NEW YORK CITY POLICE REFORM AND REINVENTION COLLABORATIVE

Color Contrast

RACIAL AND ETHNIC DISPARITIES IN NEW YORK CITY LAW ENFORCEMENT

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Research and Evaluation Center

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In 2021, the New York City **Mayor's Office of Criminal Justice (MOCJ)** contracted with several research centers at John Jay College of Criminal Justice to support research and/or technical assistance related to 6 of the 132 reform initiatives contained within the **New York City Police Reform and Reinvention Collaborative Plan** ("the Plan"). The Plan was the result of more than 85 listening sessions, roundtable discussions, town halls and stakeholder engagement meetings conducted by NYPD and community partners. In March 2021, the NYC Council adopted the Plan via **Resolution 1584** pursuant to State Executive Order Number 203. The City's Reform Implementation Working Group was tasked with implementing and monitoring the progress of the 132 reform initiatives within the Plan. This report is aligned with reform initiative 79 of the Plan as directed by MOCJ.

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SUMMARY

Arrest rates vary across the neighborhoods of New York City in ways that reveal racial and ethnic disparity. Researchers at the John Jay College Research and Evaluation Center (JohnJayREC)investigated the extent of disparities after controlling for differences in neighborhood demographics and crime rates as measured by 911 “calls for service.” The research team focused on two high-volume offenses: assault and larceny. Researchers created five neighborhood subgroups based on the proportion of Black and Hispanic residents in each neighborhood (quintiles from low to high). Next, they examined the percentage of arrests in each area that involved Black or Hispanic suspects. Neighborhoods with more Black and Hispanic residents reported more Black and Hispanic arrestees. However, the percentage of Black and Hispanic arrests relative to the percentage of Black and Hispanic residents (i.e., the “arrest to resident ratio”) was often disproportionate, particularly for larceny. Disparities could stem from a neighborhood’s crime reporting rate and the intensity of law enforcement efforts to investigate crime incidents and make arrests. Simple differences in race and ethnicity are not de facto evidence of police bias, of course, but monitoring disparity measures could help public officials guard the equity of justice policies and practices.

INTRODUCTION

Racial disparity in the context of criminal justice refers to the unequal or disproportionate rate of criminal justice contact and subsequent processing for individuals of varying racial and ethnic backgrounds. Differences in crime rates are part of what causes disparity, of course, but other causes include the context and rates at which different population groups come into contact with police, prosecutors, and judges. Demographic groups experience varying chances of surveillance, restraint, arrest, prosecution, conviction, and sentencing.

Arrest is a key element in the justice process. Disparities in arrest are apparent across New York City neighborhoods. Are arrest disparities a function of neighborhood crime rates, or do the actions of law enforcement contribute to the demographic profile of suspected and arrested citizens? Many laws and policies have been implemented to reduce racial disparities in arrests and criminal justice processing, but disparities always seem to remain.

Black Americans, in particular, are disproportionately arrested compared to their White counterparts. The difference has not changed significantly in recent years.[1] Research reveals disparities in many areas of the justice system. For example, Black drivers are more likely to be pulled over by law enforcement for traffic violations, often for minor infractions, leading to a higher likelihood of arrest.[2] Black youth are more likely to be involved in the juvenile justice system, which can have detrimental effects.[3] Research also points to geographical variations as some neighborhoods exhibit more pronounced racial disparities in justice contact.[4]

In recent years, New York City (NYC) and New York State enacted laws and policies that could address racial disparities. For example, lawmakers in New York City curtailed the once notorious practice of "stop and frisk" that had disproportionate impacts on Black and Hispanic residents. State officials enacted the "Justice Reinvestment Act" to reduce mass incarceration and address racial disparities in law enforcement and criminal justice. Officials took other actions to enhance the equity of bail and discovery laws, and laws were changed to raise the age of criminal responsibility and reduce the harm of legal sanctions enforced against youth under 18. New York was one of the states to decriminalize the possession of small amounts of marijuana, which should reduce the rate of drug-related arrests that disproportionately affect Black and Hispanic communities.

The key question, of course, is what explains enduring racial and ethnic differences in criminal justice. Are the crimes reported to law enforcement and the arrests that follow a fair sample of whatever crimes occur in a community? Are arrests simply a reflection of neighborhoods themselves? Not likely. First, police do not hear about all crime incidents. Some illegal acts are observed directly by law enforcement, but victims or witnesses are needed to report most crimes. The odds of a crime turning into an arrest depend on the nature of the offense, its location, and the inclination of neighborhood residents to trust police and report crimes. Significant neighborhood differences may exist in the number of crimes reported to authorities and the chances that reports result in arrests. For example, police made 11 arrests citywide for every 100 calls to the police reporting incidents of larceny between 2018 and 2023. The arrest rate per 100 calls was more than 50 percent higher in neighborhoods with high proportions of White residents (14 arrests per 100 calls) versus low proportions of White residents (9 arrests per 100 calls).

MEASURES AND METHODS

Researchers analyzed the race and ethnicity of people arrested in specific areas of New York City (i.e., Neighborhood Tabulation Areas or NTAs). The overall percentage of Black and Hispanic arrestees in each NTA between 2018 and 2023 was compared to the proportion of Black and Hispanic residents in that area as of the 2020 U.S. Census. The ratio of the two percentages serves as a measure of racial disparity.

The research team conducted spatiotemporal analyses of police data about arrests and 911 "calls for service" originating from the same NTAs. To create a sample of comparable residential NTAs, researchers excluded 65 NTAs designated as non-residential by the Department of City Planning (DCP) (i.e., parks, cemeteries, airports, Rikers Island, and other locations like the Brooklyn Navy Yard). Researchers used zoning district data to assess each neighborhood's residential and non-residential space. Shapefiles were obtained from an online data repository (NYC GIS Zoning Features), and the data were used to divide the city into three districts: Residential, Commercial, and Manufacturing.

Using GIS mapping software, researchers spatially intersected 2020 NTA polygons with zoning district polygons to obtain the total area of zoned land within a neighborhood. Based on these results, researchers excluded NTAs where the primary land use was not residential (i.e., more than 50% of the area was designated as non-residential).

The remaining 174 residential NTAs were placed into five subgroups based on the percentile values of their Black and Hispanic populations, from the least Black and Hispanic (20th percentile or lower) to the most Black and Hispanic (80th percentile or higher). Each group contained about 35 NTAs with roughly similar total populations (Table 1).

TABLE 1
DEMOGRAPHICS AND CRIME METRICS IN 174 NEIGHBORHOOD TABULATION AREAS (NTA) ORGANIZED INTO FIVE EQUAL GROUPS (QUINTILES) BASED ON THE PERCENTAGE OF RESIDENTS IDENTIFYING AS BLACK OR HISPANIC

	NTA Quintiles Based on Percentage of Black/Hispanic Residents				
	Lowest Quintile (35 NTAs)	Low Quintile (35 NTAs)	Middle Quintile (34 NTAs)	High Quintile (35 NTAs)	Highest Quintile (35 NTAs)
Total Population	1,530,711	1,561,125	1,590,683	1,632,953	1,502,954
Black / Hispanic Population	193,391	375,289	781,737	1,215,306	1,368,612
Black / Hispanic Percent of Total	13%	24%	49%	74%	91%
911 Calls for Service (2018-2023)					
Larceny	143,657	159,888	222,355	233,490	237,367
Assault	39,898	45,359	89,811	106,451	120,372
Arrests (2018-2023)					
Larceny	19,682	16,943	26,918	24,420	20,847
Assault	14,725	17,968	38,175	42,975	47,949

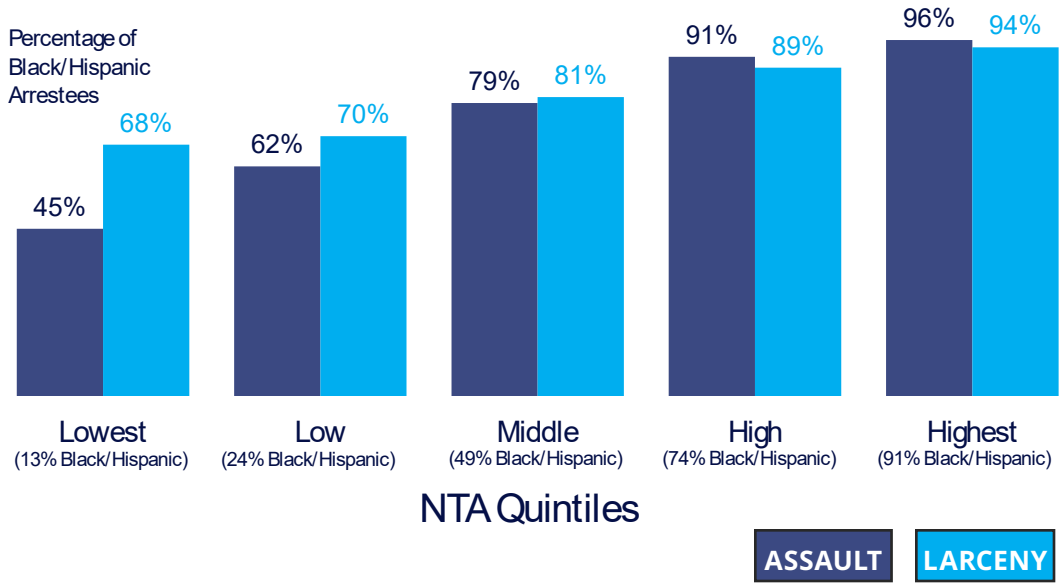
Researchers assessed the yearly distribution of arrests and 911 calls for four relatively serious and high-volume crime types: assault, burglary, larceny, and robbery. Arrest records were excluded if they lacked geographic information or had discrepancies in the geographic codes for police precinct or borough. The research team set a threshold of acceptable error at no more than 15 percent citywide. Arrests for burglary and robbery exceeded the threshold. As a result, these records were excluded from the analysis. The study focused on the two remaining high-volume offenses with fewer errors: assault (161,792 arrests) and larceny (108,810 arrests) between 2018 and 2023.

The analysis focused on calls for service, arrests, and the demographic profile of residents in each NTA.[5] Researchers obtained data for arrests and 911 calls using information from the NYC Open Data Portal.[6] Data included observations from 2018 through 2023 for various offenses and call types.[7] The study relied on 2020 decennial census data to measure the race and ethnicity of community residents.

RESULTS

Assault arrests were strongly correlated with the demographic characteristics of the study's NTA quintiles, rising from fewer than 15,000 arrests in the quintile with the lowest percentage of Black and Hispanic residents to nearly 48,000 arrests in the quintile with the highest percentage of Black and Hispanic residents. Larceny arrests, on the other hand, were more evenly distributed among the NTA groups. The fewest arrests (16,943) were reported for the second-lowest quintile, while the most (26,918) occurred in the middle quintile. The lowest and highest quintiles reported nearly the same number of arrests, 19,682 and 20,847, respectively. The racial characteristics of individuals involved in assault arrests varied according to where they occurred (Figure 1).

FIGURE 1
THE PERCENTAGE OF BLACK/HISPANIC INDIVIDUALS AMONG PEOPLE ARRESTED IN NEW YORK CITY NEIGHBORHOODS (NTAS) BETWEEN 2018 AND 2023 VARIED BY AREA DEMOGRAPHICS



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RESULTS

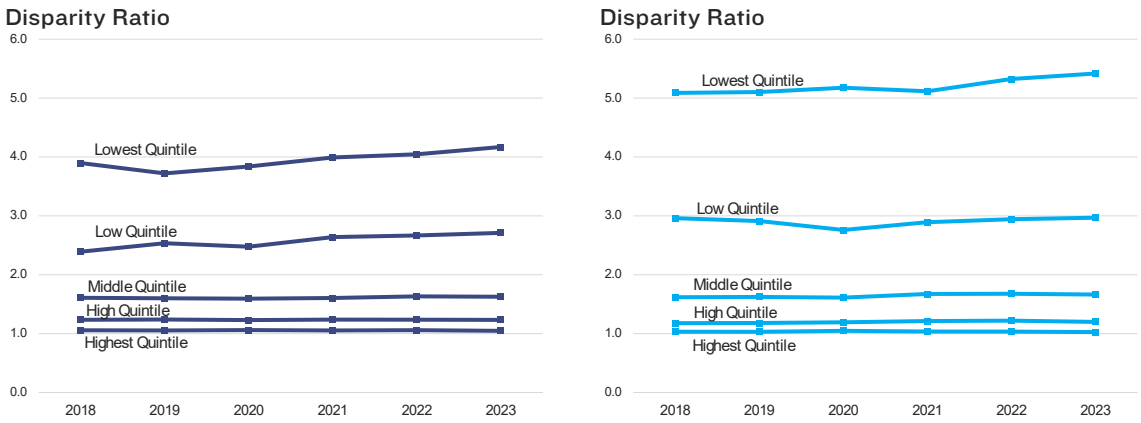
Fewer than half (45 percent) of assault arrests involved Black or Hispanic individuals in the quintile having the lowest proportion of Black and Hispanic residents, rising consistently to 96 percent for arrests in the highest quintile. The percentage of Black and Hispanic individuals among larceny arrests also increased with the population characteristics of NTA quintiles, but less markedly, rising from 68 to 94 percent.

The key question for the analysis is whether racial and ethnic differences in arrests vary only due to the racial composition of neighborhoods. Or, do the actions of citizens reporting crimes and law enforcement arresting suspects add disparity? A first step would be to compare the racial and ethnic characteristics of neighborhood residents with the characteristics of the individuals arrested in those neighborhoods.

Data from the five population quintiles suggest that arrests made by law enforcement do not simply reflect the characteristics of neighborhood residents. In the two quintiles with the lowest and next-to-lowest percentage of Black and Hispanic residents, the proportion of Black and Hispanic individuals among larceny arrests between 2018 and 2023 was nearly three to five times the proportion among residents (i.e., 68% versus 13% and 70% versus 24%, respectively). When the suspected charge was assault, the percentage of Black and Hispanic arrestees was two to three times the percentage among residents (i.e., 45% versus 13% and 62% versus 24%).

These "disparity ratios" (i.e., the Black/Hispanic percentage of arrests relative to the Black/Hispanic percentage of residents) were relatively consistent over time. In 2018, for example, the disparity ratio for larceny was approximately one to one in the highest population quintile (94% of arrests versus 91% of residents), and it remained so through 2023 (Figure 2).

FIGURE 2
DISPARITY RATIOS (I.E., PERCENTAGE BLACK/HISPANIC ARRESTS RELATIVE TO PERCENTAGE BLACK/HISPANIC RESIDENTS) DID NOT CHANGE SUBSTANTIALLY OVER TIME WITHIN EACH POPULATION QUINTILE OF NYC NEIGHBORHOODS



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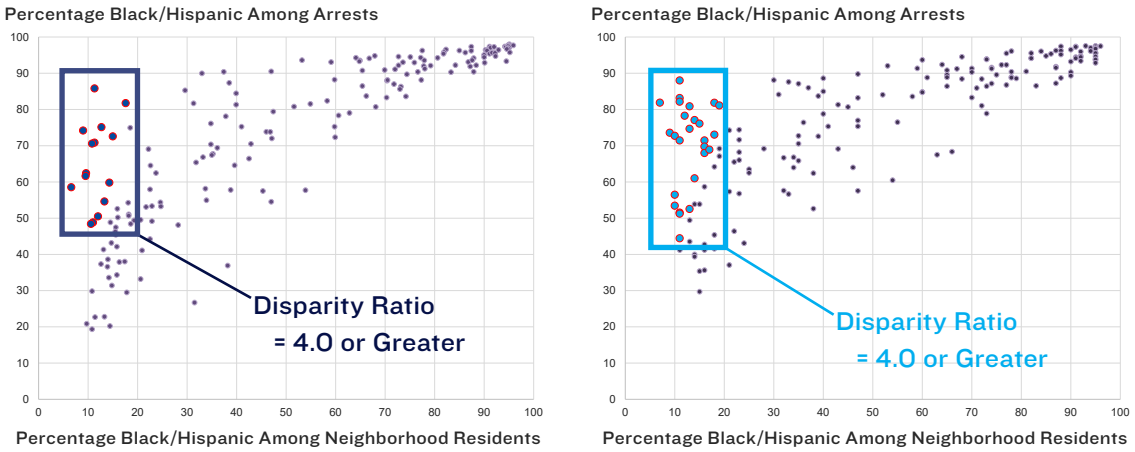
RESULTS

In the quintile with the lowest proportion of Black and Hispanic residents, the percentage of Blacks and Hispanics among 2018 larceny arrests (66%) relative to the Black and Hispanic resident percentage (13%) produced a disparity ratio of more than five to one. The difference persisted through 2023, including the height of the COVID 19 pandemic. Even when law enforcement activity decreased, disparities persisted. Disparity ratios were highest in neighborhoods with the lowest representation of Black and Hispanic residents — at least in part because the denominators for calculating arrests relative to residents were inherently smaller (Figure 3).

FIGURE 3
BETWEEN 2018 AND 2023, THE HIGHEST DISPARITY RATIOS (4.0 OR GREATER) WERE OBSERVED IN 26 NEIGHBORHOODS FOR LARCENY AND 15 NEIGHBORHOODS FOR ASSAULT



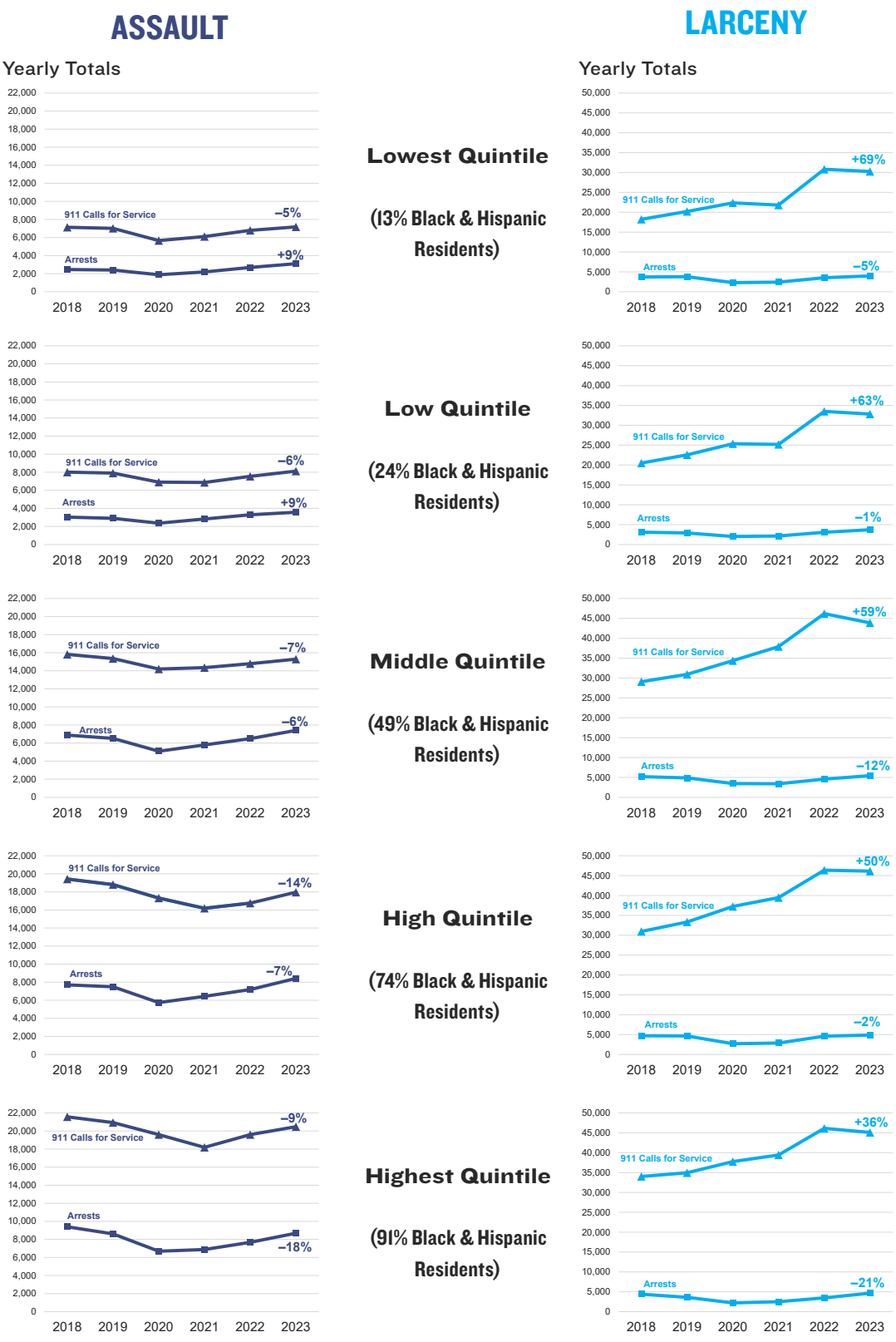
The disparity ratio of Black/Hispanic larceny arrests to residents was 4.0 or greater in 26 neighborhoods (Table 2). The largest disparity ratios for larceny were seen in Upper East Side/Carnegie Hill (11.7 times more Blacks and Hispanics among arrestees than among residents), East Midtown/Turtle Bay (8.2), South Williamsburg (8.0), Upper East Side/Lenox Hill / Roosevelt Island (7.6), Brooklyn Heights (7.5), the West Village (7.3), Stuyvesant Town/Peter Cooper Village (6.5), and Greenwich Village (6.5). Many of the same neighborhoods had high disparity ratios for assault as well. The largest disparity ratios for assault were seen in the Upper East Side/Carnegie Hill neighborhood (8.4 times more Blacks and Hispanics among assault arrestees than among residents), East Midtown/Turtle Bay (8.2), South Williamsburg (7.8), Brooklyn Heights (6.4), Greenwich Village (6.4), the West Village (6.2), and Borough Park (6.2).

To what extent are disparities generated simply by the volume of crimes reported to law enforcement? Researchers estimated the association between crime rates and arrest rates using the number of 911 calls for service originating from neighborhoods. Call-adjusted arrest rates (i.e., arrests per 100 calls) for larceny and assault were analyzed across the five population quintiles. The robustness of the measure was first checked visually by inspecting trends in calls and arrests from 2018 through 2023 (Figure 4).

TABLE 2
NYC NEIGHBORHOODS WITH HIGH (4.0+) DISPARITY RATIOS BETWEEN 2018 AND 2023 WERE FREQUENTLY AREAS CHARACTERIZED BY HIGH INCOMES AND LOW POVERTY

	Disparity Ratios		Percent of Families in Poverty	Percent on Public Assistance, Food Stamps	Median Household Income
	Assault	Larceny			
Average Across All 174 Areas	1.4	1.5	14%	22%	$76,610
Brooklyn					
Borough Park (click to view map)	6.2	5.6	28%	35%	$56,250
Brooklyn Heights	6.4	7.5	3%	4%	$174,914
Mapleton-Midwood (West)	4.4	4.7	14%	21%	$74,127
Midwood	3.2	4.4	12%	26%	$69,525
Park Slope	4.5	4.6	2%	6%	$189,549
South Williamsburg	7.8	8.0	40%	50%	$34,712
Windsor Terrace-South Slope	<4.0	4.1	5%	9%	$134,210
Manhattan					
East Midtown-Turtle Bay	8.2	8.2	4%	3%	$163,423
Gramercy	5.8	5.7	8%	7%	$159,645
Greenwich Village	6.4	6.5	1%	3%	$172,687
Murray Hill-Kips Bay	4.8	5.1	3%	4%	$143,183
Stuyvesant Town-P Cooper Village	4.2	6.5	2%	7%	$172,804
Upper East Side-Carnegie Hill	8.4	11.7	3%	3%	$198,702
UES-Lenox Hill-Roosevelt Island	4.4	7.6	5%	4%	$140,567
Upper East Side-Yorkville	4.2	6.2	5%	7%	$136,290
Upper West Side (Central)	<4.0	4.3	5%	6%	$152,514
West Village	6.2	7.3	1%	3%	$146,964
Queens					
Breezy Point-Belle Harbor-Rockaway Park-Broad Channel	4.3	5.5	6%	9%	$110,875
Douglaston-Little Neck	<4.0	4.7	6%	8%	$112,196
Flushing-Willets Point	<4.0	4.3	18%	20%	$53,040
Glen Oaks-Floral Pk-New Hyde Park	<4.0	4.5	4%	5%	$112,677
Oakland Gardens-Hollis Hills	<4.0	4.4	5%	8%	$105,348
Queensboro Hill	<4.0	4.1	13%	12%	$58,386
Whitestone-Beechhurst	<4.0	4.4	6%	8%	$98,269
Staten Island					
Annadale-Huguenot-Prince's Bay-Woodrow	<4.0	5.3	5%	7%	$117,218
Great Kills-Eltingville	<4.0	4.0	5%	5%	$126,114

FIGURE 4
CALLS FOR SERVICE RELATED TO LARCENY INCREASED SHARPLY AFTER 2020 WHILE ARRESTS FOR LARCENY DECLINED IN ALL NEIGHBORHOOD QUINTILES (NTA)



Results differed somewhat between the two offenses. Between 2018 and 2023 citywide, assault-related calls for service declined more than four percent while arrests for assault increased nearly six percent. Larceny arrests dropped seven percent across New York City between 2018 and 2023, but 911 calls for service related to larceny jumped 49 percent.

Trends varied among the NTA quintiles created for the study. In NTAs with the lowest percentage of Black and Hispanic residents, arrests for assault grew nine percent between 2018 and 2023, compared with a decline of 18 percent in NTAs with the highest percentage of Black and Hispanic residents. Arrests for larceny were down slightly (–5%) in NTAs with the lowest percentages of Black and Hispanic residents, while larceny arrests fell 21 percent in NTAs with the highest proportions of Black and Hispanic residents.

More striking differences emerged in the number of 911 calls for service. Calls related to assault generally declined in all areas between 2018 and 2023, with the largest declines in the second-highest and highest NTA quintiles (–14% and –9%, respectively).

On the other hand, calls related to larceny increased substantially, including increases of 50% or more in four of five NTA quintiles. In other words, New York City residents made many more calls to law enforcement to report potential larceny incidents. However, the chances that their calls would result in arrests fell significantly between 2018 and 2023.

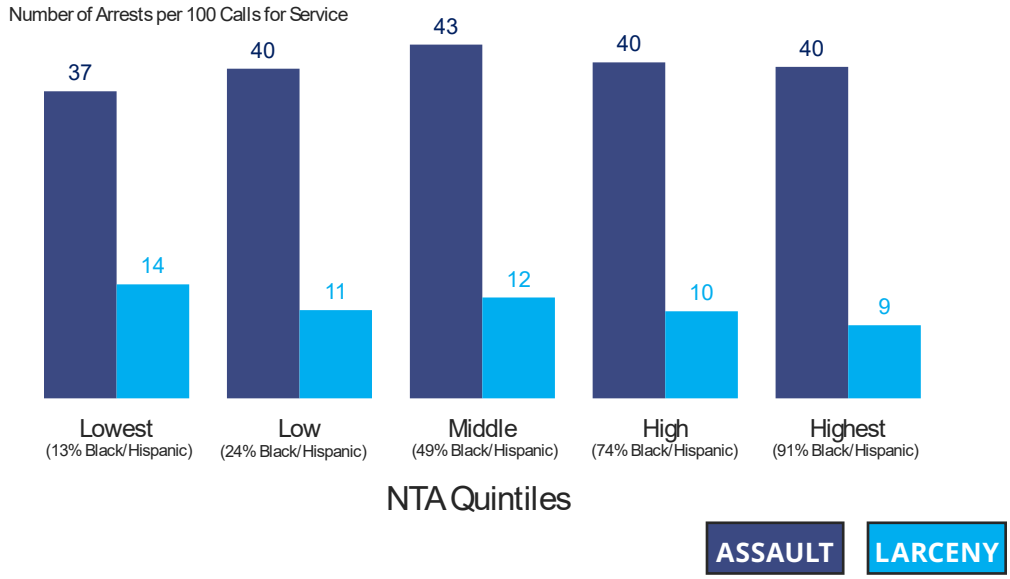
Calculating a citywide rate of arrests relative to 911 calls for service from 2018 to 2023 resulted in 40 assault arrests and 11 larceny arrests for every 100 calls for each offense type. There were few differences in the call-adjusted arrest rate for assaults within population quintiles from year to year, meaning the relationship between 911 calls and arrests was relatively stable over time within each group of neighborhoods, from those with the fewest to those with the most Black and Hispanic residents.

The magnitude of arrest rates relative to calls for service varied considerably between the two offense types (Figure 5). Between 2018 and 2023, police made 37 to 43 arrests for every 100 calls for service related to assault but fewer than 15 arrests for calls related to larceny.[8]

The probability of arrest following a reported assault did not change uniformly between the five population quintiles. The greatest probability (43 per 100 calls) was observed in the middle quintile. The probability of a larceny arrest was more closely and negatively related to the racial and ethnic characteristics of neighborhood residents. In the NTA quintile with the greatest proportion of Black and Hispanic residents, NYPD reported nine larceny arrests for every 100 calls for service. In neighborhoods with the lowest proportion of Black and Hispanic residents, police made 14 larceny arrests for every 100 calls.

The chance that a reported crime will result in an arrest is likely an outcome of several factors, including citizens' willingness to trust police with relevant information and the extent of law enforcement efforts to investigate crime incidents. Both factors may be correlated with the racial and ethnic characteristics of neighborhood residents.

FIGURE 5
CALL-ADJUSTED ARREST RATES FROM 2018 THROUGH 2023 IN NEIGHBORHOODS AS DEFINED BY THE PERCENTAGE OF BLACK AND HISPANIC RESIDENTS IN 2020



When arrest data were examined at the level of individual NTAs across New York City, the racial profile of a neighborhood's residents (i.e., the proportion of Black and Hispanic residents) was strongly and positively correlated with the racial profile of larceny and assault arrests from that neighborhood ($p < .01$). Communities of color experienced more arrests involving people of color. The correlation was reversed in neighborhoods within the lowest quintile of NTAs having the smallest proportion of Black and Hispanic residents. In other words, the discrepancy between the percentage of Black and Hispanic individuals among residents and reported arrests was greatest in areas with the smallest Black and Hispanic resident populations. For larceny, the negative correlation was statistically significant between 2018 and 2020.

The direct association between resident characteristics and arrest characteristics across all city neighborhoods was diminished when researchers accounted for the rate of 911 calls to police. The neighborhood outliers identified in Figure 3 — i.e., NTAs with racial disparity ratios of 4 or more — suggest other factors are likely to disrupt the general association between the racial characteristics of residents and arrestees. The effect may result from differentials in 911 calls and variations in law enforcement efforts. In other words, law enforcement actions may be more vigorous in some neighborhoods in ways that add to racial disparity.

Data to estimate the vigor of police efforts are not readily accessible to the public, but such information could help to reveal the sequence of varying actions from criminal incidents, citizen reports, police investigations, and arrests. Statistical analyses of police deployments could reveal neighborhood inequities in the effects of police efforts (Franchi et al., 2023).[9]

Racially correlated disparities in police action affect downstream outcomes, including arrest. When a neighborhood has a heavier police presence, any given level of crime is more likely to result in a larger number of arrests. If public policies are shaped in response to arrest trends, a more heavily policed neighborhood will appear to be more prone to crime even if it is simply more prone to vigorous law enforcement.

More detailed data about police-citizen contacts would be helpful for monitoring disparities and detecting bias. In 2024, New York City officials enacted a **new policy** that requires police officers to report basic information about a wider array of citizen encounters, including their responses to minor infractions and incidents unlikely to result in arrests. The new law requires patrol officers to provide quarterly reports about more of their "investigative encounters" with civilians, "including the race/ethnicity, age and gender of the civilian approached by the police, the factors that led to the interaction, and whether the interaction led to a summons or use of force incident." As this information becomes consistently available for inspection and analysis, it should help city officials to reduce unwanted racial and ethnic disparities in law enforcement.

CONCLUSION

Researchers explored the extent of racial and ethnic disparities in arrests across the neighborhoods of New York City between 2018 and 2023. Data analyses compared the racial and ethnic characteristics of arrestees with resident demographics in each area where arrests occurred. The results confirmed that neighborhoods containing more Black and Hispanic residents tended to account for more Black and Hispanic arrestees. However, the percentage of Black and Hispanic arrests relative to their percentage in the resident population (i.e., the "disparity ratio") varied considerably.

In 26 of 174 neighborhoods examined in the study, the disparity ratio ranged from 4 to nearly 12, meaning the proportion of Black and Hispanic people among arrestees was close to 12 times greater than among residents of the neighborhood. Areas with the highest disparity ratios were often the least diverse, highest income neighborhoods of Brooklyn and Manhattan.

High disparity ratios are not de facto evidence of racial and ethnic bias in policing, but monitoring such information could help to guide the efforts of city officials as they work to ensure fairness and equity in the criminal justice system.

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5 Arrest records from the NYPD include the race and ethnicity values “Black,” “White Hispanic”, and “Black Hispanic.” These are combined to create the study's “Black and Hispanic” category. The remaining groups (“White”, “Asian/Pacific Islander”, and “American Indian/Alaskan Native”) are combined to create a “White and Other” category. Population data from the U.S. Census Bureau provides more detailed race and ethnicity information so researchers aggregated across sub-categories to create racial groupings comparable to those generated from the arrest data. The study’s focus on disproportionate law enforcement within Black and Hispanic communities informed the creation of racial categories.

6 The study uses New York Police Department (NYPD) data publicly disseminated via the City’s Open Data Portal, a repository of administrative data routinely compiled by various city agencies. NYPD data related to public safety and law enforcement include arrests and 911 calls for service (available 2018 onwards).

7 A factor in this choice was the availability of 911 calls for service data, which became accessible in 2018.

8 Some crime incidents may generate multiple 911 calls. This information is not provided in the data available from the city’s Open Portal. Thus, some degree of overcounting of arrests per 100 calls is possible. The research team addressed this source of error by matching or validating 911 calls with complaints occurring within the same spatiotemporal frame (i.e., the same location and date or time), as well as creating a time bubble to accommodate the temporal lag between when a 911 call is made and when a crime complaint is recorded, either by a civilian or police officer.

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