Analysis of Toronto Homeless Shelter System:*

A closer look at hidden homelessness

Huda Sahaf

2 February 2023

First sentence. Second sentence. Third sentence. Fourth sentence.

Introduction

For people experiencing homelessness in the city of Toronto, there are several options for help, most of which are funded by the government. These services are of many different types: homeless shelters, drop-in programs to access the necessities, 24-hour respites, warming spaces, and programs to get help with housing.Despite these programs, in 2021, there were 18,096 people who were experiencing homelessness in Toronto (Canadian Observatory on Homelessness 2021). Homelessness is a serious problem, and unfortunately homeless shelters as well as most of the services that are offered by the city of Toronto are not a sustainable solution. The causes for homelessness are many and these service options do not address them.

These services are made up of a network of 53 sites that offer services that are approved by the city of Toronto(City of Toronto 2023a). Some of these sites are run and managed by the city itself, and others are community sites that are provided for by the city. Shelters offer a possible referral to other community services based on need, counselors to help find permanent housing, and mental and physical health support services. 24-hour respite sites are also similar in that they also offer referrals for other services based on the need of the individual.

But every single one of the services and sites in the network must meet the Shelter and Respite Site Standards set by the government of Toronto. The use of the homeless help services are monitored by the government of Toronto using the Shelter Management Information System (SMIS).

The Shelter Management Information System is meant to streamline the process of finding information about shelters in the city of Toronto. It is required for all shelter staff to be trained in the use of SMIS(City of Toronto 2023c). Through SMIS, the city of Toronto is able

---

*Code and data are available at:

to regularly monitor the conditions of the shelters, whether it be the number of available beds in a shelter or finding the number of newly identified homeless individuals in the last month across the network of shelters in the city. All information that is entered by an individual shelter or respite site is made available on the City of Toronto servers and must meet the requirements of the city.

To conduct the analysis on the city of Toronto's homeless shelter system data, R (R Core Team 2020) will be used. The data set itself was downloaded from `opendatatoronto` (Gelfand 2022). The packages `tidyverse` (Wickham et al. 2019), `dplyr` (Wickham et al. 2022), and `janitor` (Firke 2021) will be used to read in, clean and manipulate the data. Any graphs and tables displayed were created using `ggplot2` (Wickham 2016), `knitr` (Xie 2023), `kableExtra` (Zhu 2021), and coloring options were made possible using the `RColorBrewer` (Neuwirth 2022) package.

Data

The primary data set used to conduct the analysis was found on opendatatoronto (Gelfand 2022). There are some shelters and respite sites that operate isolated from the city of Toronto and others that have not yet begun using the Shelter Management Information System, and therefore these two categories of homelessness help services are not included in this data set. There are many categories of information available within it. The data is broken down into group demographics and there is data on each group, spanning backwards to the last five years. These groups include the following:

All populations: This is a summative category, referring to the total of the following five categories

Chronic: This category refers to people who are experiencing chronic homelessness. More specifically, chronic homelessness is defined as someone who has been reported to have 180 overnight stays in any or multiple of the homeless service facilities in the last year, or, in the past five years, the person has a total number of reported stays of 546 nights.

Families: These are reported individuals who are staying at overnight facilities appointed by their families

Youth: Unaccompanied youth who are between the ages of 16-24.

Single Adult: Individuals who do not fall in either families or in youth

Refugees: People who identify as a refugees upon entry into a homeless help facility or those who complete a homeless help program designated for refugees.

Non-Refugees: People who do not fall in the refugee category.

Indigenous: A person who identifies as First Nations, Metis, or Inuit.

Alongside these population groups there are also categories of situational data within this dataset.

Actively Homeless: These are people who have made use of the shelter system at least once in the past three months and did not end up moving to permanent housing.

Became Inactive: People who were reported to have been using the shelter system but have not been documented using the system consistently for a period of at least three months.

Moved to Housing: Individuals who were reported to have found and moved to permanent housing

Newly Identified: People who were documented for use of the shelter system for the very first time.

Returned to Shelter: Individuals who became inactive from using the homeless shelter system in Toronto and are reported to have recently returned.

Returned from Housing: People who were reported to have found and moved to permanent housing options but have now come back to use at least one of the overnight services within the system.

There are also age breakdowns, gender demographics and population percentage available within this data set.

Discussion

The purpose of the data is to provide a holistic view of the homeless shelter system in the city of Toronto. This data set specifically documents the flow of people in the homeless shelter system due to the fact that people are constantly coming in and out of the system. There are many different types of services, and as such SMIS reflects the entry and exit of an individual in the system on a monthly basis.

According to the city of Toronto, this data is used to help measure progress towards one of the goals of the government: to make sure that homelessness in this city becomes "rare, brief, and non-recurring (City of Toronto 2023b)." There are also different types of services that individuals often move between, which is why the numbers in the Shelter Management Information System data are reported to be higher.

In order to gain a better understanding of the newly identified homeless individuals per population group, the all-populations category was filtered out of the data set, so that the total would not skew the distribution. (Figure 1) shows the mean number of newly identified homeless people based on population group in 2020. (Figure 2) is a graph representative of the mean number of newly identified homeless people based on population group in 2022. As represented on both graphs, all population groups have not changed drastically across both

Table 1: wow bro.

Year	average
2018	9171.000
2019	9756.500
2020	8314.750
2021	8298.333
2022	9768.500

years. The non-refugees category in both graphs remain highest in terms of the number of newly identified homeless people.
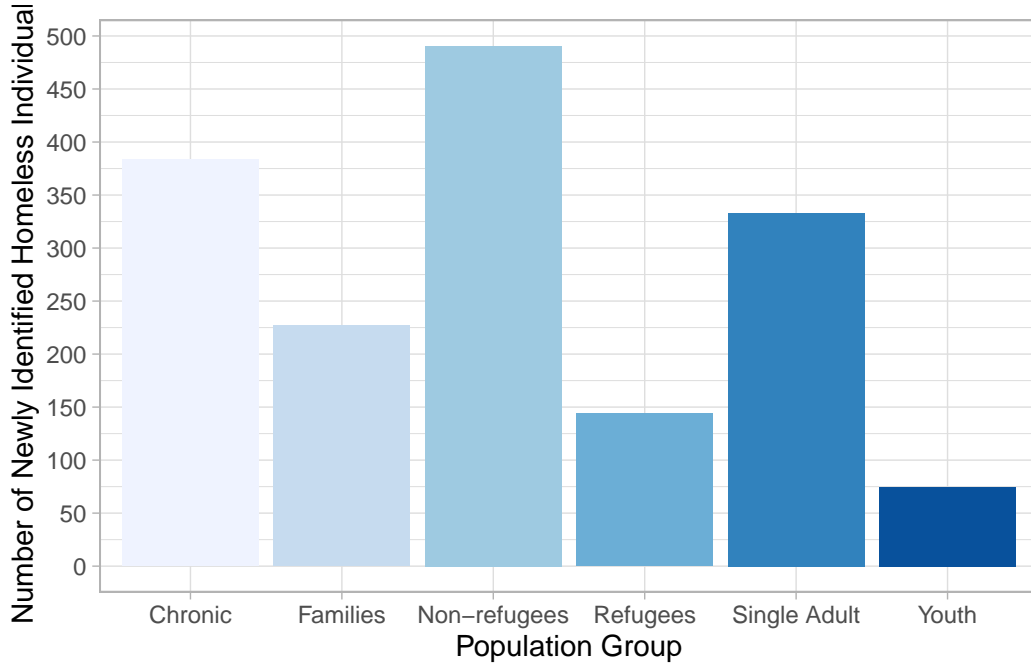

Figure 1: Newly Identified Homeless People 2020

What is interesting about the non-refugees population group is that it is situationally the most general of the categories defined by the city of Toronto. Yet it points to a systemic failure, an insecurity in living accommodations that results in more and more people needing the homeless shelter system over time. This is a common but worrisome phenomenon in the city of Toronto. The Canadian Observatory on Homelessness (COH) defines hidden homelessness as a type of situational homeless due to temporary or insecure living situations (Ali 2018). There are several factors contributing to hidden homelessness, extreme scenarios of which can leave a person helpless enough to make use of the system. These circumstances consist of unaffordable housing, disabilities, chronic illness, loss of employment, and discrimination. Many of these
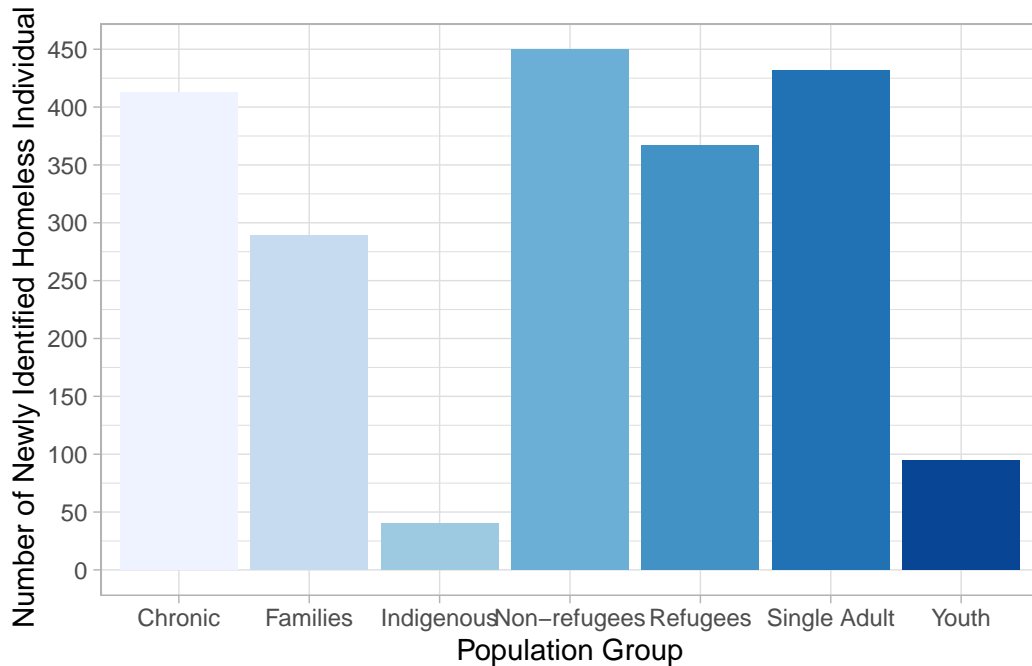
Figure 2: Newly Identified Homeless People 2022

factors point to intrinsic problems within society and can compound at a dangerous rate for marginalized communities depending on their social location.

Also bills and their average (Table 1). (You can change the height and width, but don't worry about doing that until you have finished every other aspect of the paper - Quarto will try to make it look nice and the defaults usually work.)

Weaknesses and next steps:

There are limitations with regards to this data set that must be addressed. Firstly, the way that the city of Toronto collects shelter data is very reflective of "point-in-time counts. (Rech 2023)" The problem with this type of data collection is that it lacks context. It is relevant only in that it reflects what the homeless shelter system looks like at any given point in time. They do not fully account for hidden homelessness, and this impacts the numbers reported, especially in women and youth.

Another limitation is in the reporting of Indigenous individuals in the data. There are many columns in which the row belonging to the Indigenous population group simply does not exist. Due to this, in Figure 1, there is no column for Indigenous data. The city of Toronto has not acknowledged this as an issue, and as a result, there is no reason given for why this

inconsistency exists. It is not just for the newly identified category that this is a problem, but for all situation data categories.

A characteristic of this dataset is that the population group definitions are all extremely general. There is no defined meaning to the category "Non-Refugees", and whether or not there is room for overlap in the categories "Non-Refugees" and "Single Adult". There is very little detail given as to the demographic break down of the population groups, they seem situationally narrow and do not give an idea of the identity's of the people themselves.

Appendix

Additional details

References

Ali, Nadia. 2018. "Understanding Hidden Homelessness." Canadian Observatory on Homelessness. https://www.homelesshub.ca/blog/understanding-hidden-homelessness.

Canadian Observatory on Homelessness. 2021. "Community Profiles: Toronto." Canadian Observatory on Homelessness. homelesshub.ca/community-profile/toronto.

City of Toronto. 2023a. "About City-Operated Services." City of Toronto. https://www.toronto.ca/community-people/community-partners/emergency-shelter-operators/about-torontos-shelter-system/see-our-shelters/#:~:text=The%20City%20oversees%20the%20operation,10%20shelter%20programs%20shown%20here.

———. 2023b. "About City-Operated Services." City of Toronto. https://www.toronto.ca/city-government/data-research-maps/research-reports/housing-and-homelessness-research-and-reports/shelter-system-flow-data/.

———. 2023c. "Shelters." City of Toronto. https://www.toronto.ca/community-people/housing-shelter/homeless-help/shelters/#shelters.

Firke, Sam. 2021. *Janitor: Simple Tools for Examining and Cleaning Dirty Data.* https://CRAN.R-project.org/package=janitor.

Gelfand, Sharla. 2022. *Opendatatoronto: Access the City of Toronto Open Data Portal.* https://CRAN.R-project.org/package=opendatatoronto.

Neuwirth, Erich. 2022. *RColorBrewer: ColorBrewer Palettes.* https://CRAN.R-project.org/package=RColorBrewer.

R Core Team. 2020. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Rech, Nathalie. 2023. "Homelessness in Canada." https://www.thecanadianencyclopedia.ca/en/article/homelessness-in-canada.

Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis.* Springer-Verlag New York. https://ggplot2.tidyverse.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.

Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2022. *Dplyr: A Grammar of Data Manipulation.* https://CRAN.R-project.org/package=dplyr.

Xie, Yihui. 2023. *Knitr: A General-Purpose Package for Dynamic Report Generation in r.* https://yihui.org/knitr/.

Zhu, Hao. 2021. *kableExtra: Construct Complex Table with 'Kable' and Pipe Syntax.* https://CRAN.R-project.org/package=kableExtra.