Population Profile of the City of Toronto in 2016 and Its Implications on Housing*

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Abstract

Toronto is one of the biggest cities in North America. This paper examines the age profile of Toronto's population and its implications in the housing affordability crisis. Younger populations are moving away from the city due to unaffordable housing, causing a population decline in those age groups.

1 Introduction

This paper examines the population profile of the city of Toronto. The dataset used is from `opendatatoronto` (Gelfand 2020). The Open Data Portal was launched in Fall 2009 with the aim of responding to increasing demand for open and transparent data (Toronto Open Data Portal, n.d.). The dataset used is the Neighbourhood Profiles with contains "demographic information about each neighbourhood, prepared by the City's Social Policy Analysis & Research Unit from Statistics Canada Census data (updated every 5 years)"(Toronto, n.d.). This data is important to paint a picture of the demographics of Toronto. It could help the city prioritize development of infrastructure for certain demographics. The population of Toronto was approximately 2,731,571 according to the 2016 Census, with a 4.5% increase (Gelfand 2020). The paper looks at the age group composition of the population and its implications on the housing affordability crisis.

2 Data

The programming language used for this analysis was `R` (R Core Team 2020). The `tidyverse` package was used for data manipulation (Wickham et al. 2019). Other packages used were `dplyr`(Wickham et al. 2021), `ggplot`(Wickham 2016) and `knitr`(Xie 2021b). R Markdown or `bookdown` was used to generate this document (Xie 2021a). The dataset was last refreshed on October 7, 2019.

First, I imported the Neighbourhood Profiles dataset from `opendatatoronto` (Toronto Open Data Portal, n.d.). The raw dataset includes data for Toronto's 140 neighbourhood with categories including Population, Families, Households and marital status, Language, Income, Immigration and citizenship, Ethnic origin, Housing, Education and Labour. Since I wanted to focus on the age characteristics of the population of Toronto as a whole, I excluded the other categories and the neighbourhood specific data. This left me with a data frame consisting of 48 observations and 3 variables: topic, characteristics, city_of_toronto. This can be seen in Table 1 which was created using `ggplot` (Wickham 2016). The table is an exact representation of the cleaned up dataset.

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*Code and data are available at my GitHub repo

Table 1: Age characteristics of the population of Toronto in 2016

Age Group	Population
Children (0-14 years)	398135
Youth (15-24 years)	340270
Working Age (25-54 years)	1229555
Pre-retirement (55-64 years)	336670
Seniors (65+ years)	426945
Older Seniors (85+ years)	66000
Male: 0 to 04 years	69895
Male: 05 to 09 years	69350
Male: 10 to 14 years	64945
Male: 15 to 19 years	74240
Male: 20 to 24 years	97415
Male: 25 to 29 years	113905
Male: 30 to 34 years	108895
Male: 35 to 39 years	94070
Male: 40 to 44 years	86535
Male: 45 to 49 years	90860
Male: 50 to 54 years	98735
Male: 55 to 59 years	88145
Male: 60 to 64 years	72270
Male: 65 to 69 years	60360
Male: 70 to 74 years	42320
Male: 75 to 79 years	32730
Female: 10 to 14 years	62165
Male: 80 to 84 years	25670
Male: 85 to 89 years	15665
Male: 90 to 94 years	6185
Male: 95 to 99 years	1280
Male: 100 years and over	125
Female: 0 to 04 years	66105
Female: 05 to 09 years	65680
Female: 15 to 19 years	71285
Female: 20 to 24 years	97330
Female: 25 to 29 years	119040
Female: 30 to 34 years	115675
Female: 35 to 39 years	102240
Female: 40 to 44 years	95860
Female: 45 to 49 years	100065
Female: 50 to 54 years	103670
Female: 55 to 59 years	94660
Female: 60 to 64 years	81600
Female: 65 to 69 years	70180
Female: 70 to 74 years	51285
Female: 75 to 79 years	43430
Female: 80 to 84 years	34965
Female: 85 to 89 years	25135
Female: 90 to 94 years	13500
Female: 95 to 99 years	3475
Female: 100 years and over	650

I then made a new dataset showing the age composition of the population without the gender as I wanted to plot a graph showing the age composition of the city of Toronto. I created a new variable and assigned the tibble of my cleaned dataset to it as it coincidentally contained the datapoints I wanted to include. This graph can be seen below in Figure 1.
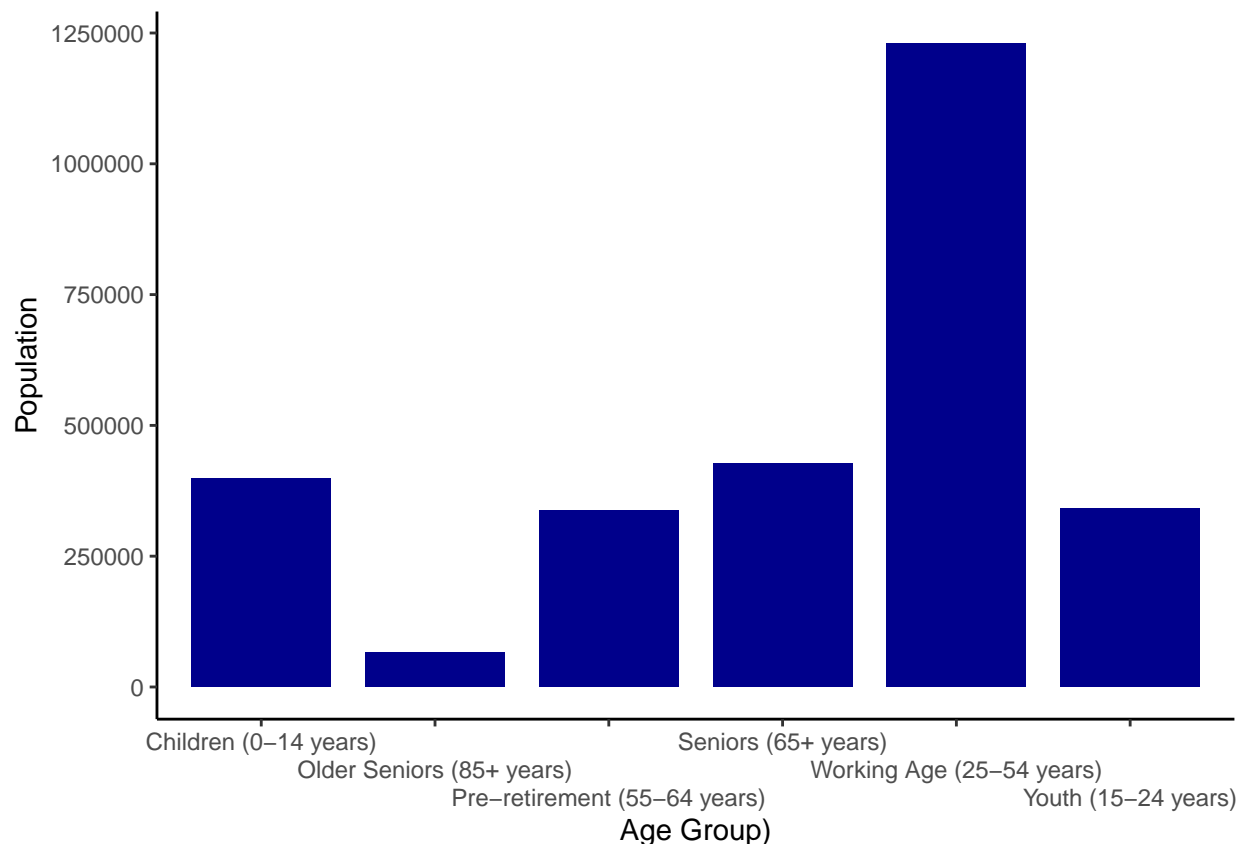

Figure 1: Population of Toronto in 2016 by Age Group

3   Discussion

We can see in Figure 1, that the age group with the largest population is the Working Age group. a huge chunk of the population still includes the baby boomer generation (i.e. Seniors and Pre-retirement). However, we can also see that a substantial portion of population is young (i.e. Children and Youth). The age group with the lowest population are the Older Seniors. However, we can see that majority of the population is over the age 55.

Recent data shows that Toronto as a whole experienced an approximately 12% increase, which will always be the case due to immigration (Bowden 2022). However, Toronto is currently going through an affordability crisis. As a result, many young people and their families are moving from the city. This contributed to the decline in child population (Bowden 2022). Experts state that this decline "could impact the social fabric of cities that no longer cater to families, as a temporary population may not want to invest in improving the city and ensuring it remains vibrant. Only the very wealthy will be able to make a city like Toronto a permanent home" (Bowden 2022). The City must enact policies to make it more inclusive to people from various socioeconomic backgrounds and ages. Currently, "the city ... appeals to young adults who are working and can enjoy the bar and restaurant scene while living in a small space" (Bowden 2022). However, this has led to a "conveyor belt [culture] young people stay until they want to have a family and then leave" (Bowden 2022). If people begin to leave the city in droves, it could affect other areas such as infrastructure

and policy.

References

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