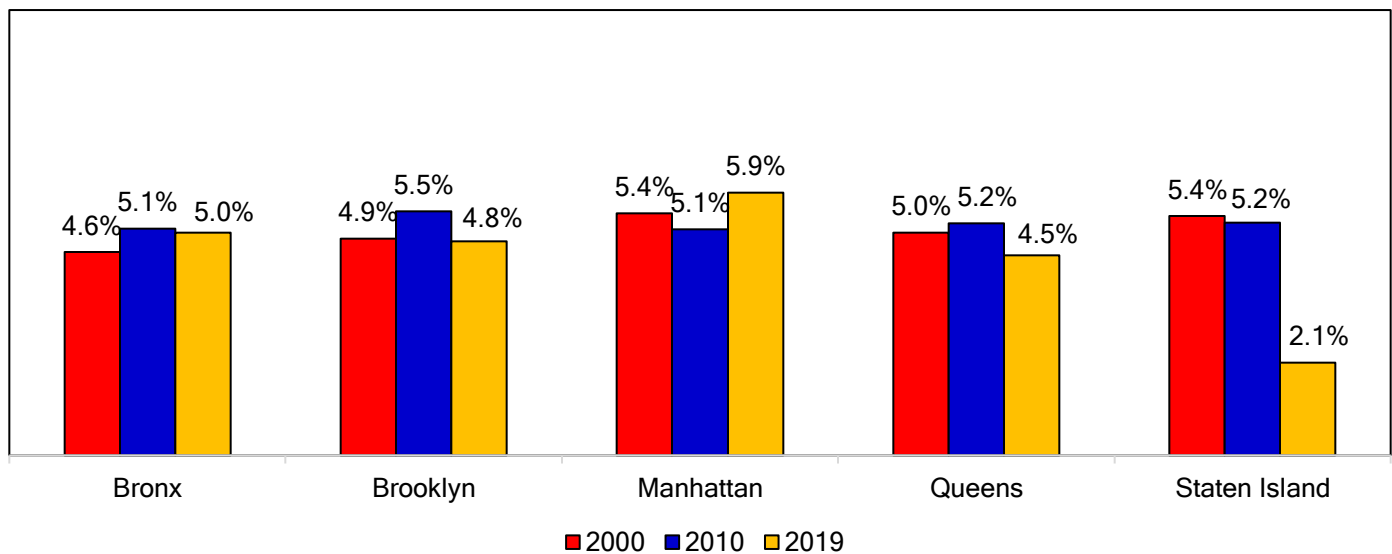
The percentage of people with cognitive difficulty in New York City remained relatively stable at around 5% between 2000 and 2019. From 2000 to 2010 there was only a 0.2% increase (from 5.0% to 5.2%). However, reported cognitive difficulty decreased to the lowest percentage out of the three timepoints to 4.8% in 2019. (See Figure 1).

Figure 1
Percentage of the Population with Cognitive Difficulty
New York City, 2000 - 2019



Although the overall cognitive difficulty percentage was about 5%, there were notable differences across the five boroughs in New York City. In 2000, Manhattan and Staten Island had the highest level of cognitive difficulty (5.4%) when compared to the Bronx (4.6%), Brooklyn (4.9%), and Queens (5.0%). Mirroring the general trend by 2010, there was an increase in the percentage of people with cognitive difficulty in the Bronx (5.1%), Brooklyn (5.5%), and Queens (5.2%), but there was a decrease in rates in Manhattan (5.1%) and Staten Island (4.5%). Between 2010 and 2019, cognitive difficulty rates decreased across all boroughs except for Manhattan, which increased by 0.8 percentage points from 5.1% to 5.9%. There was a substantial decrease—more than half—in Staten Island from 5.2% in 2010 to 2.1% in 2019. (See Figure 2).

Figure 2
Percentage of the Population with Cognitive Difficulty by Borough
New York City, 2000 - 2019



Sex

A slightly higher percentage of the population with cognitive difficulty was found among males (5.1%) than females (4.9%) in 2000. Between 2000 and 2010, cognitive difficulty rates among men remained the same, but they increased by 0.5 percentage points among women—from 4.9% to 5.4%. By 2019, the percentage of men with cognitive difficulty marginally decreased from 5.1% in 2010 to 5.0% and from 5.4% to 4.7% among women. (See Figure 3).

Over the period studied in this report, sex differences in cognitive difficulty percentages emerged by borough. Overall, males in all boroughs, except for Queens, had a slightly higher percentage of cognitive difficulty when compared to females across the three timepoints. In the Bronx, rates of cognitive difficulty slightly increased between 2000 and 2019 from 4.7% to 5.2% among males, and from 4.4% to 4.8% among females. Opposite trends in cognitive difficulty rates by sex were found in Brooklyn, with males reporting a marginal increased

percentage in cognitive difficulty from 5.0% in 2000 to 5.1% in 2019, but females slightly declined from 4.7% to 4.5%.

The largest differences by sex in cognitive difficult percentage were observed in Manhattan. The rates among males in this borough soared from 5.4% to 8.9%, but they more than halved among females (5.4% to 2.3%). In contrast to the other boroughs, women had slightly higher percentages of cognitive difficulty than men in 2010 and 2019. Although females reported a higher cognitive difficulty rate when compared to males, both female and male rates decreased between 2000 and 2019, from 5.0% in 2000 to 4.4% among males and 4.6% among females by 2019. Similarly, the percentage of cognitive difficulty among both males and females significantly decreased between 2000 and 2019 in Staten Island. Males decreased by 3.8% percentage points from 6.1% to 2.3%, and females by 2.7% percentage points from 4.6% to 1.9%—the lowest of all timepoints. (See Figure 4).

Figure 3
Percentage of the Population with Cognitive Difficulty by Sex
New York City, 2000 - 2019

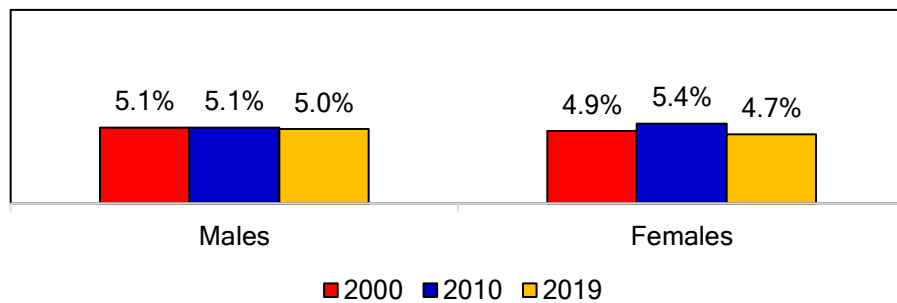
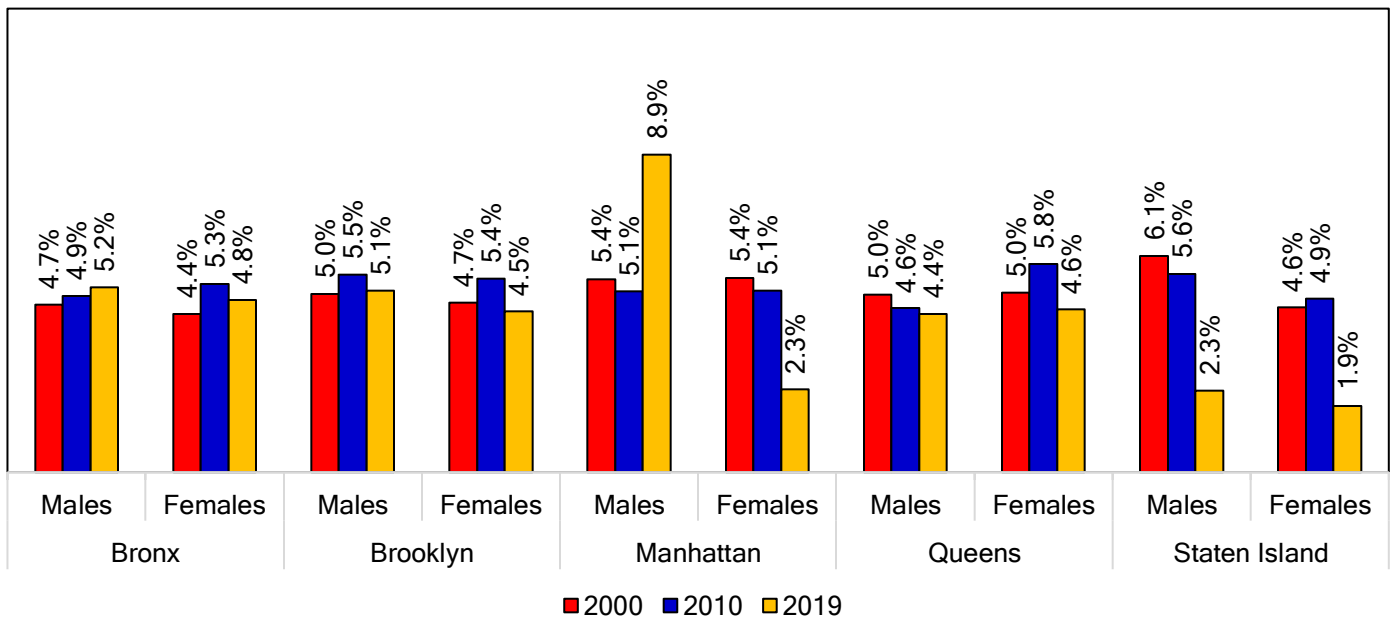


Figure 4
Percentage of the Population with Cognitive Difficulty by Borough and Sex
New York City, 2000 - 2019



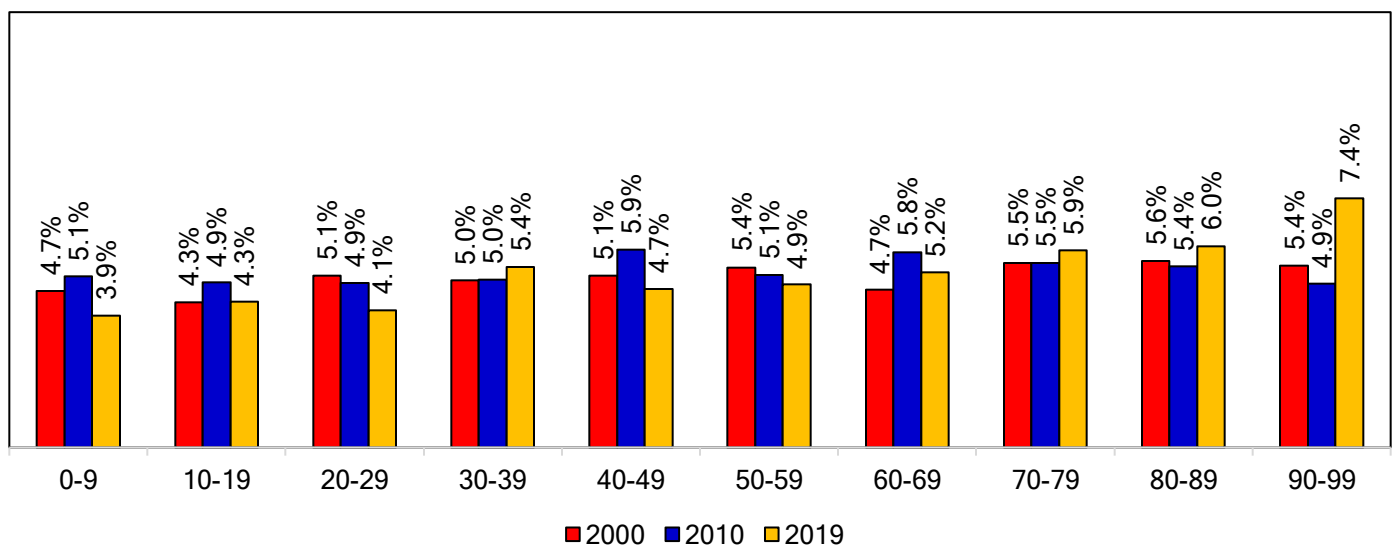
Age

The percentage of the population with cognitive difficulty was higher among older people when compared to the younger age groups. Between 2000 and 2019, cognitive difficulty decreased for most age groups under 60 years old but increased for people 60 years and older. In 2000, 80-89-year-olds had the highest percentage of the population with cognitive difficulty (5.6%), while 10-19-year-olds had the lowest (4.3%). (See figure 5).⁴

Between 2000 and 2010, the percentage of people in the city experiencing cognitive difficulty remained relatively stable except among 40-49- and 60–69-year-olds, whose percentage of cognitive difficulty increased from 5.1% to 5.9% and 4.7% to 5.8%, respectively. In 2010, 40-49-year-olds (5.9%) reported the highest percentage of cognitive difficulty overall and people between the ages of 10-29 and 90-99 years old reported the lowest percentage of cognitive difficulty at 4.9%.

Between 2010 and 2019, cognitive difficulty rates among most age groups under 60 years old decreased. The percentage of people experiencing cognitive difficulty increased among 30-39-year-olds and people over 70 years old. The most significant increase was among people in the 90-99 age bracket, which went up 2.5 percentage points from 4.9% in 2010 to 7.4% in 2019. People in this age group had the highest rate of cognitive difficulty of the whole sample, and children between 0-9 years old had the lowest (3.9%) in 2019.

Figure 5
Percentage of the Population with Cognitive Difficulty by Age
New York City, 2000 - 2019

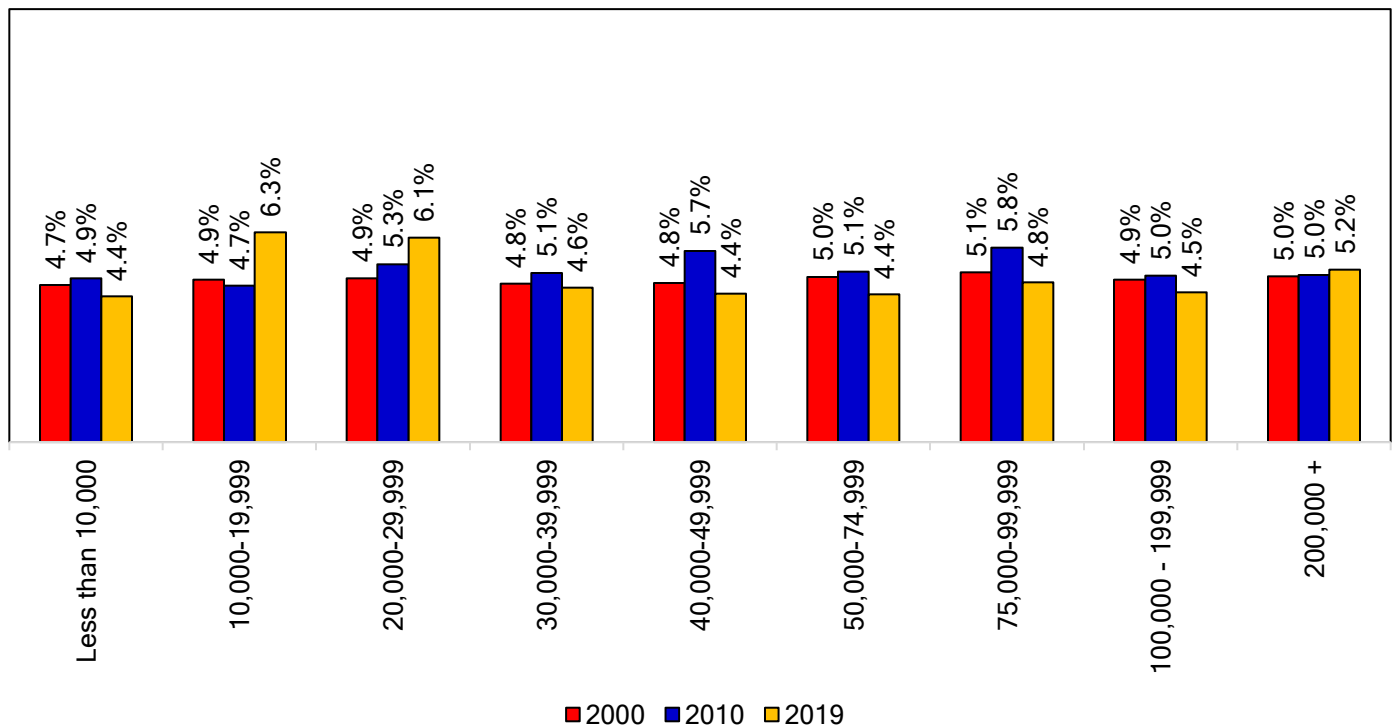


⁴ Because of a likely sampling issue, this section does not include cognitive difficulty rates by age and borough.

Household Income

Overall, the percentage of the population with cognitive difficulty was similar across all household income brackets between 2000 and 2019. Again, like the general trend, most household income groups reported a cognitive difficulty rate of around 5% in 2000, which slightly increased in 2010, and then decreased again by 2019. The percentage of people whose household income was between \$10,000-29,999 with cognitive difficulty increased steadily between 2000 and 2019, going from 4.9% to 6.1%. Among people whose household income was between \$10,000-19,999, there was a moderate increase from 4.9% in 2000 to 6.3% in 2019, and from 4.9% in 2000 to 6.1% in 2019 among those with a household income between \$20,000-29,999. (See Figure 6).⁵

Figure 6
Percentage of the Population with Cognitive Difficulty by Household Income
New York City, 2000 - 2019
 (Adjusted for Inflation to 2019 Dollars)

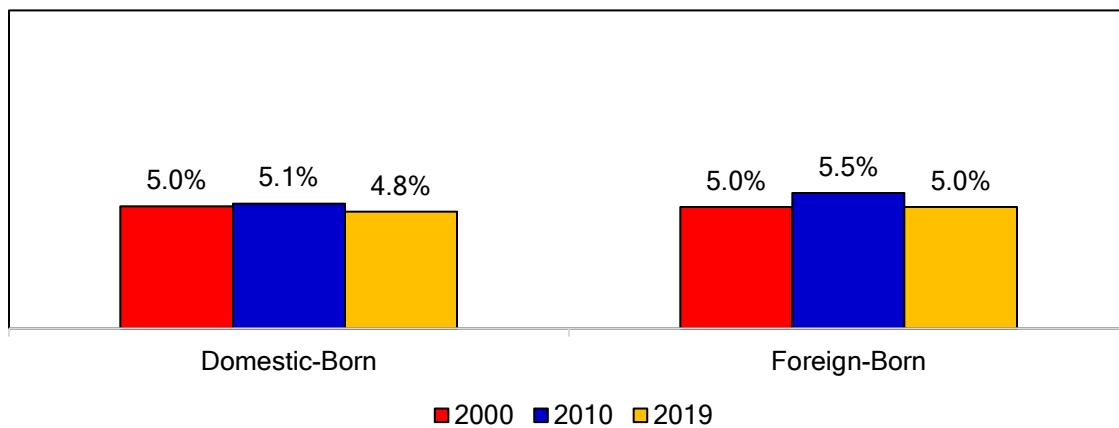


⁵ Because of a likely sampling issue, this section does not include cognitive difficulty rates by household income and borough.

Nativity

Foreign-born individuals reported slightly higher cognitive difficulty percentages when compared to domestic-born people. Between 2000 and 2010, the percentage of the population with cognitive difficulty marginally increased among the domestic-born from 5.0% to 5.1%, and slightly rose from 5.0% to 5.5% among the foreign-born. Between 2010 and 2019, cognitive difficulty rates dipped among both domestic-born and foreign-born populations, from 5.1% to 4.8% and 5.5% to 5.0%, respectively. (See Figure 7).

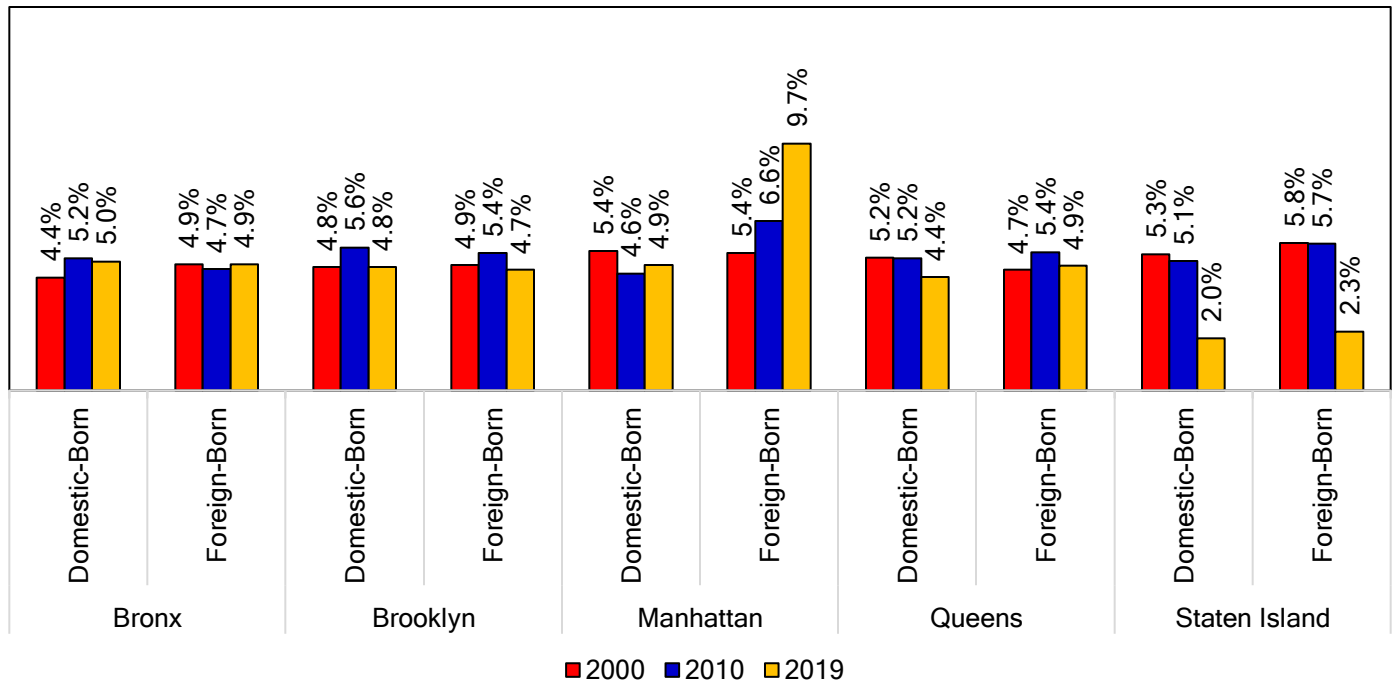
Figure 7
Percentage of the Population with Cognitive Difficulty by Nativity
New York City, 2000 - 2019



Initial rates of cognitive difficulty among domestic-born and foreign-born were similar across the five boroughs in 2000. Between 2000 and 2019, the percentage of cognitive difficulty among domestic-born people in the Bronx went from 4.4% to 5.0%, and remained stable at 4.9% among the foreign born. In Brooklyn, these rates were the same at 4.8% among the domestic born and decreased from 4.9% to 4.7% among the foreign-born group.

The percentage of cognitive difficulty reported among domestic-born individuals in Manhattan decreased from 5.4% in 2000 to 4.9% in 2019, but almost doubled from 5.4% to 9.7% among foreign-born people. In Queens, these rates dipped from 5.2% to 4.4% among the domestic born and marginally increased from 4.7% to 4.9% among the foreign-born population. In Staten Island, rates more than halved between 2000 and 2019 among the domestic-born population from 5.1% to 2.0% and from 5.7% to 2.3% among foreign-born individuals. (See Figure 8).

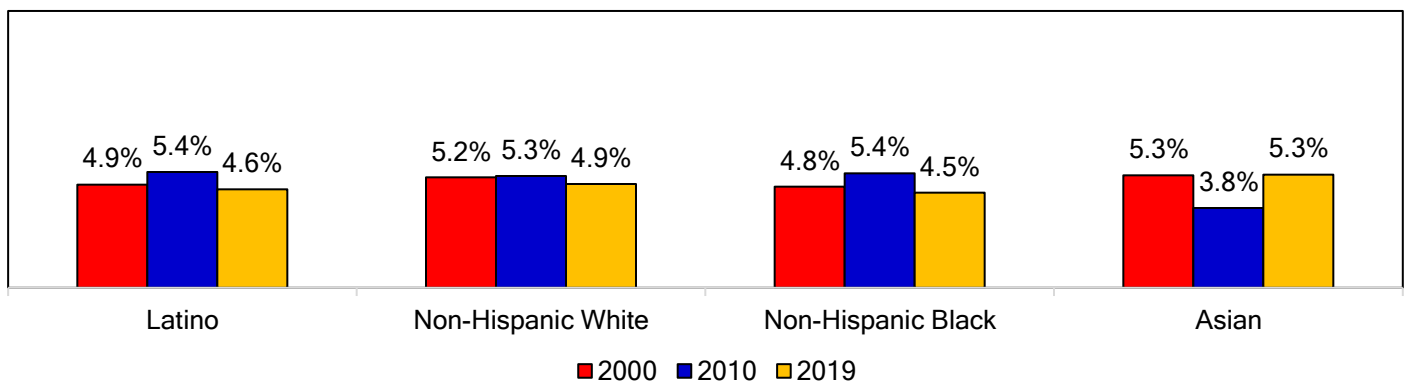
Figure 8
 Percentage of the Population with Cognitive Difficulty by Borough and Nativity
 New York City, 2000 - 2019



Race/Ethnicity

Cognitive difficulty rates were similar among all four major race and ethnic groups in New York City over the period analyzed in this report. Among Latinos, these rates had a slight decrease from 4.9% in 2000 to 4.6% in 2019. Rates among Non-Hispanic whites also dipped from 5.2% to 4.9%. Non-Hispanic blacks had the lowest percentages among all race and ethnic groups, which also had a minor decrease from 4.8% to 4.5%. On the contrary, Asians had the highest rates, remaining relatively stable at 5.3% from 2000 and 2019. (See Figure 9).

Figure 9
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity
 New York City, 2000 - 2019



In the Bronx, Asians had the highest percentage of people with cognitive difficulty in 2000 (5.9%) when compared to Latinos (4.4%), non-Hispanic whites (4.7%), and non-Hispanic blacks (4.5%). Following the overall trend, cognitive difficult rates slightly increased between 2000 and 2010 and then slightly decreased between 2010 and 2019 among Latinos, non-Hispanic whites, and non-Hispanic blacks. However, the percentage of Asians reporting cognitive difficulty almost halved from 5.9% in 2000 to 2.8% in 2010, but then increased back to 5.4% in 2019. By 2019, non-Hispanic whites and Asians reported the highest cognitive difficulty rates at 5.4%, followed by Latinos (4.7%), and non-Hispanic blacks (4.0%). (See Figure 10).

The cognitive difficulty trends by race and ethnicity in Brooklyn were somewhat different from the overall trends. They fluctuated among Latinos, non-Hispanic whites, and Asians, but consistently increased among non-Hispanic blacks between 2000 and 2019. By 2019, the cognitive difficulty rate among Latinos decreased to 3.0% from 5.2% in 2000. The rate remained relatively stable among non-Hispanic whites—from 4.6% in 2000 to 4.5% in 2019—and moderately increased among Asians—from 5.2% to 5.7%. By 2019, non-Hispanic blacks reported the highest cognitive difficulty rate at 6.5%. (See Figure 11).

Figure 10
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity in the Bronx
 New York City, 2000 - 2019

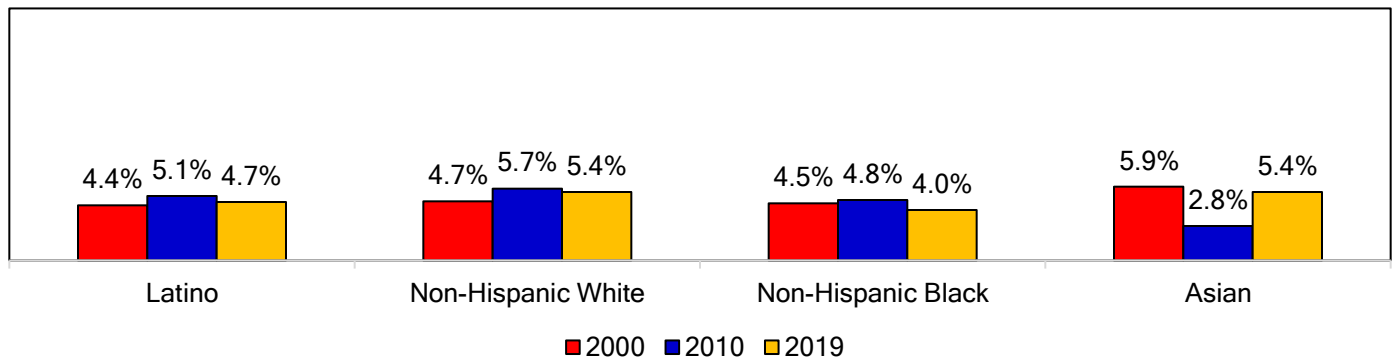
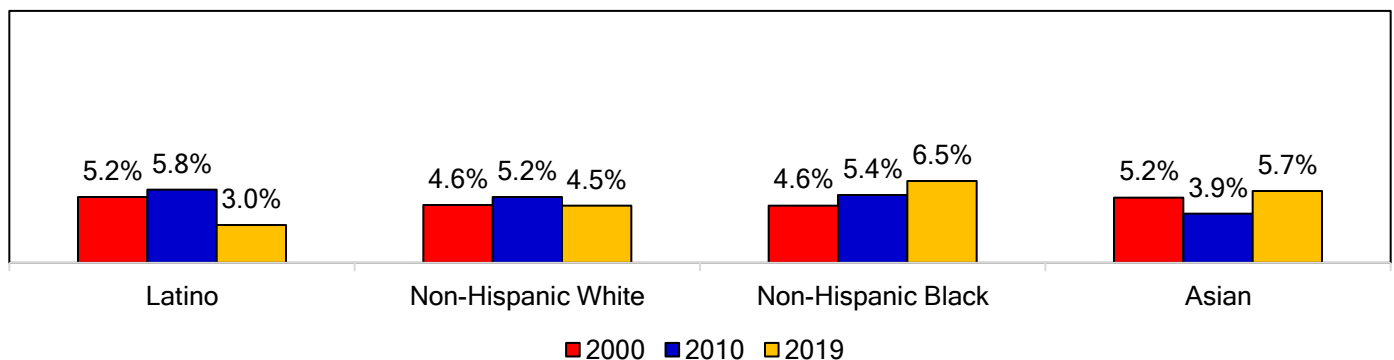
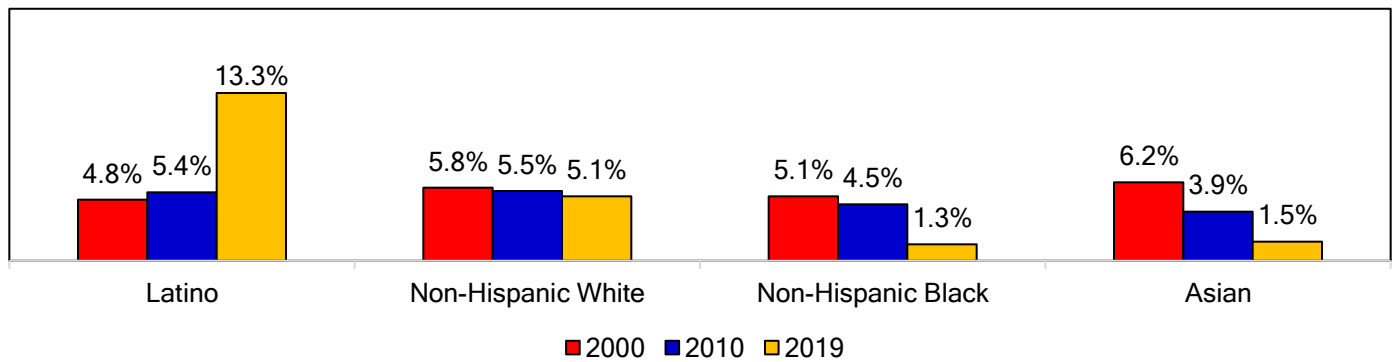


Figure 11
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity in Brooklyn
 New York City, 2000 - 2019



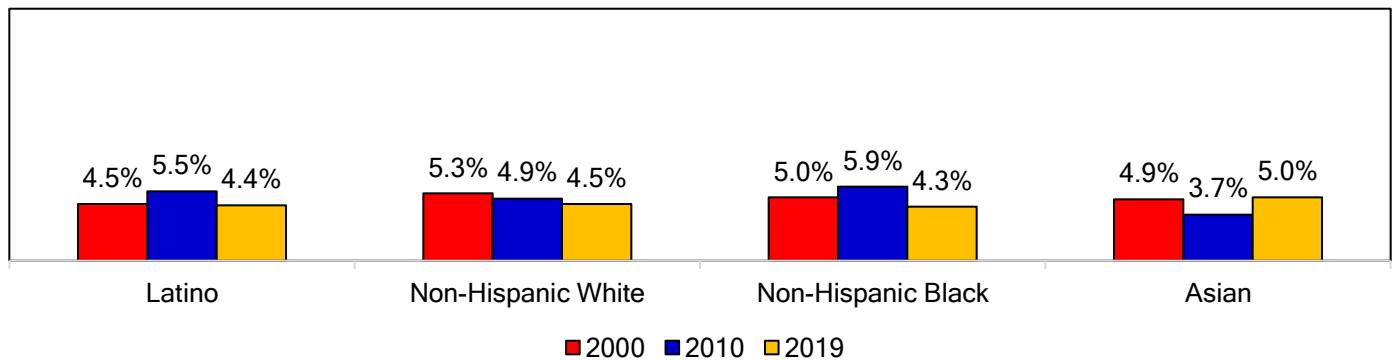
In Manhattan during the period analyzed in this study, the percentage of Latinos who reported cognitive difficulty steadily increased but decreased among the other race and ethnic groups. In 2000, Latinos had the lowest rate of cognitive difficulty percentage at 4.8% but significantly increased to 13.3% in 2019, the highest of any group. Non-Hispanic whites' percentage of cognitive difficulty slightly declined from 5.8% in 2000 to 5.1% in 2019. The cognitive difficulty rates between 2000 and 2019 moderately decreased among non-Hispanic blacks and Asians, from 5.1% to 1.3% and 6.2% to 1.5% respectively. (See Figure 12).

Figure 12
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity in
 Manhattan
 New York City, 2000 - 2019



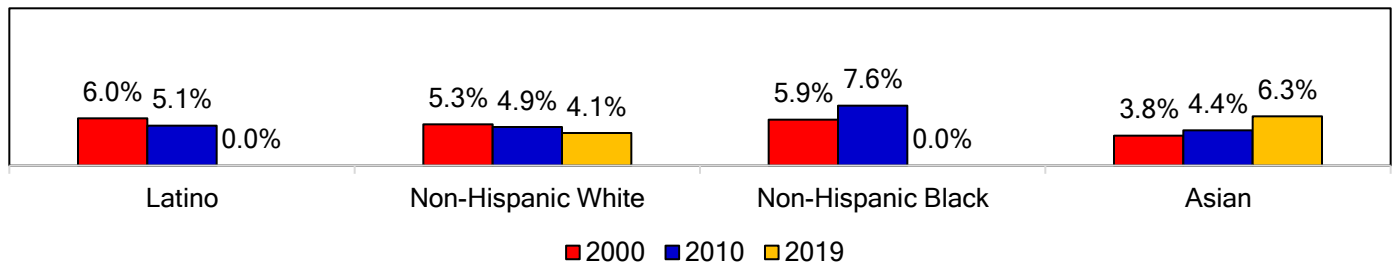
In Queens, the percentage of people reporting cognitive difficulty marginally decreased between 2000 and 2019 among Latinos—4.5% to 4.4%—, non-Hispanic whites—5.3% to 4.5%—, and non-Hispanic blacks—5.0% to 4.3%. By 2019, Asians had the highest cognitive difficulty percentage (5.0%) when compared to the other three groups. (See Figure 13).

Figure 13
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity in
 Queens
 New York City, 2000 - 2019



Between 2000 and 2019 in Staten Island, the percentage of people reporting cognitive difficulty decreased among Latinos from 6.0% to 0.0%. Similarly, the rate decreased among non-Hispanic blacks from 5.9% in 2000 to 0.0% in 2019.⁶ Among non-Hispanic whites, the cognitive difficulty rate decreased from 5.3% to 4.1% between 2000 and 2019. Asians were the only group that reported an increasing percentage of cognitive difficulty from 3.8% in 2000 to the highest among all racial and ethnic groups (6.3% in 2019).

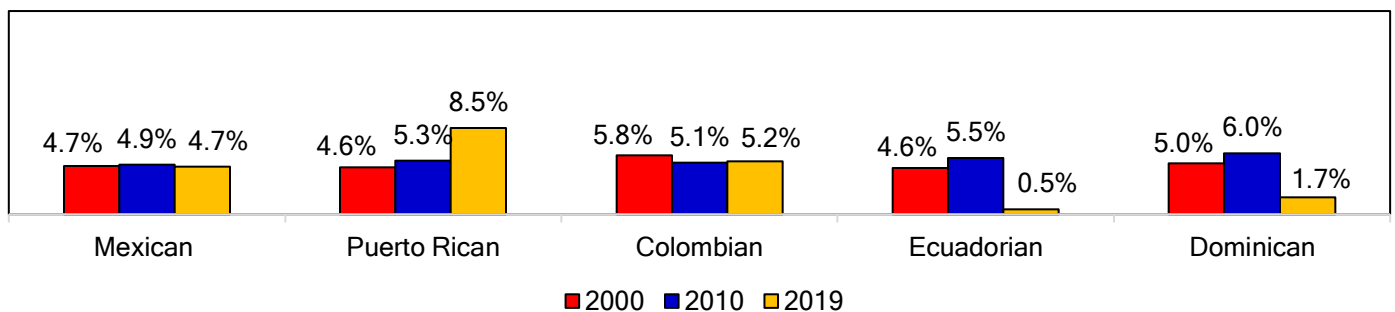
Figure 14
 Percentage of the Population with Cognitive Difficulty by Race/Ethnicity in Staten Island
 New York City, 2000 - 2019



Five Largest Latino Nationalities

Significant differences in percentages of population with cognitive difficulty were observed among the five largest Latino subgroups in New York City. Cognitive difficulty among Puerto Ricans consistently increased across the three timepoints, going from 4.6% in 2000 to 8.5% in 2019. Rates of cognitive difficulty among Mexicans remained relatively stable over the same period at 4.7%, while the percentage of Colombians with cognitive difficulty dipped from 5.8% to 5.2%. Ecuadorians’ and Dominicans’ rates experienced the sharpest decreases, going from 4.6% to 0.5% and 5.0% to 1.7% respectively. By 2019, rates of cognitive difficulty among Puerto Ricans had increased to the highest of Latino nationalities at 8.5%, while Ecuadorians (0.5%) had the lowest percentages of all timepoints. (See Figure 15).⁷

Figure 15
 Percentage of the Population with Cognitive Difficulty by the Five Largest Latino Nationalities
 New York City, 2000 - 2019



⁶ That there are 0.0% of people in both categories can be attributed to a sampling error in the original database.

⁷ Because of a likely sampling issue, this section does not include cognitive difficulty rates by Latino subgroup and borough.

Conclusion

This report examined the rates of cognitive difficulty between 2000 and 2019 among residents in the five boroughs in New York City—Bronx, Brooklyn, Manhattan, Queens, and Staten Island. Overall, approximately 5% of the New York City population reported experiencing cognitive difficulty in the three years, but differences were observed across the five boroughs and several sociodemographic characteristics. Initial rates of cognitive difficulty were similar among residents from the five boroughs, but by 2019 differences emerged with Manhattan having the highest percentage of cognitive difficulty, followed by moderately lower rates in the Bronx, Brooklyn, and Queens, and finally the lowest rate in Staten Island.

Racial/ethnic differences in cognitive difficulty percentage varied by borough, with specific racial/ethnic groups experiencing notably higher cognitive difficulty rates. Non-Hispanic whites and Asians reported the highest cognitive difficulty in the Bronx, whereas non-Hispanic blacks reported the highest percentage in Brooklyn. Asians reported the most cognitive difficulty percentage in Queens and Staten Island. In Manhattan, Latinos reported a drastically higher cognitive difficulty rate when compared to other racial/ethnic groups in Manhattan and the other boroughs.

Significant differences were also observed among the five largest Latino subgroups in New York City. Cognitive difficulty among Puerto Ricans consistently increased across the three timepoints, but it remained relatively stable among Mexicans and Colombians, while decreasing among Ecuadorians and Dominicans. By 2019, Puerto Ricans still reported the highest rate of cognitive difficulty, whereas Dominicans and Ecuadorians reported the least across all time points.