Toronto Crime Rates*

Disadvantaged communities face continued marginalization.

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28 January 2021

Abstract

Neighbourhood Crime Rate data was pulled from the City of Toronto Open Portal to analyze neighbourhoods that were most affected by crime and how crime rates have changed over time. Although crime rates have risen between 2014-2019, certain neighbourhoods experience higher crime rates in the Greater Toronto Area. Further literature reviews of neighbourhoods who experience higher crime rates are also found to be economically disadvantaged communities. This data, without a further analysis and understanding of socioeconomic circumstances could lead to higher police surveillance and further punitive action towards marginalized communities.

Contents

*Code and data are available at: https://github.com/rachaellam/Toronto-Crime-Rates.git.

1 Introduction

In 1971, Richard Nixon launched the War on Drugs followed by Ronald Reagan signing the Anti-Drug Abuse Act in 1986, initiating decades of increase police presence and highly punitive sentences. Public opinion shifted in support for harsher punishment leading to a massive increase in law-and-order government agencies (Marable 2015). Crime rate statistics were largely misconstrued to further push anti-crime policies that poorly affected low-income communities and communities of colour. These policies led to mass surveillance under the guise of safety and protection, continuing the cycle of oppression that marginalized communities face (Windsor, Dunlap, and Armour 2012). The long history of discriminatory crime and punishment is not unique to America. Canada has similarly promoted harsh punishments such as enforcing mandatory sentences for drug related crimes during the Stephen Harper administration. Even flyers circulating from the the same time proclaimed "Serious Crime = Serious Time" (DeKeseredy 2013).

Unfortunately, Canada is reluctant to admit racialized practices and histories, therefore race based data is either suppressed, decidedly unreported or not readily available (Owusu-Bempah and Wortley 2014). Police departments are responsible for the collection of a portion of Canada's data, which tends to be bias towards communities of color. Between 2001 and 2006, 16% of investigations involving police use of force involved black civilians despite only accounting for 3.6% of the population(Owusu-Bempah and Wortley 2014). This discrimination towards communities of colour can lead to disproportionately high numbers of crime incidents, skewing the veracity of the situation and resulting in a disproportionately large population of Black and Indigenous communities in federal and provincial institution (Owusu-Bempah and Wortley 2014).

Due to the absence of racial data or overrepresentation in reporting due to police biases, a holistic and historical understanding of race and poverty must be taken when examining crime data. In this paper, I will use crime rate data from the City of Toronto to explore the neighbourhoods that face the highest rates of crime. I will then analyze the trajectory of crime rates between 2014 and 2019. Finally I will investigate the neighbourhood profiles from the 2016 Census to gain a greater understanding of a neighbourhood's demographic and the consequences of generalizing crime statistics. While data and statistics can share many valuable insights, they are numbers that have been manipulated in the past for particular political agendas. Careful examination must be insured to avoid further marginalization of disenfranchised communities.

2 Data

To gain a better understanding of crime fluctuations over the years and what neighbourhoods were most affected by crime, I utilized the Neighbourhood Crime Rates data from the Toronto Open Data portal (Gelfand 2020). Toronto crime data is collected and published by the Toronto Police Services and was last updated on September 18, 2020. The raw data includes 140 neighbourhoods in the Greater Toronto Area, population of said neighbourhoods, and number of crimes committed by type of crime paired with the year (ex. Robbery_2014). Type of crime included: assault, auto theft, breaking and entering, homicide, robbery, and theft over. Using `R` (R Core Team 2020), `tidyverse` (Wickham et al. 2019), `devtools` (Wickham, Hester, and Chang 2020) and `dplyr` (Wickham et al. 2021), I cleaned and extracted the necessary data to start my exploratory analysis.

To begin, I selected Neighbourhood and all types of crime from the raw data. I excluded the neighbourhood IDs as the given name would be easier to recognize. I then combined all types of crime into a long format dataframe using `reshape2` (Wickham 2007) in order to sum all the crimes, which produced a new variable of total crimes per year by neighbourhood. The raw data included an average per crime variable but I determined that a total of all crimes would provide a more comprehensive examination rather than a crime specific investigation. I then selected ten neighbourhoods with the highest number of total crime to constitute the frame.

Using the selected ten neighbourhoods, I weighed the population density against the crime rate, to further understand which neighbourhoods had high crime rates but low density (Figure 1). Figure 1,created using

Table 1: Variation of Neighbourhood Populations.

Population Min	Population Max	Population Mean	Population Standard Deviation
6577	65913	19511.22	10033.59

ggplot2 (Wickham 2016), is ordered from neighbourhoods with the largest populations to neighbourhoods with the the smallest populations. Although Waterfront Communities-The Island has the highest number of crimes, they also have the largest population, double that of Kensington-Chinatown. Conversely, Bay Street Corridor has the second highest number of crimes, yet the third smallest population.
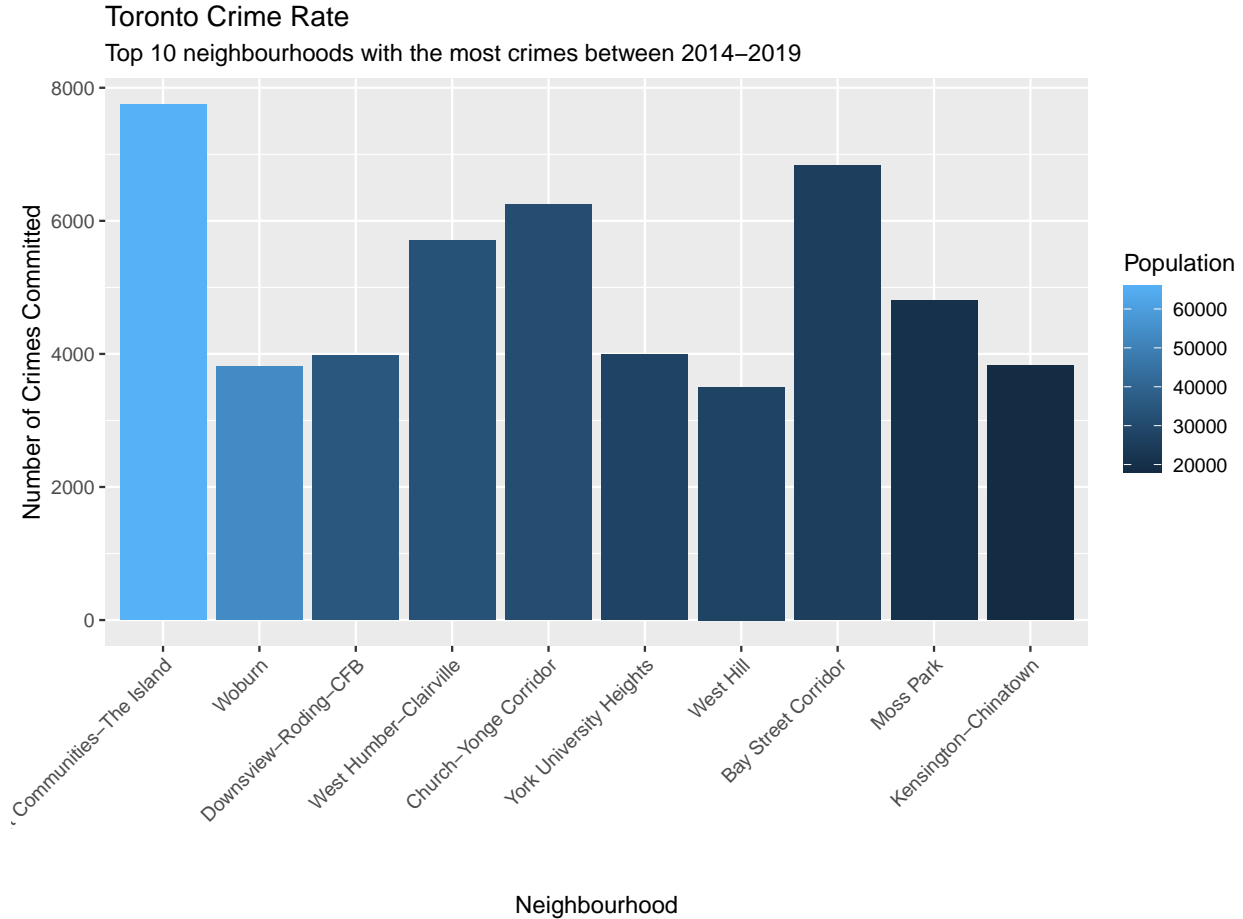

Figure 1: Top 10 neighbourhoods with the most crime ordered by largest population to smallest population, filled with population

To better understand how population varies, I reported the min, the max, the mean, and the standard deviation of all neighbourhoods in the Greater Toronto Area using kableExtra (Zhu 2020) (Table 1). The Population Max confirms that Waterfront Communities-The Island has one of the largest population sizes and that Bay Street Corridor has an average population size. Kensington-Chinatown similarly has an average population size compared to the Population Mean and Population Min despite it being on the bottom end of the gradient scale in Figure 1.

Now with a greater understanding of population, I calculated crime per capita (Figure 2). This confirmed my findings from earlier: although Waterfront Communities-The Island had the highest number of total

crimes, because of its density, it had fewer crimes on a per capita basis. Bay Street Corridor on the other hand, despite controlling for population, still had one of the highest crime rates in the Greater Toronto Area. Additionally, Moss Park and Kensington-Chinatown had similarly high crime rates for their population size.
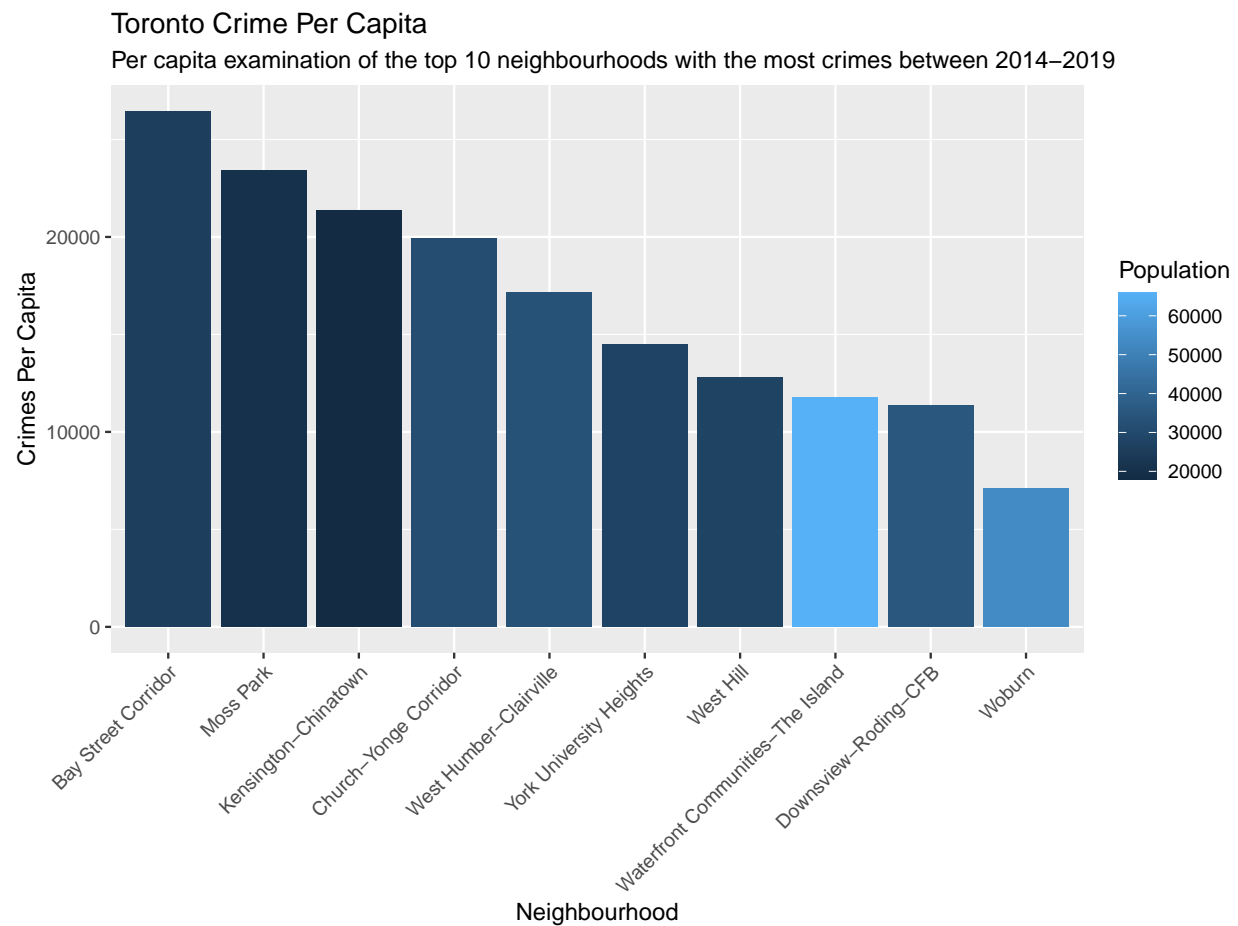

Figure 2: Neighbourhood crime per capita filled with population

Finally, I wanted to see how crime had progressed over the years. Figure 3 demonstrates that crime has drastically increased in certain neighbourhoods between 2014-2019. The Waterfront Communities-The Island and the Church Yonge Corridor have experienced some of the sharpest increases in crime whereas Woburn and York University Heights seem to have experienced very minor changes.

3 Results

Initial examination would assume that Waterfront Communities-The Island is seemingly the most dangerous neighbourhood in Toronto as it has the highest number of total crimes. Once population was factored into the analysis, they had one of the lowest crime rates of the selected neighbourhoods in the Greater Toronto Area. In contrast, Kensington-Chinatown, which had one of the lowest crime numbers of the selected ten neighbourhoods, had one of the highest number of crimes per capita. Additionally, Bay Street Corridor had the second highest number of total crimes with one of the lowest population densities, signalling the highest number of crimes per capita.

Finally, the sum of all crimes was plotted in relation to the year, revealing an increase in crime between 2014

Total Crimes by Year
Number of total crimes between 2014–2019

Neighbourhoods
- Bay Street Corridor
- Church–Yonge Corridor
- Downsview–Roding–CFB
- Kensington–Chinatown
- Moss Park
- Waterfront Communities–The Island
- West Hill
- West Humber–Clairville
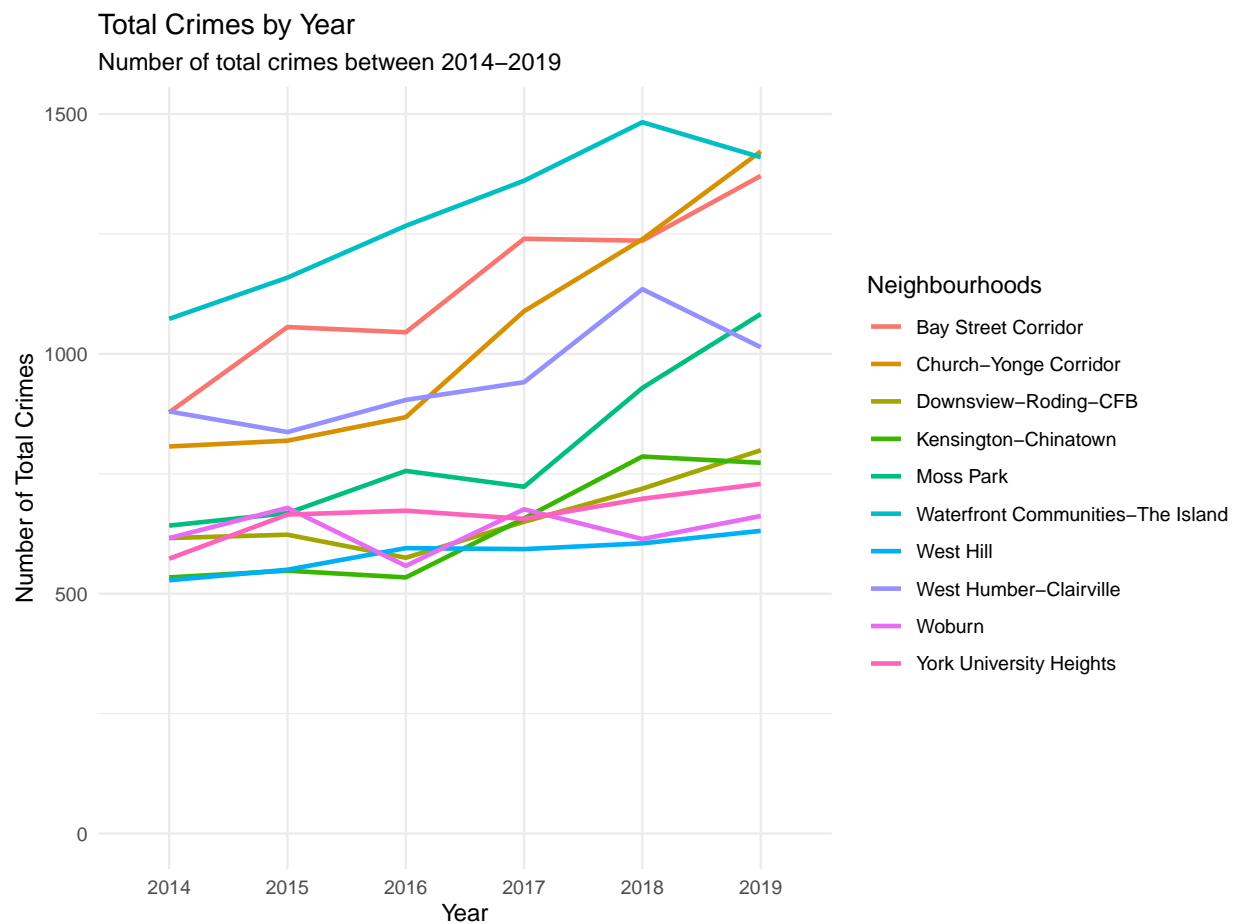- Woburn
- York University Heights

Figure 3: Top 10 neighbourhoods with the highest crime per year

and 2019. Although additional research would have to be conducted to gain insight into the many factors that could cause a rise in crime which is beyond the scope of this paper, one reason may be attributed to the sharp increase in population according to the Toronto Census of Population data (Canada 2016). Waterfront Communities-The Island, Bay Street Corridor and Moss Park all experienced a population increase of 52%, 33.3% and 25% respectively between 2011 and 2016. This data corresponds particularly with Bay Street Corridor and Waterfront Communities-The Island's significant increase in crime.

4   Discussion

Although the crime rates published by the City of Toronto do not include demographic information, it is important to look extensively into the profiles of these neighbourhoods. Without a deeper understanding of each neighbourhood, certain assumptions could be made about the nature of each community leading to even harsher measures that already severely disadvantage certain communities. Additionally, it would be impossible to implement the correct safety and protection measures without a comprehensive appreciation of what each neighbourhood needs. Unfortunately, as mentioned earlier, race information is rarely available in crime data reports but using the Census Data provided by the City of Toronto (Canada 2016), we can see income statistics, racial demographics, and housing information for each neighbourhood. In section 4.1 to section 4.5, I will provide statistics about a few notable neighbourhoods including Bay Street Corridor, Moss Park, Kensington-Chinatown and Waterfront Communities-The Island. I will then begin a discussion in section 4.6 on how the neighbourhoods differ and why their statistics are important to note.

4.1   Bay Street Corridor

Bay Street Corridor is located in Toronto's Downtown Core. The neighbourhood is home to Toronto City Hall, Toronto's main shopping centre and half of the University of Toronto's campus. Despite these features, Bay Street Corridor has 39.3% of its residents living in poverty and 37.7% classified as low income. Additionally, 57.2% of households live in unaffordable housing, which is defined as "households spending more than 30 per cent of their total household income on shelter costs" (Canada 2016). The visible minority population makes up 62.2% of the Bay Street Corridor, 20.1% of the population are non-permanent residents and 0.6% of residents identify as Aboriginal.

4.2   Moss Park

Moss Park is a small neighbourhood that only spans two blocks between Jarvis Street and Parliament Street. It is well known for being the site of CBC's Kim's Convenience TV Show but as well as for being dominated by public housing projects. Moss Park has 34.6% of its residents living in poverty and 31.9% classified as low income. Additionally, 39.9% of households live in unaffordable housing. The visible minority population makes up 42.6% of Moss Park and 2.1% of residents identify as Aboriginal.

4.3   Kensington-Chinatown

Kengsinton-Chinatown is a well known neighbourhood in Toronto. It is home to Kensington Market and Chinatown, which are both popular tourist destinations with long and vibrant histories. Unfortunately, residents living there face difficult living conditions with 40.3% living in poverty and 33.2% classified as low income. Additionally, 48.1% of households live in unaffordable housing and 9.7% of households live in inadequate housing, which is defined as "households in dwelling that are in need of major repairs" (Canada 2016). The visible minority population makes up 60.3% of Kensington-Chinatown and 0.8% of residents identify as Aboriginal.

4.4 Waterfront Communities-The Island

Waterfront Communities-The Island is a long stretch of land near the water that includes the Toronto Islands and parts of Queen Street West. Although it is population the largest of all four neighbourhoods mentioned in Section 4, it is also the wealthiest. Only 18.7% of residents live in poverty and 16.5% are classified as low income. Despite this, 40% of households live in unaffordable housing despite having a median family income of $108,199. In addition, the visible minority population makes up 44.1% of the neighbourhood and 1% of residents identify as Aboriginal.

4.5 Comparison

Although there are many statistics to digest, it is first necessary to compare these statistics with the average statistics across the Greater Toronto Area. The average percent of people in Toronto who live below the poverty line is 21.9%. This means that Bay Street Corridor, Moss Park and Kensington-Chinatown have a higher percentage of residents living below the poverty line on average. In comparison, Waterfront Communities-The Island have a lower percentage than the city's average.

The racial demographics also vary significantly across the selected neighbourhoods. While 50.1% of Toronto's population is comprised of visible minorities, Bay Street Corridor and Kensington-Chinatown have an exceptionally higher percentage. Furthermore, Bay Street Corridor has the highest percentage of non-permanent residents at 20.1% compared to the city's average of 3.5%. In Moss Park, 2% of residents identify as Aboriginal compared to the city's average of 0.9%.

These figures accentuate the economic disparities within the Greater Toronto Area neighbourhoods. Poverty has historically been the rational for higher police surveillance, disguised as a crusade against drug abuse. Unfortunately, such measures have disproportionately affected low income communities, further trapping them in the cycle of poverty. Lack of resources for struggling families in addition to Toronto's unaffordable housing also compound adverse circumstances. In addition, the impact of racism in Canada can similarly be attributed to the overrepresentation of crime in the four neighbourhoods identified in this section. Canada's practice of racism through a long history of colonization and genocide has had lasting consequences for Indigenous communities. Indigenous citizens are more than two times as likely to have involuntary, frequent contact with police (Alberton et al. 2019). Comparably, although certainly different histories, black communities in Canada have faced a long history of discriminatory practices including police surveillance. Black Lives Matter Toronto recently protested the "Community Contracts Policy," which sanctioned the practice of demanding identification from individuals in public spaces. This practice disproportionately affected black communities as they constituted 27% of incidences despite only representing 8.5% of Toronto's population (Teelucksingh 2018).

5 Conclusion

There has been much debate on the ethics of providing demographic information in crime statistics. While some argue that it provides greater transparency into the criminal justice system, other argue it could that the data could be used to reinvigorate outdated claims of associations between crime and race (Owusu-Bempah and Wortley 2014). Both opinions shed light on the necessity to handle data appropriately and with caution. The graphs and tables displayed in this paper could be easily generalized, while the Census statistics could be misinterpreted as an argument to blame low income communities and communities of colour for high crime rates. However, I propose that with this information, it is important to reexamine the factors that place certain communities in a perpetual state of poverty. It is necessary to learn the historical impact of colonization and racism to better understand how Canada can rectify the situation and provide better resources for those affected, rather than increasing funding for discriminatory policing practices.

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