Accessing Homelessness Through the Lens of Homeless Shelters Across the Greater Toronto Area

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Increasing numbers of homeless shelter's overnight stay across different regions of the Greater Toronto Area suggests an increasing need to focus on homelessness and questioning the efficacy of existing policies. Regions experiencing greater increases in overnight stays between 2021 and 2023 have to be scrutinised even further in order for canada to reduce incidences of homelessness. Homelessness does not only affect those that are directly experiencing it. From how our tax dollars are used, healthcare resources, crime and safety, understanding the homelessness landscape would allow every individual to understand the ripple effects of homelessness in their own future.

1 Introduction

Homelessness has been an ongoing issue in Canada. Since April 1, 2019, the Government of Canada (2023) has began the initiative 'Reaching Home: Canada's Homelessness Strategy', aiming to reduce chronic homelessness by 50% before 2028. About $6.2 billion have been funded to this nationwide issue over the past 9 years. With a slew of policies addressing different categories of homelessness, this paper aims to analyse whether homelessness has improved since the approximate end of COVID in 2021.

Unfortunately, homelessness affects us all. Local communities with large homeless encampments may have concerns over safety and spreading of diseases due to the close nature of said encampments. Furthermore, taxpayer money is funnelled into project 'Reaching Home', therefore it is important to know that the money we earned is well spent on a project that is feasible to solve. However, the findings in this paper suggests that homelessness has not improved. In fact, is still increasing.

The remainder of this paper is structured as follows. Section 2 gives us insights about the dataset and the steps used in obtaining the dataset[1]. In Section 4, we will be validating the data with existing observations made across various web sources and performing our analysis of homelessness. Data cleaning and manipulation is performed on R programming language. (R Core Team 2023; Wickham et al. 2019)

2 Data

2.1 Measurement of Homelessness

This dataset offers us an insight to the daily count of overnight stays in different homeless shelters. Since we are interested in uncovering the landscape of homelessness, we would be interested in observing the daily overnight stays categorised by different groups such as regions where shelters are, the gender and age demographic of the particular shelter. By using daily overnight stays summarised by the various groups, we would be able to observe discrimination (if it exists) against any particular groups.

2.2 Original Data

Daily active overnight allied services and shelters data was collected in the Shelter Management Information System (SMIS) database from Toronto Shelter and Support Services (TSSS). Prior to 2021, TSSS has also collected data regarding homeless shelter counts. Since then, the TSSS has revised the curation of the dataset. Major revisions include…

- Overnight Service Type: Accounts for all overnight services instead of only those from shelter programs.
- Capacity Type: The new dataset distinguishes room based capacity and bed based capacity. This allows us to differentiate between homeless individuals and homeless families as room based capacity are geared towards households where the sleeping rooms are not shared by different families, while bed based capacity are characterised by a common and shared sleeping area. This prevents over reporting of the previous capacity of room based capacity.
- Two Measures of Capacity: The TSSS has since provided **Funding** capacity and **Actual** capacity. Funding capacity reports the *intended* number of rooms/beds available for a particular day. Actual capacity reports the *actual* number of rooms/beds provided for that day. Datasets prior to 2021 only included **Funding** capacity. Therefore, the **Actual** capacity would provide a more accurate representation of various program's overnight stay rates.

[1] data and code used for this article can be obtained on: https://github.com/Monoji77/Homelessness-In-Toronto

The previous dataset collected by the TSSS prior to 2021 cannot be used in this discussion because there were overnight programs that were not captured by in the database. Furthermore, the older datasets did not distinguish room-based stays and bed-based. With the newer dataset, we can further examine if there exists a difference between homeless households and homeless individuals. Overall, as the newer dataset provides data that resembles closer to the actual landscape of overnight homeless stays, only the newer datasets collected yearly from 2021 to present should be used. While data from 2024 is available, it is incomplete, therefore omitted from the analysis from this paper. This paper will solely analysize data from 2021 to 2023.

2.3 Data Cleaning

This paper uses tidyverse library from R to perform data manipulation and cleaning. (R Core Team 2023) While the original dataset captured many aspects of overnight stays in homeless shelters, we will be focusing on the general trends across various groups mentioned earlier. Therefore, we will be reducing 43 possible attributes to only

2.4 Data Attributes

The original dataset contains over 42 different attributes. However, for the analysis of these paper, we will be utilising the following 6 attributes and *service_user_count* as the response.

occupancy_date: date of record collected at 4AM EDT the following day. eg. Jan 01, 2021 would be the data collected on Jan 02, 2021 4AM EDT.

location_city: city where overnight service is occuring.

sector: type of homeless shelter. Possible classifications includes, 'adult men', 'adult women', 'mixed adult' (co-ed or all gender), 'youth' and 'family'.

program_area: classification on whether program is all year round or simply temporary due to an unexpected emergency.

service_user_count: a counter for homeless people/families using a particular overnight service in a given day.

capacity_actual_bed: actual number of beds available during the overnight service.

capacity_actual_room: actual number of rooms available during the overnight service.

3 Findings

3.1 Average overnight stays at homeless shelters across Greater Toronto Area has increased from 2021 to 2023.

Figure 1 shows that that from 2021 to 2023, all cities have increased levels of average daily overnight stays in their regions. Particularly for North York, We are able to observe a larger increase from 69 homeless overnight stays in 2021 to 139 homeless overnight stays in 2023. Table 1 summarises the percentage increase in average daily overnight stays across the different regions from 2021 to 2023.

Table 1: Percentage increase of average daily homeless stays from 2021 to 2023

City	Percentage
Etobicoke	+20%
North York	+100%
Scarborough	+40%
Vaughan	+4%

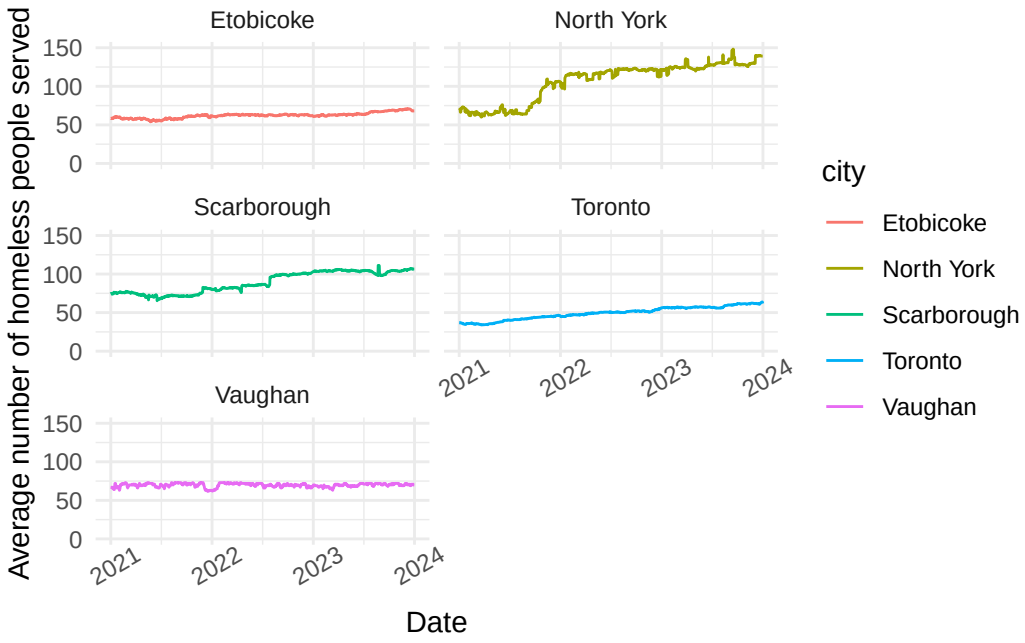

Figure 1: number of homeless people served from 2021 to 2023 across cities

3.2 Homeless families are the greatest contributers of the increase in overnight stays in North York from 2021 to 2023.

To figure out what may have caused a significant doubling of average daily overnight stays in North York, we can immediately reconcile what happened at various time periods from Figure 1 using Figure 2. According to the data presented in Figure 2, there was a big jump in the number of homeless families that are seeking overnight shelter services around the last quarter of 2021, with contributing increases from mixed adult and women homeless shelters as well.

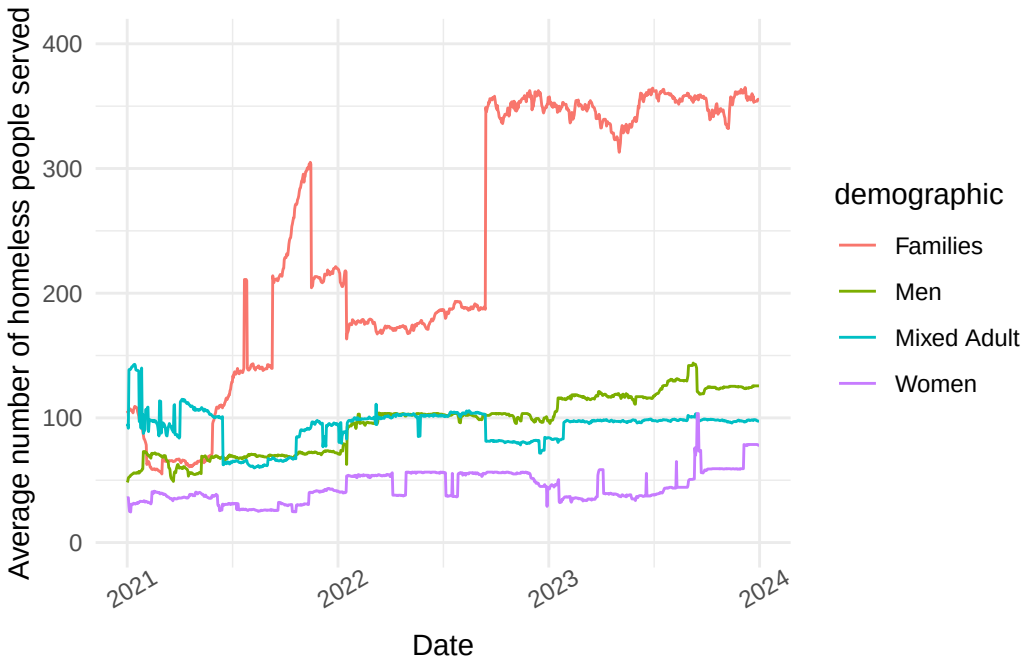

Figure 2: number of homeless people served from 2021 to 2023 across cities

3.3 Temporary Refugee response programs have an increasing number of homeless people occupying their shelters from 2021 to 2023.

According to Figure 3, the most interesting part of the plot is that refugees are the ones contributing most to homelessness across all regions, from 130 average daily overnight stays in 2021 to 250 average daily overnight stays in 2023, approximately a 92% increase.

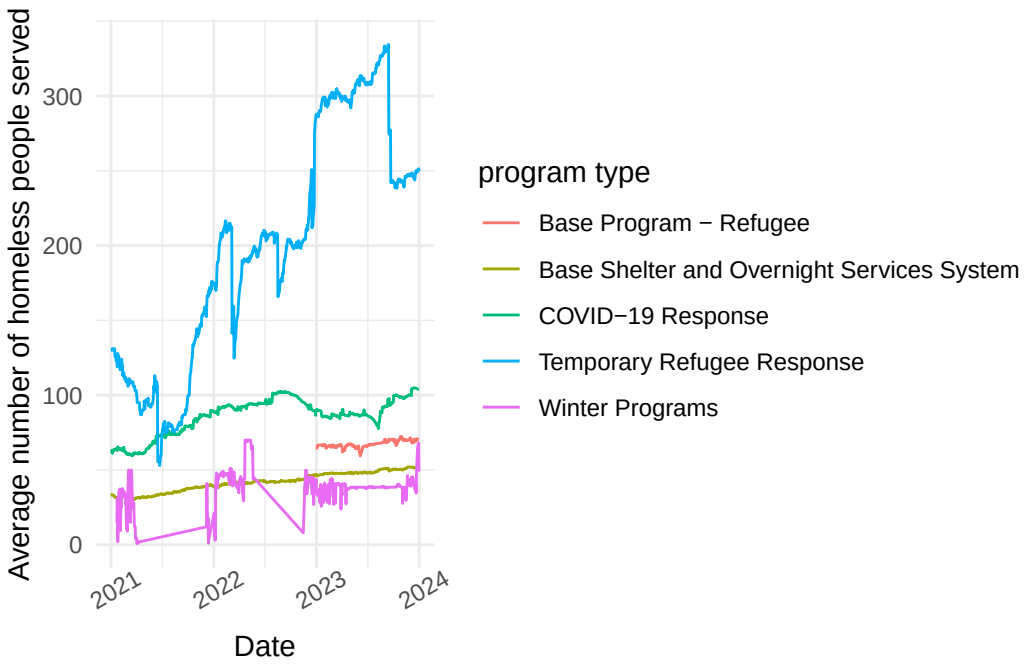

Figure 3: number of homeless people served from 2021 to 2023 across programs

4 Conclusion

The situation provided by this dataset immediately alerts us to the city of North York the number of homeless families serviced daily has increased from beginning of 2021 to the end of 2023. Andrew Palamarchuk North York Mirror (2023) posits that homeless shelters have filled up only after 4 days of it's launch back in 2022. This simple observation can be seen from Figure 1 under North York's scatter plot where there there were sporadic volatile increases in the first quarter of 2022. Unfortunately, not much research or journalism has been done to explore but the data presented by *About Daily Shelter & Overnight Service Occupancy & Capacity* (2024) suggests that more can be done to help indiviuals and family struck by the unfortunate case of homelessness.

While the federal government has funneled a billions of dollars to the 'Reaching Home' initiative, the increasing number of homeless shelter's overnight stay suggests that the policies have not been as effective as the federal government had initially planned. Furthermore, findings in Figure 3 could suggest a greater focus on targetting refugee-related policies in order to curb the degree of homeless in the Greater Toronto Area.

5 Limitations

It is also important to recognize that homelessness is a multi-faceted issue, entangled in the web of problems facing Canada such as increasing immigration and refugees, high inflation and higher cost of living. These interconnected issues are exacerbated by insufficient data collection geared towards the study of how these issues could be connected to each other. The analysis provided in this paper only analyses a single entity (dataset). In an article written by Gurney (2024), he explains how many of us do not have the full grasp of homelessness, fueled by our existing (and potentially obsolete) definitions of 'homelessness', characterised by easily quantifiable and visible encampments and tents that litter the parks of the city. He explores an additional definition, which includes individuals who stay with their friend's or have some cash in hand to afford motels in the short term. These individuals who deplete their financial resources before setting a firm foundation for long-term, sustainaible ways of living may be the key contributing factors in understanding the cause of homelessness, therefore allowing the federal government to project funding to snip the root of the problem.

References

About Daily Shelter & Overnight Service Occupancy & Capacity. 2024. Toronto Shelter & Support Services. https://open.toronto.ca/dataset/daily-shelter-overnight-service-occupancy-capacity/.

Andrew Palamarchuk North York Mirror. 2023. *New North York Homeless Shelter Fills to Capacity in Four Days*. 8 Spadina Avenue, Suite 10A, Toronto, ON M5V 0S8: Toronto.com. https://www.toronto.com/news/new-north-york-homeless-shelter-fills-to-capacity-in-four-days/article_07fca8c6-11e1-5626-b621-793b592601b7.html?

Government of Canada. 2023. *About Reaching Home: Canada's Homelessness Strategy*. Vienna, Austria: Government of Canada. https://housing-infrastructure.canada.ca/homelessness-sans-abri/index-eng.html.

Gurney, Matt. 2024. *On Homelessness, No One Seems to Have a Full Grasp of What We're up Against*. https://www.tvo.org/article/on-homelessness-no-one-seems-to-have-a-full-grasp-of-what-were-up-against.

R Core Team. 2023. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.