Trends and Challenges in Toronto's Homeless Population (2018-2024)*

A Focus on Demographics and Chronic Homelessness

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September 24, 2024

This paper explores Toronto's homeless population from 2018 to 2024, focusing on age, gender, and chronic homelessness trends. The data reveal a decline during the pandemic, followed by a rebound, with males and individuals aged 35-44 making up the majority. The number of chronically homeless also increased significantly. These findings highlight the need for targeted interventions to address chronic homelessness and improve housing policies.

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*Code and data are available at: https://github.com/JianingLi1225/Toronto_Homeless

1 Introduction

Homelessness is a growing global concern, especially with rapid urbanization and the housing crisis. As Canada's largest city, Toronto faces a growing homeless population(Richard et al. 2024). In addition to being a socio-economic issue, homelessness intersects with public health and social justice(Sleet and Francescutti 2021). Understanding the trends and composition of the homeless population is critical to effective policymaking. However, existing data often lack detailed categorization, hindering a full understanding of the needs of specific groups. This study seeks to fill this gap.

Using the "Toronto Shelter System Flows" dataset form Toronto Open Data Platform(Toronto Shelter & Support Services 2024), this paper examines trends in Toronto's homeless population from 2018 to 2024, focusing on age, gender, and chronic homelessness. Our analysis reveals a decline during the pandemic, followed by a rebound, with males and the 35-44 age group comprising the majority. The number of chronically homeless people continues to grow, providing important insights for policymakers.

In this essay, Section 2.1 explains the background and necessity of using this dataset, followed by an explanation of the variables mentioned and the methods used. Section 2.2 shows the changes in the number of homeless population and the proportion of each age group, gender and chronic homelessness. Graphs and related explanations are provided. Section 3 further analyses the information presented in the graphs.

2 Data

2.1 Overview

The dataset used for this analysis is the "Toronto Shelter System Flows" dataset from the Toronto Open Data Platform (Toronto Shelter & Support Services 2024). Similar datasets available on the City of Toronto's Open Data Catalogue include Daily Shelter & Overnight Service Occupancy & Capacity and Daily Shelter Occupancy(City of Toronto, n.d.). However, these datasets only provide an overview of shelter usage without categorizing the homeless population using the shelters. As a result, they were not used in this analysis.

This dataset shows the total number of homeless people entering and exiting shelters each month from 2018 to September 2024, as well as the number of different age groups and genders. It also shows the number and proportion of chronic homeless, refugees, youth, single adults, and families in the total homeless population. These data are updated monthly and reflect the latest trends in Toronto's homeless population and shelter system(Toronto Shelter & Support Services 2024).

The variables of interest in this analysis vary by age group (Under 16, 16-24, 25-34, 35-44, 45-54, 55-64, 65 and over) and gender (Male, Female, Transgender/Non-Binary), as well as Chronic

and All populations. According to Toronto Shelter & Support Services (2024), Chronic refers to those who, according to the federal government's definition of chronic homelessness, meet one of the following two criteria: first, stayed in a shelter for at least 180 nights in the past year; and second, stayed in a shelter multiple times in the past three years, totaling at least 546 cumulative nights. All populations refers to the total number of homeless persons covered in the report without any demographic breakdown.

All processes are performed through the R language(R Core Team 2023). Data is simulated and tested using the `tidyverse`(Wickham et al. 2019) packages , and data is downloaded through the `tidyverse`(Wickham et al. 2019) and `opendatatoronto`(Gelfand 2022) packages. The `tidyverse`(Wickham et al. 2019) packages are also used for data cleaning, removing unneeded variables and renaming variables. In addition to these parcels mentioned, the `ggplot2`(Wickham 2016), `dplyr`(Wickham et al. 2023) and `tidyr`(Wickham, Vaughan, and Girlich 2024) packages are used when plotting the graphs.

2.2 Results

In this section, the dataset is first loaded in the R programming language(R Core Team 2023) and the dates in the data are converted into a suitable format. Then, the change in the total homeless population over time, the percentage of each age group and gender and the change in the number and percentage of chronic homeless population over time were presented in the form of graphs. The `ggplot2` (Wickham 2016), `dplyr` (Wickham et al. 2023) and `tidyr` (Wickham, Vaughan, and Girlich 2024) packages were utilised in drawing the graphs in the R programming language, and the code was done with the help of Chatgpt, which is also referred to Alexander (2023).

Figure 1 illustrates the fluctuation in Toronto's homeless population from 2018 to 2024. The chart shows cyclical rises and falls, with more pronounced declines around 2020 and 2021, followed by a steady increase.The population reaches its highest point in 2024. Throughout this period, the homeless population varies between approximately 7,500 and 11,000 individuals.

Figure 2 shows the percentage of Toronto's homeless population in each age group as a proportion of the total homeless population from 2018 to 2024. The largest age group is 35-44 years old, accounting for about 21% of the total population, followed by the 25-34 age group (approximately 18%), the 45-54 age group (approximately 17%), and the 55-64 age group (approximately 14%). The under 16 and 16-24 age groups each account for 12%. The smallest age group is 65 years and above, making up about 7% of the total population.

Figure 3 presents the gender distribution of Toronto's homeless population from 2018 to 2024. During this period, males have consistently made up the largest proportion, accounting for approximately 61.8% of the total homeless population. Females make up about 36.8%, while non-binary individuals make up about 1.4%.
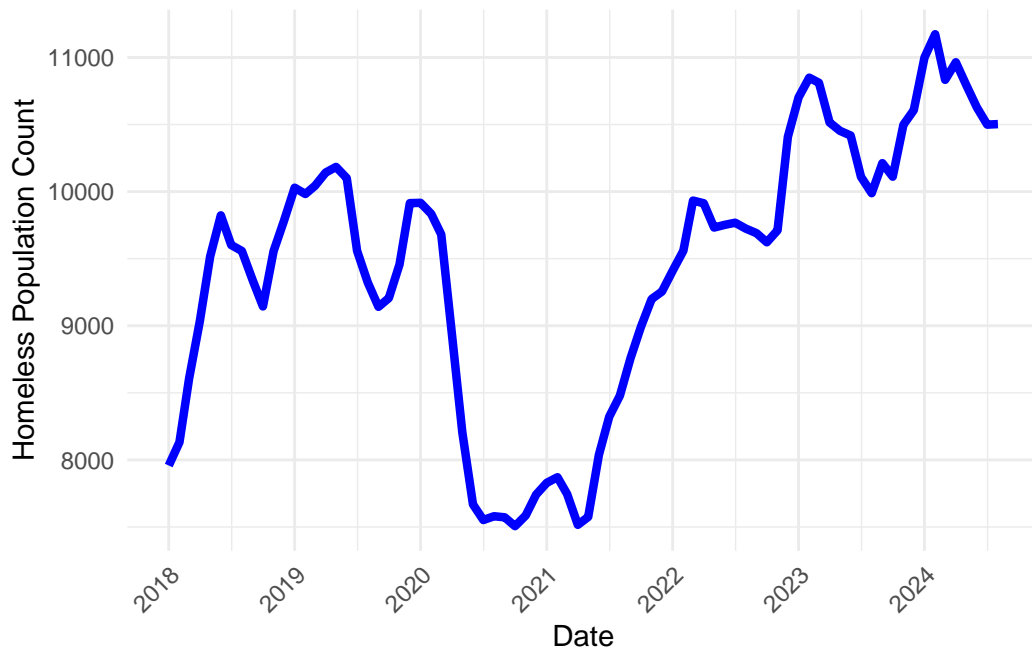
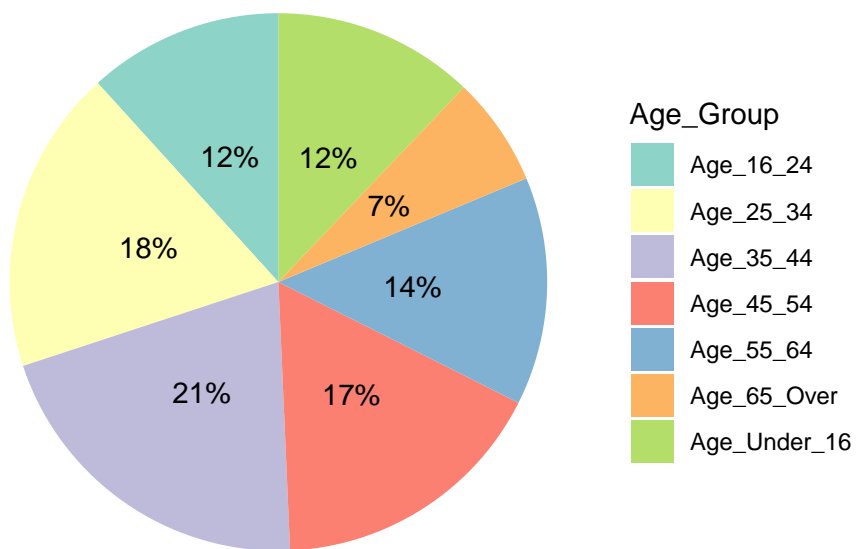Figure 1: Trend of Homeless Population in Toronto from 2018 to 2024

Figure 2: Age Group Distribution of Homeless Population in Toronto (2018-2024)
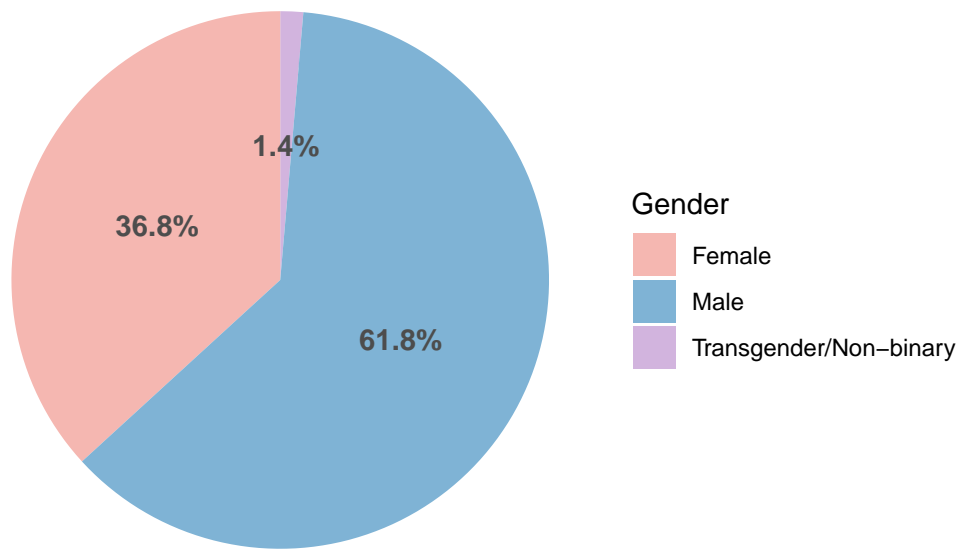
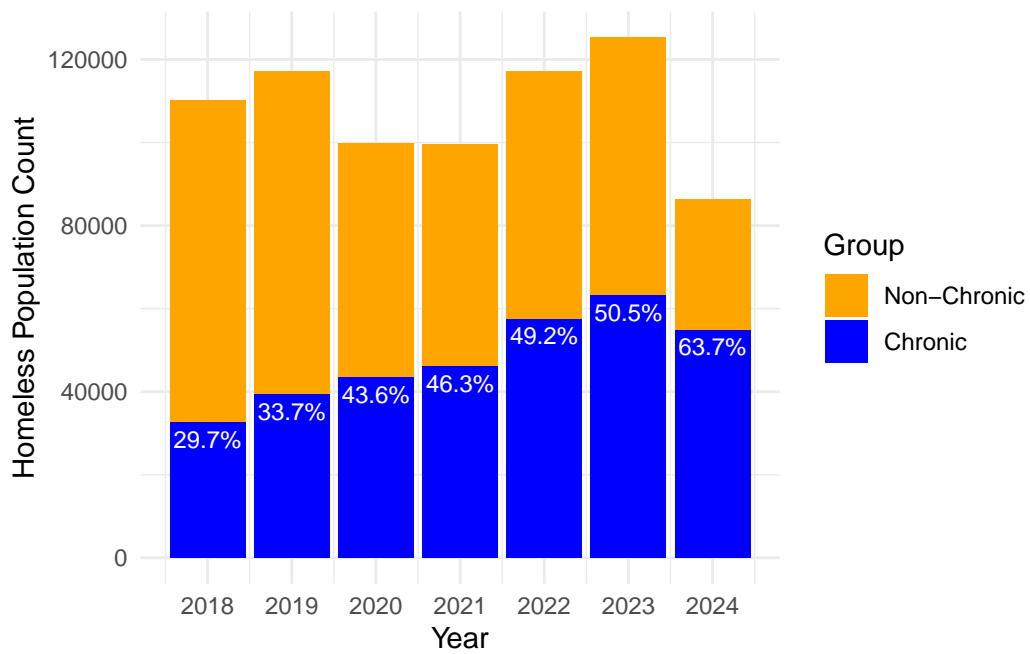Figure 3: Homeless Population by Gender in Toronto (2018-2024)

Figure 4: Changes in Chronic and Non-Chronic Homeless Population and Proportion in Toronto (2018-2024)

The Figure 4 displays the changes in the number and proportion of chronic and non-chronic homeless people in Toronto between 2018 and 2024. The number of chronically homeless has been growing over this time, with over 30,000 people in 2018, and by 2023, the number has gone to about 60,000, nearly doubling. the slight drop in numbers in 2024 is due to the fact that the statistics were last updated on September 17, 2024, and it is projected that by the end of the year, the number will have exceeded the 2023 one. Similarly, the percentage of chronically homeless is growing every year, from 29.7% in 2019 to 63.7% in 2024. Note that in 2019 to 2020 and 2023 to 2024, the rate grows faster, by about 10 percent.

3 Discussion

3.1 Overview of Homeless Trends (2018-2024)

In Section 2.2 trends in Toronto's homeless population from 2018 to 2024 are presented, focusing on key factors such as age, gender, and chronic versus non-chronic conditions. The homeless population fluctuates significantly, being significantly impacted in specific years such as 2020 and 2021Figure 1, with males and the 35-44 age group making up the majority of the homeless populationFigure 2, and chronic homelessness showing an increasing trendFigure 4.

3.2 Impact of COVID-19 on Homelessness

The homeless population declined significantly in 2020 and 2021, likely due to COVID-19. To meet social distancing requirements, the Toronto government reduced shelter capacity and opened temporary shelters, including additional spaces in hotels and motels(May and Shelley 2023). These actions may explain the drop during these years. However, the rebound in homelessness afterward suggests that issues like housing affordability and lack of social support remain unresolved, highlighting the need for sustainable long-term solutions.

3.3 Demographic and Chronic Homelessness Insights

An analysis of age, gender, and chronic homelessness provides key insights into Toronto's homeless population. Homelessness is concentrated among working-age adults, especially those aged 35-44 and 25-34, likely due to challenges with employment or housing stability. In terms of gender, males consistently make up the majority, while non-binary individuals account for only 1.4%. This suggests shelters should consider different designs for men and women, while also addressing the needs of non-binary individuals, despite their smaller numbers. The rise in chronic homelessness suggests that existing measures are not enough to help people exit homelessness permanently.

3.4 Weaknesses and next steps

A limitation of this analysis is that the data analyzed does not reflect the entire Toronto homeless population. The database used only includes people who use City of Toronto-funded overnight shelter services and fails to reflect people who spend the night outdoors or use other homeless services. According to the most recent Street Needs Assessment, approximately 18% of the homeless population is not included in the data(Toronto Shelter & Support Services 2024).

Future directions for improvement should include expanding the data scope of the analysis to include people who spend the night outdoors and use shelters that are not funded by the Government of Toronto, in order to provide a more complete picture of homelessness in Toronto. This will help fill data gaps and support more effective policy decisions.

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