Analyzing Patterns of Hate Crimes in Toronto*

The Majority of Hate Crimes Target Jewish Individuals

Sakura Hu

September 27, 2024

This paper explores the issue of hate crimes in Toronto and their underlying causes, highlighting the urgent need for societal awareness and intervention. Utilizing a dataset of hate crime incidents, we employed statistical methods to analyze the counts attributed to various bias categories. Our findings reveal that the majority of hate crimes are directed toward Jewish individuals, with a concerning trend of increasing occurrences over the years. These results underscore the importance of understanding hate crimes to inform policies and initiatives aimed at fostering inclusivity and reducing discrimination in our communities.

1 Introduction

Hate crimes are criminal offenses directed at individuals or property, driven by bias, prejudice, or hatred based on factors such as race, ethnicity, language, religion, gender, sexual orientation, disability, or other similar characteristics (Toronto Police Service, 2024). These crimes are a serious societal issue, as they target specific groups and reinforce divisions. In recent years, cities like Toronto have witnessed a rise in reported hate crimes, prompting a need to analyze the underlying causes and trends (The Canadian Press, 2024). Understanding the motivations behind hate crimes and identifying the most affected communities is critical for developing targeted prevention strategies and fostering a more inclusive society.

This paper employs a dataset of reported hate crimes in Toronto to investigate the patterns and motivations behind these offenses. By analyzing demographic groups that are most frequently victimized, this research aims to uncover trends of bias and discrimination that persist in the community. The findings indicate that Jewish individuals are disproportionately targeted, with a concerning increase in hate crime occurrences each year. This pattern not only reflects existing societal prejudices but also raises alarms about the broader implications for community safety and cohesion.

*Code and data are available at: https://github.com/xycww/Hate_Crime_In_Toronto

The significance of this study lies in its potential to inform policymakers, law enforcement, and the general public about the prevalence and nature of hate crimes in Toronto. By addressing the root causes of these offenses, stakeholders can implement effective strategies to reduce their occurrence and protect vulnerable communities.

The remainder of this paper is structured as follows: Section 2.1 discusses the data sources and variables used in the analysis; Section 2.2 presents the results, including visualizations of key trends and a discussion of the findings. Section 3.1 in the appendix outlines the data cleaning process; Section 4 include a list of reference.

2 Data

2.1 Data Overview

The dataset used for this analysis is sourced from Open Data Toronto (Gelfand, 2022), specifically from the Toronto Police Service's verified hate crime occurrences. It records all confirmed hate crimes that have been investigated by the Hate Crime Unit since 2018, categorized by various types of bias. The dataset contains 1,350 observations and 25 variables. It is important to note that only verified hate crimes are included, while unfounded incidents or those classified merely as hate incidents are excluded.

The dataset serves an important societal purpose, providing communities with detailed information to enhance public safety and awareness about hate crimes in Toronto. The data categories, referred to as bias categories, capture various dimensions of prejudice that are present in hate crimes. These categories allow researchers to analyze the prevalence of bias in different forms, offering a structured view of hate crime patterns over time.

This dataset is essential for understanding hate crimes within the city, but it also comes with ethical considerations. Each data point represents a real-world event, requiring acknowledgment of the harm experienced by individuals and communities affected by these crimes. Additionally, the dataset only includes confirmed hate crimes, representing cases where sufficient evidence was gathered (Toronto Police Service, 2024). While this enhances the reliability of the data, it also limits the analysis to known and proven crimes. Furthermore, the geographic locations of the incidents are aggregated to the neighborhood level to protect the privacy of the victims and communities involved (Toronto Police Service, 2024).

The dataset was prepared, cleaned, and analyzed using R (R Core Team, 2022) with the following libraries: opendatatoronto (Gelfand, 2022) for accessing the data, tidyverse (Wickham et al., 2019), dplyr (Wickham et al., 2023) for data manipulation, and ggplot2 (Wickham, 2016) for visualizations. Additionally, knitr (Xie, 2023a) was used for report generation, and styler (Müller et al., 2024) ensured the R code was properly styled.

The cleaned data that is used for analysis is composed of 10 variables:

- **EVENT_UNIQUE_ID**: A unique identifier for each offense.
- **OCCURRENCE_YEAR**: The year in which the offense occurred.
- **MENTAL_OR_PHYSICAL_DISABILITY**: Whether the offense was based on the suspect's perception of the victim's mental or physical disability.
- **RACE_BIAS**: The race of the victim as perceived by the suspect.
- **ETHNICITY_BIAS**: The ethnicity of the victim as perceived by the suspect.
- **LANGUAGE_BIAS**: The Language spoken by the victim as perceived by the suspect.
- **RELIGION_BIAS**: The religion of the victim as perceived by the suspect.
- **SEXUAL_ORIENTATION_BIAS**: The sexual orientation of the victim as perceived by the suspect.
- **GENDER_BIAS**: The gender of the victim as perceived by the suspect.
- **LOCATION_TYPE**: The type of location where the crime occurred (e.g., public space, residence).

Alternative datasets were considered but ultimately not used. This dataset, published by the Toronto Police Service, provides verified, official data on hate crimes, making it more reliable than unofficial sources. The official nature of the data strengthens the credibility of the analysis, allowing for a more accurate reflection of hate crime occurrences and bias trends in Toronto.

2.2 Data Analysis

Table 1: Summary Statistics

Year	Race	Ethnicity	Religion	Gender	Sexual Orientation	Disability	Total
2018	28	15	81	11	19	0	154
2019	31	15	71	12	23	0	152
2020	69	36	95	5	21	2	228
2021	114	27	96	21	34	1	293
2022	95	29	99	17	40	0	280
2023	91	46	185	12	60	0	394
Total	428	168	627	78	197	3	1501

Table 1 provides a detailed summary statistic of the cleaned data, illustrating the number of hate crimes committed each year, categorized by specific bias types, along with the total occurrences for each category and the overall total of hate crimes annually. The table indicates that, on average, there are approximately 250 hate crime incidents reported each year in Toronto over the past six years. Notably, incidents motivated by religious bias consistently represent the highest proportion among the various bias types, underscoring a significant area of concern for community safety and policy interventions.

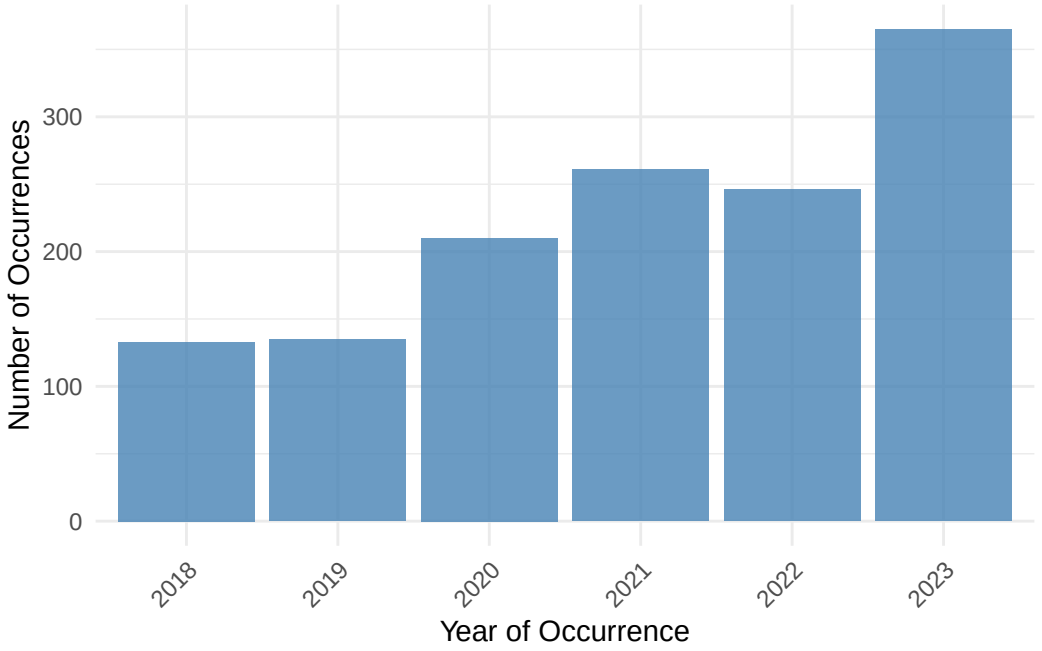

Figure 1: Occurrences of Hate Crimes by Year

Figure 1 illustrates the annual occurrences of hate crimes from 2018 to 2023. The data indicates a clear upward trend in the number of reported hate crimes over this period. Starting from approximately 154 occurrences in 2018, there is a steady increase each year, culminating in a significant rise to over 394 occurrences in 2023.

This trend may suggest a growing prevalence of hate crimes within the Toronto, possibly influenced by various social, political, and economic factors. Additionally, it could reflect an increase in public awareness and reporting of such incidents, as societal attitudes toward hate crimes continue to evolve. This increase raises important questions about the underlying causes and necessitates further investigation into the factors contributing to the rise in these offenses.

Overall, the increasing trend in hate crime occurrences highlights the importance of ongoing efforts in awareness, prevention, and intervention strategies to address the root causes of hate-driven behavior in society.

Figure 2 presents the total occurrences of hate crimes over the past six years, categorized by the type of bias involved. The data reveals that hate crimes motivated by ethnicity bias are the most frequently reported, underscoring significant concerns for ethnically targeted offenses within the community. In contrast, hate crimes related to disability bias are notably under-reported.

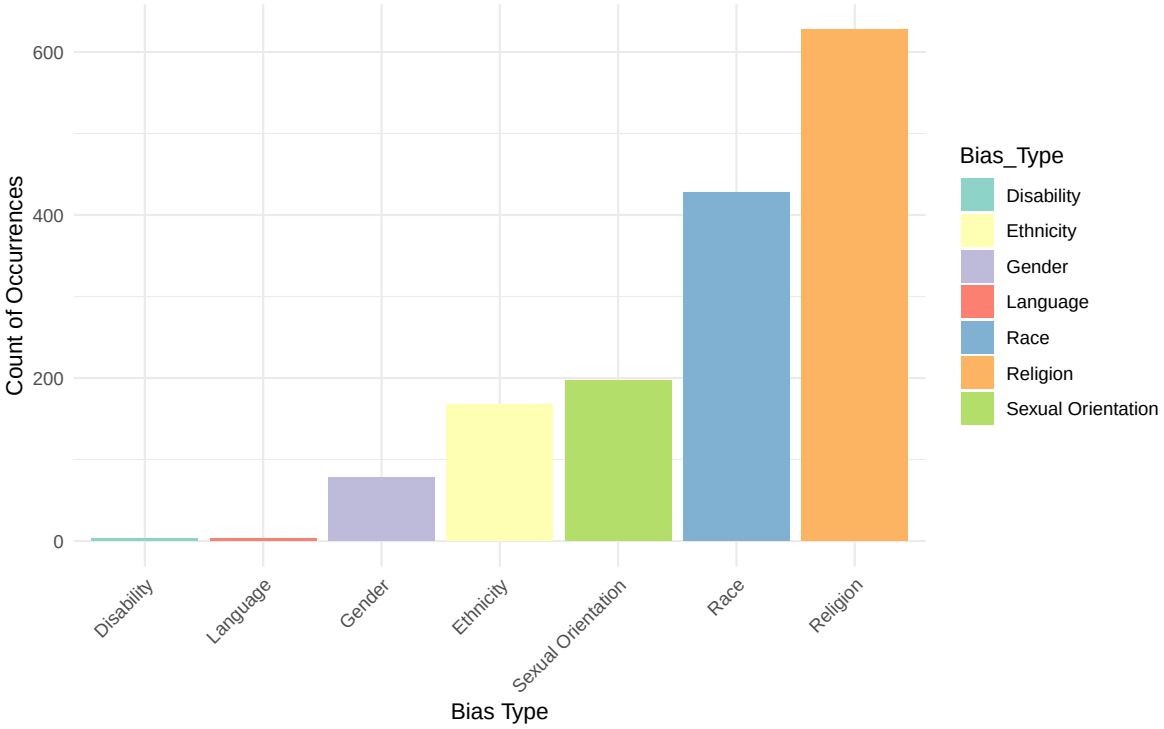

Figure 2: Count of Occurrences Based on Different Bias Types

This discrepancy may not solely reflect the actual prevalence of such crimes; rather, it also highlights potential biases in measurement and reporting. While hate crimes based on ethnicity can often manifest as attacks on community spaces, disabled individuals frequently experience isolation, lacking the community structures that might support them in reporting incidents (Healy, 2015). This isolation can lead to under-reporting of hate crimes, as many victims may not feel a sense of community or empowerment to come forward (Healy, 2015). Additionally, the unique barriers faced by individuals with disabilities, including fear of stigma and difficulties accessing reporting mechanisms, compound this issue (Healy, 2015).

Additionally, the low reporting of hate crimes motivated by language bias also highlights potential biases in measurement and reporting. Many people may associate language with ethnicity, leading them to prioritize ethnicity over language in their perceptions of hate crimes. This tendency can obscure the realities faced by victims of language bias, further complicating the understanding of hate crime dynamics.

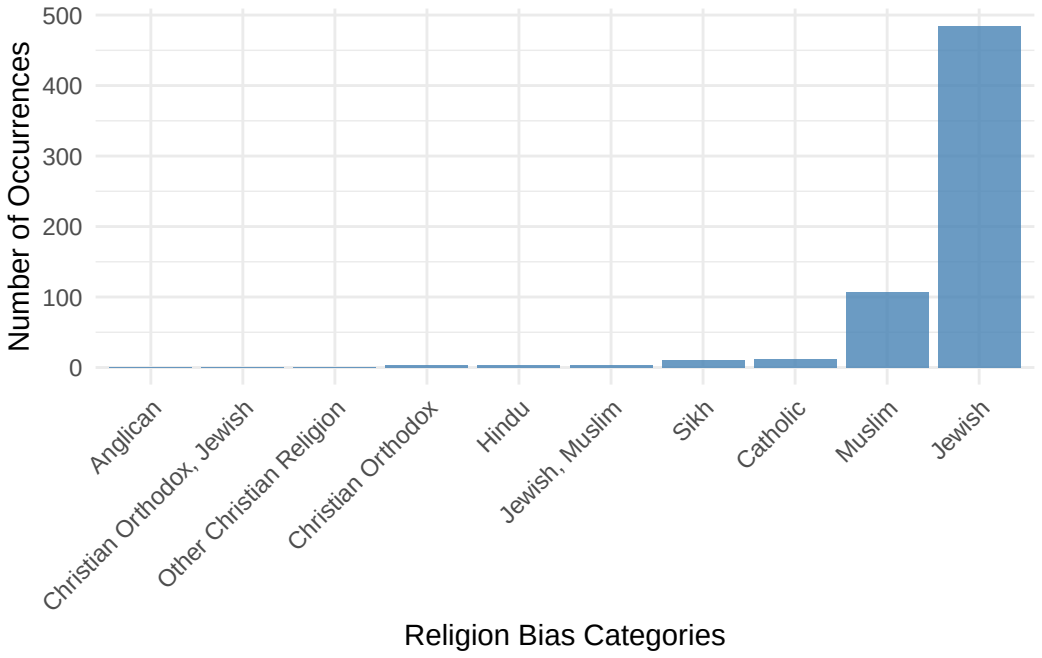

Figure 3: Occurrences of Hate Crimes by Religion Bias

Figure 3 illustrates the occurrences of hate crimes categorized by different religion bias types. The data reveals that, while a significant portion of hate crimes is directed toward individuals based on religion, Jewish individuals are disproportionately affected, facing the highest number of reported incidents. This trend underscores a critical concern regarding the targeting of Jewish communities, which highlights the ongoing issues of anti-Semitism within society.

Figure 4 displays the percentage of hate crimes targeting Jewish individuals compared to other religious groups since 2018. The data reveals fluctuations in the proportion of hate

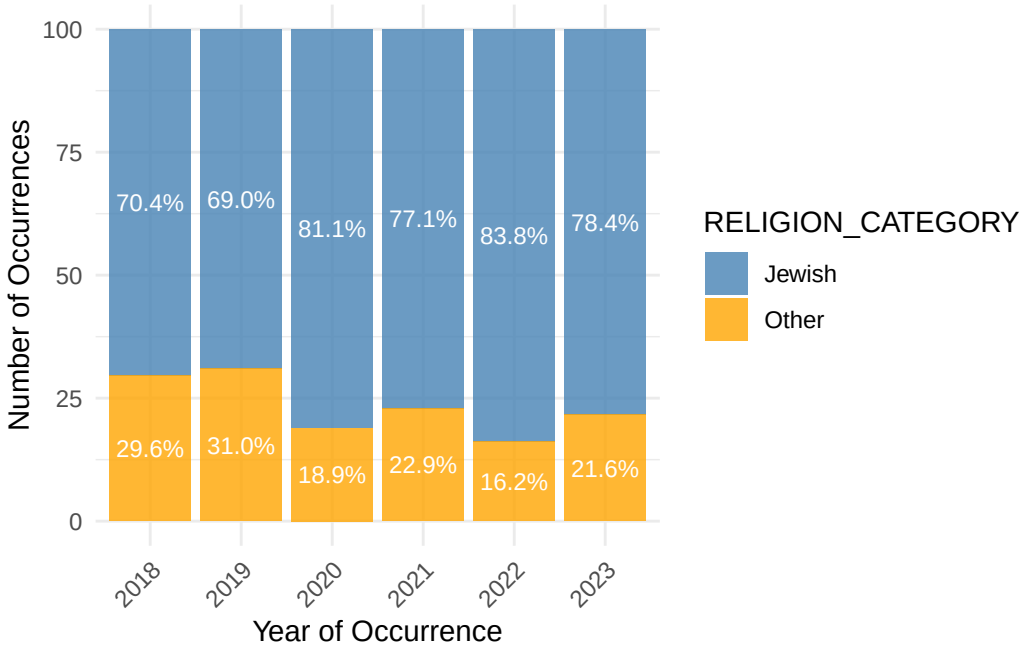

Figure 4: Trends in Hate Crimes by Religious Bias: Jewish vs. Other Religions

crimes directed toward Jewish people. Specifically, the percentage has varied, with notable increases in certain years—rising from 70% in 2018 to 83% in 2022, followed by a slight decline to 78% in 2023. While this does not indicate a steady increase, it highlights consistent high levels of hate crimes against Jewish individuals, with occasional variations across the years. This trend suggests a sustained and significant targeting of the Jewish community.

Figure 5 illustrates the distribution of hate crimes against Jewish individuals across various locations. The data reveals that a significant portion of these offenses occur in educational institutions, particularly schools, indicating that Jewish students and staff may be especially vulnerable in these settings. This highlights a pressing concern regarding the safety and well-being of Jewish individuals within the educational environment.

In contrast, hate crimes reported at cultural centers are considerably less frequent. This suggests that these venues, which often function as community hubs for Jewish populations, may offer a safer atmosphere or are less likely to be targeted for such offenses.

The stark difference between the frequency of hate crimes in schools compared to cultural centers prompts critical questions regarding the factors that contribute to these disparities. Understanding the dynamics of these environments can guide targeted initiatives aimed at enhancing safety and raising awareness in high-risk areas, particularly schools, where Jewish individuals face heightened risks of victimization.

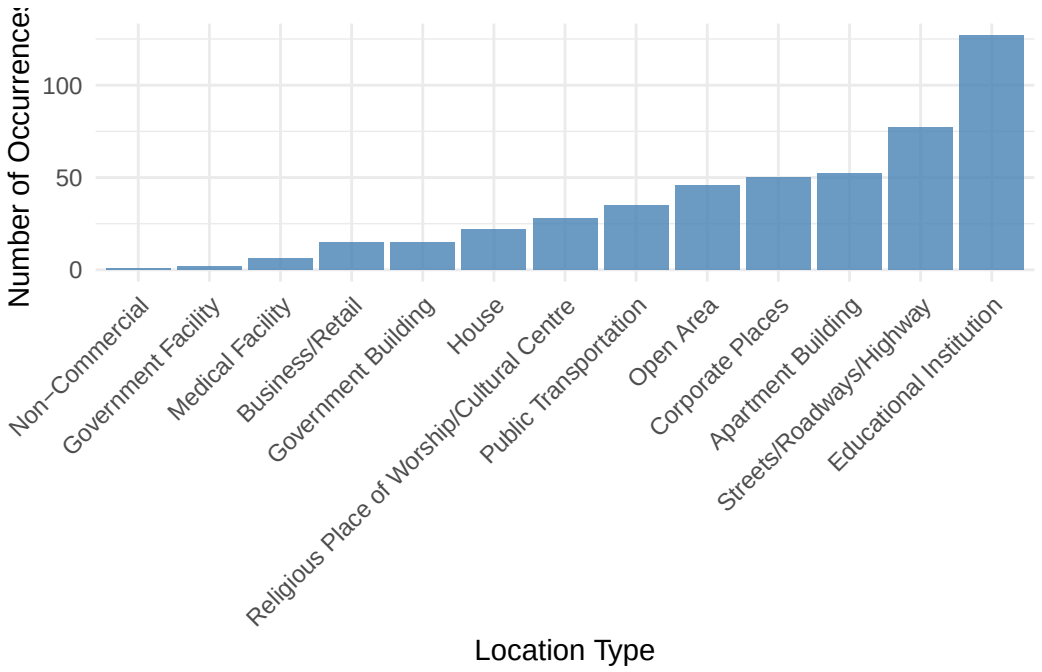

Figure 5: Distribution of Hate Crimes Against Jewish Individuals by Location Type

Appendix

3 Additional data details

3.1 Data Cleaning

The dataset underwent a series of cleaning steps to ensure its relevance and consistency for analysis. Several variables were removed due to their irrelevance to the current study. Notably, the AGE_BIAS variable was eliminated because it contained only the constant value "None," suggesting that hate crimes are rarely motivated solely by the victim's age.

Additionally, the MENTAL_OR_PHYSICAL_DISABILITY variable was updated to replace "No" with "None" to maintain consistency with the other bias categories. While no new variables were created, these cleaning processes ensured that the dataset was aligned and prepared for an analysis focused on the primary bias categories.

To handle missing values in the location type column, rows with NAs in this variable were removed for analyses specifically related to location type. However, these rows were retained for analyses that did not pertain to location type, allowing for a more comprehensive examination of the data.

4 References

R Core Team. (2023). R: A language and environment for statistical computing. R Foundation for Statistical Computing. https://www.R-project.org/

Gelfand, D. (2022). opendatatoronto: Access Open Data Toronto Datasets (R package version). https://CRAN.R-project.org/package=opendatatoronto

Wickham, H., Averick, M., Bryan, J., Chang, W., D'Agostino McGowan, L., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T. L., Miller, E., Bache, S. M., Müller, K., Ooms, J., Robinson, D., Seidel, D., Spinu, V., Vaughan, K., Wilke, C., Takahashi, K., & Dunnington, D. (2019). Welcome to the tidyverse (R package version). https://CRAN.R-project.org/package=tidyverse

Wickham, H., François, R., Henry, L., & Müller, K. (2023). dplyr: A grammar of data manipulation (R package version 1.1.2). https://CRAN.R-project.org/package=dplyr

Wickham, H. (2016). ggplot2: Elegant graphics for data analysis. Springer-Verlag New York. https://ggplot2.tidyverse.org

Xie, Y. (2022). knitr: A general-purpose package for dynamic report generation in R (R package version 1.40). https://yihui.org/knitr/

Müller, K., Walthert, L., & Patil, I. (2022). styler: Non-invasive pretty printing of R code (R package version 1.40). https://CRAN.R-project.org/package=styler

Healy, J. (2015). Why don't we recognise Disability Hate Crime? International Network for Hate Studies. https://internationalhatestudies.com/dont-recognise-disability-hate-crime/

The Canadian Press. (2024). Hate crimes in Toronto up nearly 55% over last year: Police. CBC News. https://www.cbc.ca/news/canada/toronto/toronto-hate-crime-stats-1.7245301