

Who are Toronto’s Crime Victims? A Gender and Crime Type Analysis from 2014 to 2023*

Kevin Roe

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This paper analyzes data from the Toronto Police Service’s Annual Statistical Report on Crime Victims from 2014 to 2023, focusing on the relationship between sex and crime victimization in the city. Overall, male victims outnumber female victims by 2%, but women are disproportionately affected in certain crime categories: female victims outnumber males by 78% in sexual crimes and by 9% in other crimes. These findings highlight how vulnerability to certain crimes is influenced by sex, underscoring the need for targeted policy initiatives to strengthen victim support services. Further research should focus on victims of fatal crimes, particularly those linked to Intimate Partner Violence (IPV) to address the limitations of the dataset.

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*All data, R code, and other files are available in the following GitHub repository: https://github.com/Kanghyunroe/victims_of_crimes/tree/master

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1 Introduction

In every society, keeping crime at a minimum has been a critical priority. Notably, certain demographic groups have been more affected by crime than others. For example, in the United States in 2008, there were a greater number of female non-fatal domestic violence victims than male ones (Catalano et al. 2009).

Similarly, Toronto is no exception to this. The City of Toronto notes that certain groups of people are more susceptible to Gender-based violence than others (City of Toronto, n.d.a). While the relationship between sex and crime victimization has been studied at the federal level, there have been no studies or reports specific to Toronto, leading the paper to explore this gap. For Toronto to develop effective policies and build robust victim support and recovery, it is important to analyze the disparities in the types of crimes the different sexes face (Brown et al. 2020).

In this paper, I will analyze the number of crime victims by sex in Toronto from 2014 to 2023. I categorize crime into four different areas: Assault, Sexual Violation, Robbery, and Other. Furthermore, the Assault category is further broken down into different types of assault noted by the Toronto Police Department: Assault on a Peace Officer, Aggravated Assault on a Peace Officer, Resisting Arrest, and Assault on a Peace Officer with a Weapon. Our findings indicate that while there are more female victims of sexual crimes and other broad categories of crime, the overall number of male victims is higher, especially in assault and robbery.

The remainder of the paper is structured as follows: Section 2.1 discusses the data and the relevant measurement methodologies; Section 2.2 presents the data’s results; and Section 3 discusses our findings, highlights the implications of them, and notes any key weaknesses in the study.

2 Data

2.1 Overview

This dataset, “Police Annual Statistical Report – Victims of Crime”, was published and re-freshed on August 2nd, 2024, by the Toronto Police Service (City of Toronto 2024). The Toronto Police Service publishes various datasets on public safety to inform the public about safety issues (Toronto Police Service 2023). Data on crime victims is included in the Toronto Police Service’s Annual Statistical Report, which also covers reported crimes, searches of persons, firearms, and the Police Service’s budget (Toronto Police Service 2023). The data is collected using historical arrest data in the City of Toronto to report on the victim’s age, reported year, gender, and the type of crime. It then counts the number of people who fit these categories into a single entry. Following the Municipal Freedom of Information and Protection of Privacy Act, the Toronto Police Service ensures to protect the privacy of individuals involved in the reported crimes when publishing the data. The dataset is updated annually, is open data, and can be used if an attribution statement Section A.3 and is properly cited (City of Toronto, n.d.b).

The variables of interest in the paper are CrimeType (named SUBTYPE in the original dataset), which categories the type of crime into the four areas of Assault, Sexual Violation, Robbery and Other; AssaultType (named ASSAULT_SUBTYPE in the original dataset), which specifies assault on peace officers into the subtypes noted in Section 1; Sex (named SEX in the original dataset) - which is broken down into Male, Female and Unknown, where Unknown means the victim’s sex is not known by the Toronto Police Service; and Count (named COUNT in the original dataset), which counts the number of identified victims who share the same demographic characteristics previously. Each entry in the dataset does not represent a unique person but notes the number of people who share the same characteristics, such as Sex and CrimeType. Other characteristics such as age group, reported year and age cohort were not variables of interest for the study and were removed from the cleaned dataset. Using knitr (Xie 2024), the first 10 lines of the cleaned dataset is shown in Section A.4 under Table 1. In addition, summaries of the Sex and Year variables are displayed in Section A.5.

The paper uses the R programming language (R Core Team 2023) to analyze the dataset. The tidyverse package was used to simulate the dataset. Also, the tidyverse (Wickham et al. 2019) and opendatatoronto (Gelfand 2022) packages were used to download the Victims of Crime dataset. Then, the tidyverse (Wickham et al. 2019) package was used to clean the raw dataset and generate tests. Finally, ggplot2 (Hadley Wickham 2016), tidyverse (Wickham et al. 2019), knitr (Xie 2024) and scales (Wickham, Pedersen, and Seidel 2023) packages were used to create the tables and graphs to display the results.

2.2 Results

After loading the dataset using the R programming language (R Core Team 2023) and the here package (Müller 2020), I used the tidyverse (Wickham et al. 2019) package, and the ggplot2 (Hadley Wickham 2016) package to summarize our results. The R code to do so was adapted from Alexander (2023).

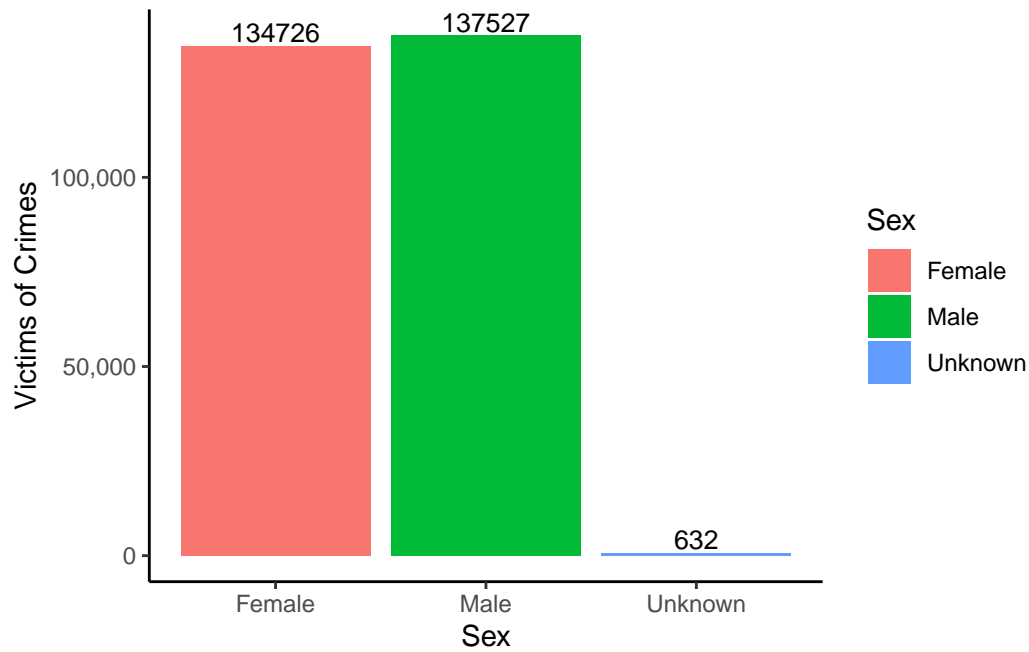


Figure 1: Victims of Crimes by Sex from 2014 to 2023

Figure 1 shows that there are 137,527 male crime victims from 2014 to 2023 and 134,726 female ones, representing a difference of 2,801 people or 2.1%.

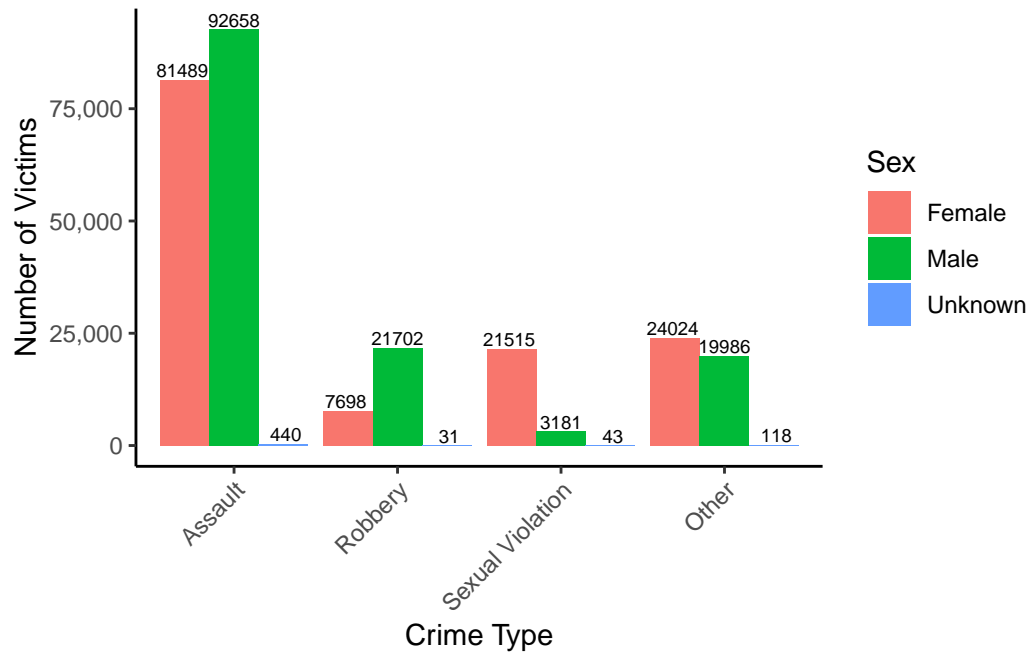


Figure 2: Breakdown of Different Categories of Crime by Gender from 2014 to 2023

Figure 2 shows that while there are more assault and robbery male victims, the number of female victims for sexual crimes and other crimes remain significantly higher than male ones. Female victims outnumber males by 78% in sexual crimes and by around 9% in other crimes.

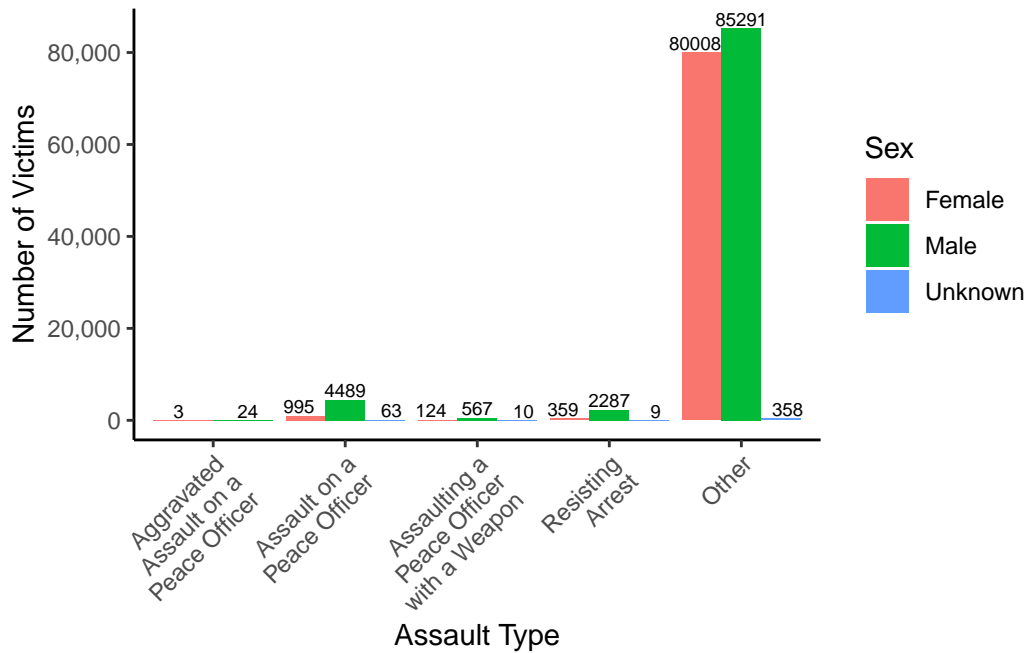


Figure 3: Victims of Crimes by Assault Type from 2014 to 2023

Figure 3 shows that even after breaking assault category into multiple subcategories, there are more male assault victims than female ones across all subcategories of assault. The specified assault subcategories are specific crimes against police officers and the Other subcategory is the most prevalent subcategory.

3 Discussion

3.1 Main Findings

Figure 1 showed that there were 2.1% more total reported male crime victims than female ones. However, when we break this down, the number of female victims outnumber males by 78% and 9% for sexual and other crimes, respectively. Further, when dissecting assault victims, male victims outnumber female ones across all specified assault subcategories.

Analyzing the data underscores that vulnerability to specific crimes varies by sex. Figure 2 underscores that women are more susceptible to gender-based violence such as sexual assault or harassment. The paper's findings are corroborated by Cotter at the national level, where he highlights that approximately 4.7 million, or 30%, of all women aged 15 or older have been sexually assaulted outside of an intimate relationship at least once (Cotter 2021). The data in Figure 2 shows that, from 2014 to 2023, there were 21,515 instances of sexual violence to women in the city of Toronto and only 3,181 for men, a disproportionate difference.

However, Figure 2 suggests that men are also more susceptible to being victims of assault and robbery compared to women, as there were 11,169 more male assault victims than female one. In addition, when broken into different categories, Figure 3 highlights that there are more male victims across all subsections of assault than female victim. Figure 3 also notes that most crimes in assault are not to police officers but fall under a more broad group of assault charges. Because assault is the most common category of crime in Toronto, the 2% difference between male and female victims in Figure 1 is fueled by the difference underlined in the assault category. Overall, the data analyzed today shows that both sexes are susceptible to different crimes. While males represent a greater proportion of total crime victims, women are disproportionately affected in sexual crimes.

3.2 Implications

The result of this study has numerous implications in policy making, victim support, and overall social justice initiatives. Most importantly, the results highlights the differences in crime victimization between sexes, such as women to sexual crimes or men to assault. In particular, the results are important to municipal policy makers designing legal protections, interventions and support services, which is important for aiding victims (Council of Europe 2024). Further, understanding the specific crimes that affect different sexes will empower victim support services in designing targeted and effective. While further study is needed to evaluate the different sexes' responses to crimes, the study still highlights these differences in the meaningful way that is specific to the Toronto community. Ultimately, the study's findings prompt broader discussion about systemic issues such as misogyny and toxic gender roles, as well as their effects on the community (Canadian Women's Foundation 2023). Overall, there are various legislative and social implications of the study that are relevant to Toronto.

3.3 Limitations and Next Steps

When working with the dataset, there are a few limitations and next steps to keep in mind. First, the data may have some duplicates because the Count could include the same person if they were victimized for the same offence during the same period. In addition, the dataset does not breakdown the Other category into specific crimes, making it difficult to analyze fatal victims of crime. Similarly, the data set does not distinguish or note the severity of crime, generalizing them into broad categories, which makes it difficult to show that women in Toronto are more susceptible to more fatal crimes. For example, research by the Government of Canada suggests that women are more susceptible to Intimate Partner Violence (IPV), such as being choked, assaulted, or sexually assaulted (Cotter and Savage 2019). Further research should investigate not only fatal crimes such as manslaughter and murder, but also whether women in Toronto are more vulnerable to IPV than men, a key area in gender-based violence.

A Appendix

A.1 Dataset and Graph Sketches

Sketches for the desired data set and the graphs are available in the GitHub Repository.

A.2 Data Cleaning Methodology

Select columns from the raw data set were filtered out and data entries were renamed for clarity purposes.

A.3 Data Attribution Statement

“This data contains information licensed under the Open Government License - Toronto” (City of Toronto, n.d.b).

A.4 Data Sample

Table 1: First 5 Rows of Cleaned Data

| id | Year | CrimeType | AssaultType | Sex | Count |
|----|------|-----------|----------------------------|---------|-------|
| 1 | 2019 | Assault | Assault on a Peace Officer | Female | 4 |
| 2 | 2019 | Assault | Resisting Arrest | Female | 2 |
| 3 | 2023 | Assault | Other | Unknown | 7 |
| 4 | 2023 | Assault | Other | Female | 490 |
| 5 | 2019 | Other | N/A | Male | 311 |

A.5 Summary Statistics

Table 2: Number of Crimes per Year

| Year | Total Victims |
|------|---------------|
| 2014 | 25339 |
| 2015 | 26876 |
| 2016 | 27308 |
| 2017 | 28161 |
| 2018 | 28807 |
| 2019 | 28991 |
| 2020 | 24436 |
| 2021 | 25192 |
| 2022 | 27883 |
| 2023 | 29892 |

Table 3: Number of Victims by Sex

| Sex | Total Victims |
|---------|---------------|
| Female | 134726 |
| Male | 137527 |
| Unknown | 632 |

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