Accessment of Homelessness in Toronto in regards to COVID-19 and other factors*

Data from January 2020 to December 2021

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Abstract

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

1 Introduction

First Paragraph is going to be motivational and broad.

Second Paragraph is about what was done and what was found.

Third paragraph is about implications.

Final Paragraph about the remainder of the paper.

The statistical analysis in this report will be done using `R` (R Core Team 2020). The R Packages, `tidyverse` (Wickham et al. 2019) and `dplyr` (Wickham et al. 2021) will be used for data manipulation and cleaning. The graphs and tables for this report will created and formatted with `ggplot2` (Wickham 2016) and `kableExtra` (Zhu 2021). The packages `bookdown` (Xie 2016) and `knitr` (Xie 2014) will be used to format this report.

*Code and data are available at: https://github.com/HanFrank/STA304-Paper-1

2 Data

2.1 Data Source

The data that was used for this report was obtained and gathered by the Shelter, Support & Housing Administration (SSHA) of the City of Toronto (Shelter 2022). This data is collected through the City of Toronto funded homelessness shelters and services. This data shares information about the people accessing the services and is meant to provide insight regarding homelessness in Toronto with the vision of reducing homelessness in the city. This dataset is openly available to the public through the City of Toronto's Open Data Portal on an Open Government License - Toronto and was accessed through R using the R package `opendatatoronto` (Gelfand 2020). This dataset contains data from January 2020 to December 2021 and was last updated on January 7th, 2022.

2.2 Methodology and Data Collection

The Shelter, Support & Housing Administration Division of the City of Toronto is the governmental service operator and manager of housing and homelessness services in Toronto. They offer services such as emergency shelters, street outreach, short-term respites and housing stability services such as drop-ins and eviction prevention (Toronto 2022a). The Shelter System Flow data records the number of unique people who are entering and leaving the shelter system each month. In the data, the number of actively homeless is determined as the number people whom have used the shelter services within the past three months.

2.3 Data Limitations

Since the data is collected from people accessing the homelessness services operated or managed by the City of Toronto, this data does not contain people who have been used these services such as people sleeping exclusively outdoors or using other homelessness services that are not using the Shelter Management Information System (SMIS). According to the dataset, based on a recent Street Needs Assessment (A city-wide count and survey of people experiencing homelessness in Toronto (Toronto 2022b)), there is an anticipated 18 per cent of people experiencing homelessness in Toronto that is not reflected in this dataset (Shelter 2022).

There is a variety of reasons a person experiencing homelessness will not seek help from a shelter system. Example of this could be to avoid shelter restrictions such as curfews. Another potential reason, especially during the Covid-19 pandemic, is public health concerns (Pallet 2020). This specific topic will be discussed further in section 3.1.

2.4 Data Characteristics

The original dataset contained 180 observations with 18 variables. These 180 observations are comprised of 7 categorical entries per month for 24 months (168 observations) and starting from January 2021, an additional entry was added per month for peoples identifying as Indigenous for an additional 12 observations (totaling 180). For the data cleaning process, variables that are outside of the scope of the report were removed as well as variables that had no potential usage for analysis. The id variable variable was removed due to no potential usage and the 5 age demographic variables were removed because they were outside of the scope for this report and I felt that the Youth categorical observations serve a similar but better statistical purpose. Lastly, I converted the date variable from an (mmm-yy) character into a date format for easier data manipulation and graph creation. This was done using code referenced from (Yarnabrina 2019) in the RStudio Community forum.

Here is an extract of the dataset from January 2020, with a few sample of variables of interest (Table 1).

As seen, since the cleaned dataset uses the date format, 2020-01-01 represents January, 2020. Moreover, for example, 2021-08-01 would represents August, 2021.

Table 1: Extract from full dataset, January 2020

Date	Population Group	Actively Homeless	Percentage of Group Population
2020-01-01	All Population	9916	100.0
2020-01-01	Chronic	3471	35.0
2020-01-01	Refugees	2941	29.7
2020-01-01	Families	2706	27.3
2020-01-01	Youth	987	10.0
2020-01-01	Single Adult	6223	62.8
2020-01-01	Non-refugees	6975	70.3

3 Data Accessment and Discussion

3.1 Covid-19 and its effects on homelessness shelter

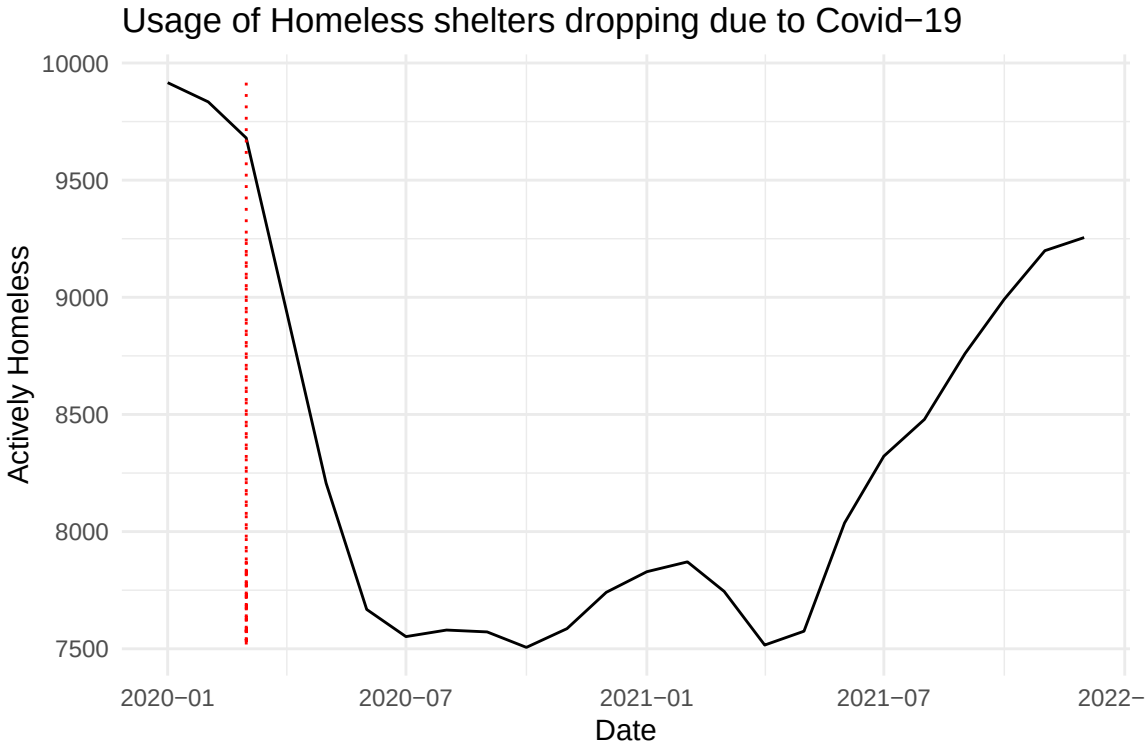

Figure 1: Active number of homeless over time

3.2 Gender demographics

3.3 Age demographics

3.4 Areas of further exploration

Weaknesses and next steps should also be included.

4 Conclusion

5 References

Articles that need to be used and referenced in discussion https://toronto.citynews.ca/2021/03/11/timeline-a-year-of-pandemic-life/ https://www.facetsjournal.com/doi/10.1139/facets-2021-0004 https://www.cbc.ca/news/canada/toronto/toronto-shelters-in-outbreak-unhoused-people-one-death-covid-19-1.6003201

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