

Hi everyone, my name is Yusra and I will be talking to you about Toronto's mental health services, specifically with an eligibility perspective.

One of the nicest things about living in Canada is the universal healthcare system which aims to fulfill everyone's right to good health. However there always seem to be some with fewer opportunities to achieve this. Targeting this issue, I will be analyzing some of the factors which deter a person from seeking mental help thereby putting them at a disadvantage for their wellbeing and satisfaction. Examples of these could be needing wheelchair accessibility or not being able to afford some services, but I will be focusing mainly on language availability and age restrictions. Hopefully, I will be able to shed some light in areas that are in most need of help to grow this city into happier and healthier lives.

Before getting started, here are the assumptions for last term's group -most of which I will be keeping. However, I have chosen to go with a reference of 11,858 people to 1 clinic instead of 6,548 based off of my own research and I will be assuming people will use services only if they are offered in their mother tongue.

The earlier group found that the number of mental health services has a positive relationship with the average income of a neighbourhood, mental health is linked to better quality of life and 68% of Toronto neighbourhoods lack a single documented mental health service. That is very concerning. Some specific findings were that Church Young St. had the best/lowest ratio, Waterfront had the worst and only 3 neighbourhoods fell within the desired range. 2 of those will be part of my research along with the best and worst neighbourhoods to serve as samples representing the city.

Without any further ado, let's get into what I found.

This first graph shows the relationship between population (bars) and number of services (lines) in the four chosen neighbourhoods through an age breakdown. Looking at the extreme values, we see that there are 11 services offered to youth in the first neighbourhood although this age group isn't even the largest. On the other hand, the third neighbourhood has an immense population, but its number of services (1) is not even close to matching it. The highest numbers of services seem to appear in the youth and working age groups and these do have the largest populations -which is a good thing, however, upon closer inspection, we see that the relation is actually not very strong. Another thing to note is that the York University Heights neighbourhood does not in fact fall within the range last term's group talked about because three of its services were the same one (and had the same address). In contrast to Toronto's weak relation, the towns of Milton and Oakville demonstrate better population-service relationships through an age breakdown while avoiding extremes. For example, Milton's second highest population group is children and so is its second highest number of services.

The next chart is broken down by language -mother tongues of the population vs the availability of those languages or interpreters in the services. Here the relations seem fine other than the non-official mother tongue category and the Waterfront Communities Island neighbourhood's english. The funny thing about Waterfront is that you can see this huge range between its english and french population and yet french is the only language for which a service is provided there. It's a problem because most people (about 86%) in the neighbourhood don't know even a bit of french. But in general,

Toronto is pretty good for its language distribution at least in comparison to Milton and Oakville. These towns match up really well for english, but greatly lack service availability in other languages.

To conclude from the previous charts and more, Toronto is great for its prevalence of free/low cost services to support lower income individuals and it is good (certainly better than other cities) for its language diversity although they would benefit from providing more non-official language options. Some areas with major improvements needed are, of course, the 68% of neighbourhoods without a single service and the distribution of services within neighbourhoods and age groups. It would be helpful to consider the population size before setting a service's eligibility/target audience so that the service will actually be worth it eg. Waterfront's french service despite the extreme minority of it as a mother tongue. Limitations to these are that the data is from different sources with some being a little over five years old, my work hasn't been revised by another person and there are always undocumented clinics (google maps vs data I have). Furthermore, I could only use quantitative data, so things like "experiencing a first episode of psychosis" didn't make the cut as eligibility markers for a service. Each facility is also very different -from size, capabilities and maximum capacities and a person's mother tongue (especially if they know another language) usually won't significantly discourage them from visiting one. Finally, my sample data as well as my reference ratio and most of this research is based on neighbourhoods with at least one mental health service.

Several paths can be taken with my findings and listed here are a few. Some of the ones I find most important however, include "How would this data change if it were all from this year?", "How do things like ethnicity affect a person's need and want for mental health services?" and "What type of service serves a community best?" Eg virtual, public. The great thing about this is anyone looking into one of these areas doesn't have to do it alone. SAP can help Toronto improve by providing analytical and predictive tools to better understand and work with the data, just like I'm doing today with SAP Analytics Cloud.

Thanks everyone for listening. I hope my analysis will inspire some development towards a more equitable future because remember, even a little change, is good change. Here are my sources of data, but you can click *here* to see a complete list of all the resources I used or made. Any questions?