

Emergency Homeless Shelter Availabilities Across Toronto*

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In this paper I analyze the occupancy and capacity of emergency homeless shelters across Toronto.

1 Introduction

Much like many other large cities around the world, Toronto is facing a homelessness crisis that seems to be ever-increasing. Whether it is because of environmental factors such as rising housing prices and lack of employment opportunities, or other issues such as drug abuse and mental health struggles, the homeless population of Toronto has risen to an alarming 10,811 in May 2023 (#cite CBC). The city council has recognized the urgency of this problem, declaring homelessness an emergency, and pledged their full efforts towards helping the homeless population move into safe homes (#CBC). Since then, the city of Toronto has focussed on securing more financial support from the provincial and federal government, requesting up to \$25 million to fund various housing projects. Notably, the Canada-Ontario Housing Benefit (COHB) aimed to move 1,600 — 2,000 households access and transition into permanent housing in 2023-2024 (#CBC).

So, how did these efforts turn out? Analyzing Toronto’s shelter occupancy data from 2024, we do not see optimistic results. Average occupancy rate of emergency shelters per night remains at 99%, with no significant decrease across the months (#cite dataset). Despite the evident high demand, there is even a decrease, albeit small, in shelters’ funding capacity over the months (#cite dataset).

In this paper, emergency shelter occupancy and availability will be compared across different months as well as different regions of Toronto to search for patterns or fluctuations in demand. The region of each shelter will be determined by its forward sorting area (FSA) code, or the first three digits of its postal code. As well, the regions that observe the highest frequency of failing

*Code and data are available at: https://github.com/cher-ning/shelter_occupancies

to make efficient use of funding are identified as potential problem areas; further investigation into potential causes would be beneficial to understand if there are improvements that can be made so that the limited available funding can be maximized.

To achieve this, the Section 2 section will introduce the Toronto Shelter & Support Services dataset used for the present analysis and the data cleaning methods applied. The following Section 7 will then go more into depth to apply context to the patterns present in the data, aiming to understand the scope and urgency of the issues at hand.

2 Data

You can and should cross-reference sections and sub-sections. We use R Core Team (2023) and Wickham et al. (2019)

The dataset used for analysis is of occupancy rate of shelters in the year 2024 (Table 1), from Gelfand (2022).

3 check if occupancy rate varies over months

Table 1: Shelter Occupancy Rate in 2024 Over the Months

Month	Mean Occupancy Rate	Mean Funding Capacity
Jan	98.82139	56.91309
Feb	99.17026	57.20373
Mar	98.53031	53.38536
Apr	98.93704	52.32272
May	99.13200	53.05673
Jun	98.77187	54.80310
Jul	99.12143	54.84483
Aug	99.37291	54.77734
Sep	99.36013	54.52559

4 first find num shelters per fsa

5 discuss summary stats of funding capacity in text, can consider to only include top few rows of this table

Table 2: Number of Unique Shelters vs FSA

FSA	Number of Shelter Locations
M5A	7
M5R	4
M5C	3
M5S	3
M6H	3
M6K	3

Figure 1: ?(caption)

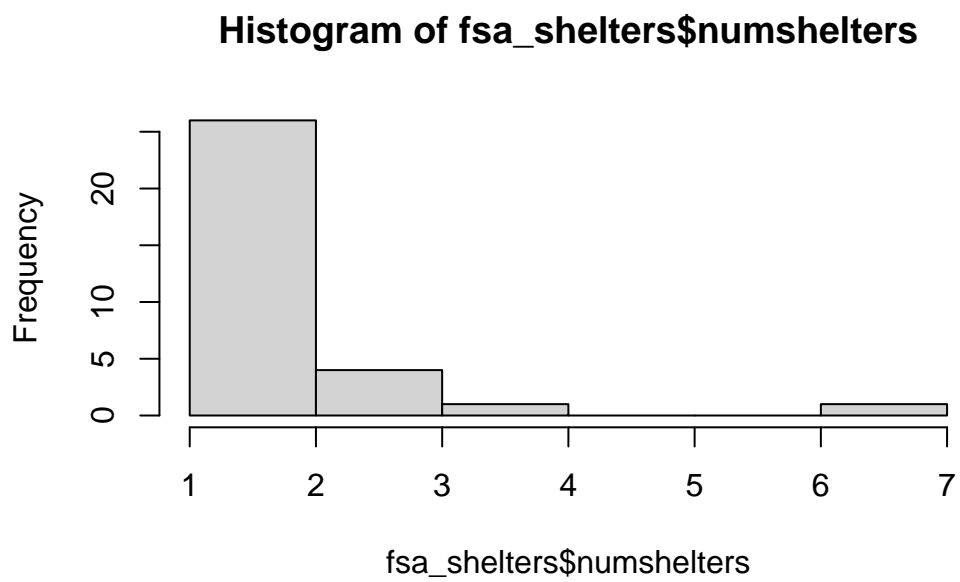


Figure 2: Number of Shelters in Each FSA

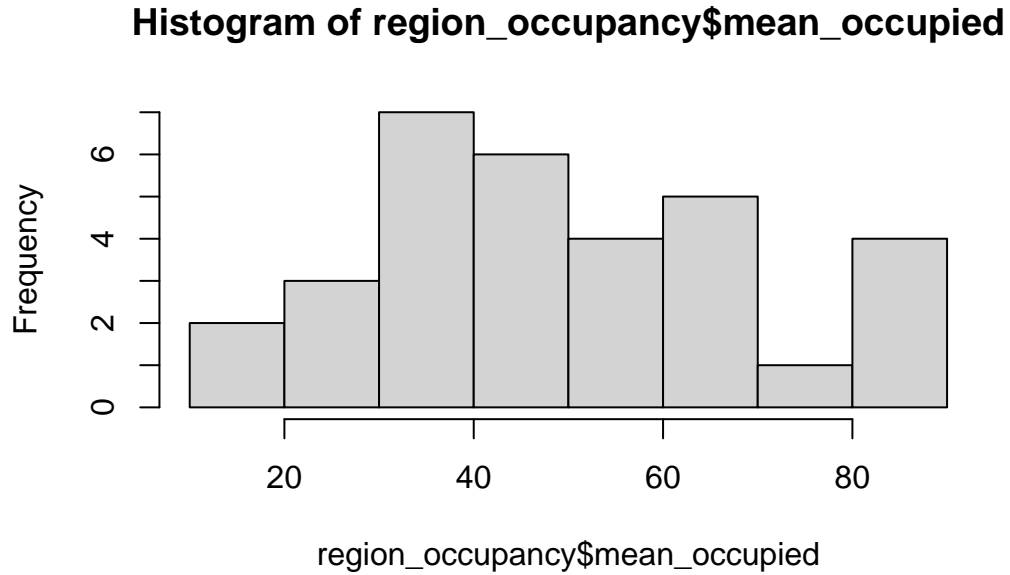


Figure 3: Average Bed Occupancy of Shelters Across Different FSA Regions

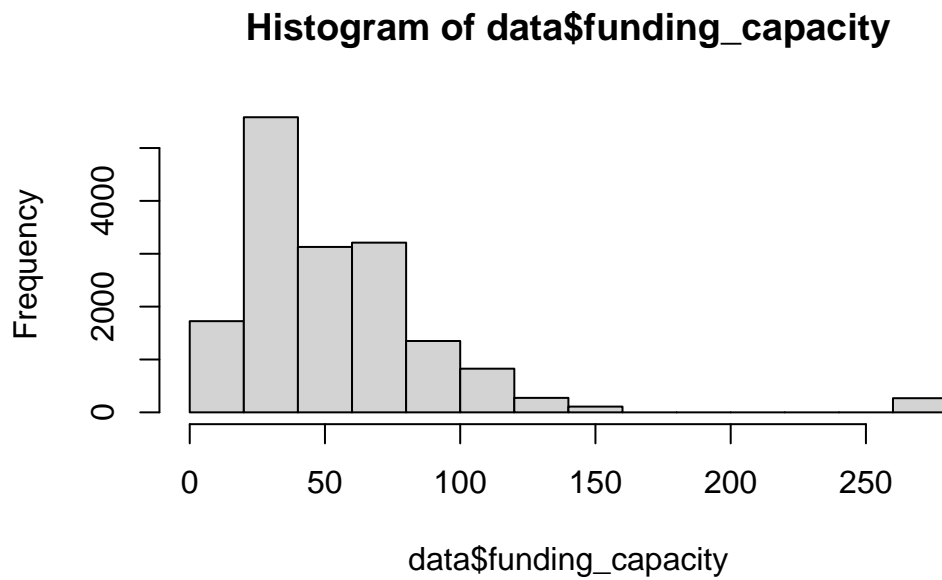


Figure 4: Funding Capacities of Toronto Emergency Shelters

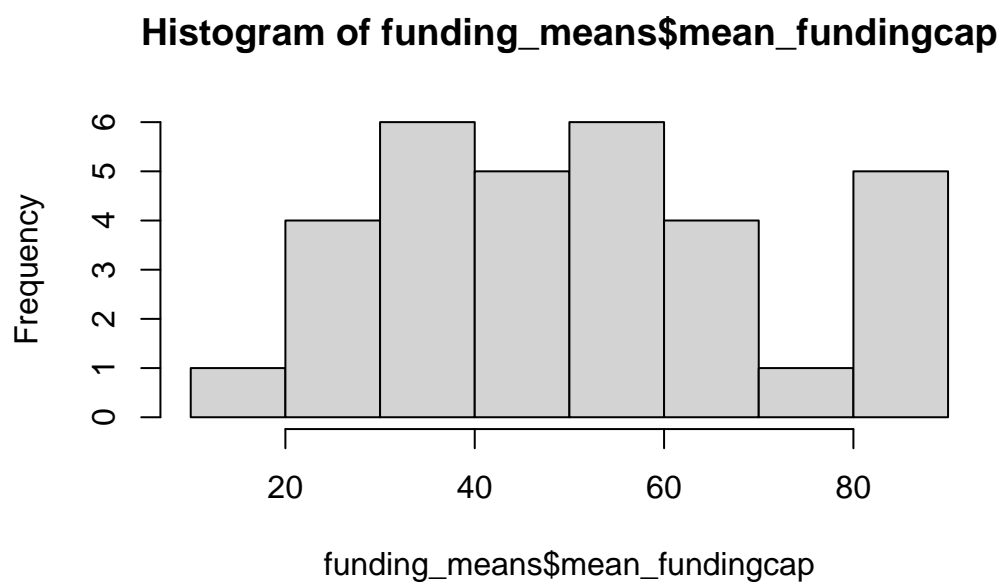


Figure 5: ?(caption)

Table 3: Number of Unavailable Beds/Night At Different FSAs

FSA	Average Number of Unavailable Beds
M2N	9.225352
M5G	9.140187
M6K	4.385066
M5V	4.248835
M4C	3.630682

Figure 6: ?(caption)

6 Results

Our results are summarized in [tbl-modelresults](#).

7 Discussion

Additionally, the distribution of shelter locations across the city's different forward sortation areas (FSA), or the first three digits of a zip code, displays that there are particular areas with higher demand than others. For example, particular blocks in Old Toronto are evidently areas that require higher attention, as they are among the FSAs to receive most funding as well as the ones that have highest number of shelters (#cite dataset).

7.1 First discussion point

7.2 Second discussion point

7.3 Third discussion point

7.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

Appendix

A Additional data details

References

- Gelfand, Sharla. 2022. *Opendatatoronto: Access the City of Toronto Open Data Portal*. <https://CRAN.R-project.org/package=opendatatoronto>.
- 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 Golemund, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.