

Investigating Trends of Absences in Toronto City Council Attendance between 2022 to 2026*

Determining the Ideal Meeting Types and Months for the 2022-2026 Term

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This paper looks at trends in absences for Toronto City Council members using data from Open Data Toronto (@). The data was used to observe which members had the most absences, absences trends over the years, and what meeting types had the most absences. It was found that evening meetings saw the most absences and absences are predicted to see an increase over the years. Through identifying trends of absences, we can help minimize the number of absences by ____ members which is important as when City Council members are elected, they are expected to attend meetings to voice the population's opinions.

1 Introduction

The Canadian parliamentary system is a democracy, where the population is represented in government by a selection of elected officials. To maintain the democratic structure, individuals should engage in political participation to have their voices represented, primarily through voting. Likewise, elected officials should uphold their duty of representing the opinions of those who voted them in. Otherwise, failing to do so will cause a decrease in trust in the government. So, it is the job of the elected members of the Toronto City Council to attend their meetings and express the concerns of the population they represent.

This paper looks at the absences of Toronto City Council members since the beginning of the 2022 term. The data used in this paper is found on Open Data Toronto (@). The study examines which council members have the highest rates of absence, the fluctuation of absences over time, and which meeting type has the most absences. This paper works to fill the gap of focused analysis on absences patterns within the City Council which directly relates to the effectiveness of representation by council members.

*GitHub repo link: <https://github.com/kiwindyy/CityCouncilAttendance>

The data analysis focuses on examining patterns in the data for various causes of absences. It was found that evening meetings experienced the most absences and the trend over the years shows that absences are likely to increase in 2022. Additionally, _____ members were found to have the most absences. Rather than blaming individuals for absences, understanding these patterns allows for future targeted meeting scheduling to minimize absences. This ensures that elected officials are present to represent the voices of the general.

The paper is structured as follows: section 2 discusses the raw and clean data used in the study and any limitations in the dataset. Section 3 shows graphical visualization of the analysis results using data from section 2. Finally, section 4 covers interpretations of each graph from section 3 and any weaknesses of this study.

2 Data

To investigate the attendance of Toronto City Council members data is retrieved from Open Data Toronto. The raw data contained columns of Term, First Name, Last Name, Committee, MTG #, Session Date, Session Type, Session Start-End Time, Present. After importing the data into R, it was cleaned to make it more readable and contain only the necessary variables. Tests were also run on the data to make sure it is city council member data and no empty rows are there.

First, the session date was made more readable by separating the year and month. Additionally, the month was changed to the word abbreviation form. The present variable was also made more readable by changing Y to Yes and N to No. Finally, the columns of interest, committee, session year, session month, session type, and present, were selected to be created into a new cleaned dataset.

Between the different variables, type, month and year, they each have different frequency. Understanding the frequency, can help better understand the outcome of the data. Thus, three tables were made counting how many meetings were done in each circumstance.

Afternoon	Evening	Morning
1561	405	1095

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	572	332	182	400	275	331	25	100	225	203	416

2022	2023	2024
234	1830	997

It can be seen that there are significantly less evening meetings while afternoon meetings are most common. Noticeably, January has no meetings likely because of external reasons. Meeting frequency of different months seem to change with no particular pattern. Finally, 2023 had the most meetings simply because it had the most time.

First, to analysis which meeting type is best a bar chart is created comparing morning, afternoon, and evening times.

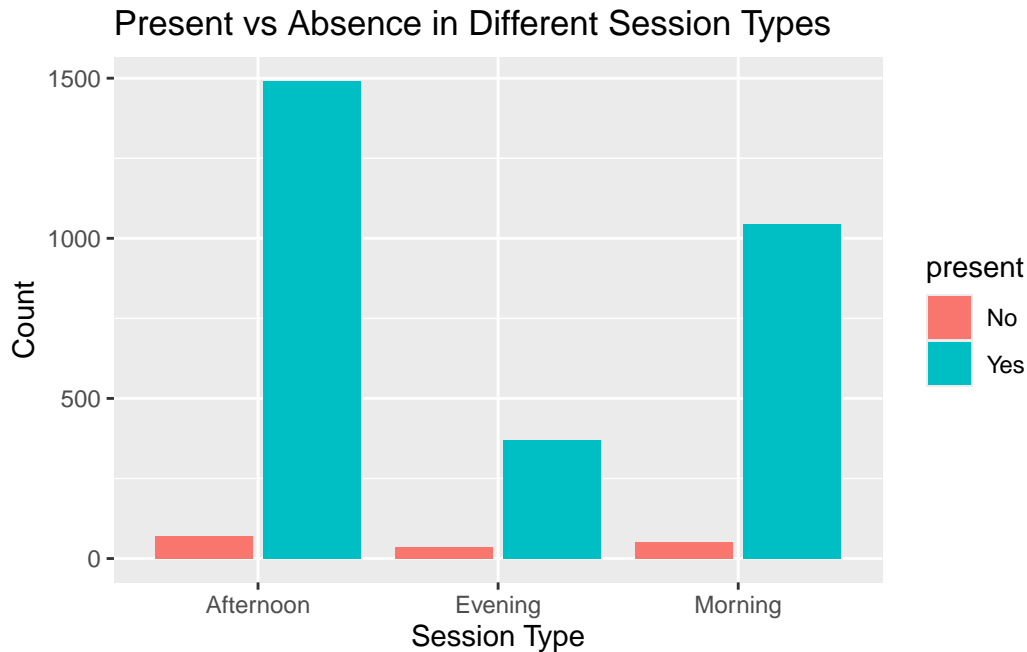


Figure 1: Comparison of Attendance in Morning, Afternoon, vs Evening Session

Figure 1 has x-axis as the session type and y-axis as the count of how many times each meeting type occurred. The blue bars are the number of attendances while the red bars are the number of absences. It can be seen that afternoon has the most absences but it also has the most attendance. Notably, while evenings occurrences are low it still has a decent amount of absences. From the data, meetings would be better held during the afternoon or morning for the best attendance.

Next, to find out which month had the best attendance rate a bar chart was graphed. The x-axis is the months and the y-axis is the count.

In Figure 2 the blue bars is the count of attendance during the month and the red bars is the count of absences. There is a rough pattern where alternating months will have higher absences, such as March, May, and July. A pattern can not be determined for the attendance rather it reflect the frequency meetings were held according to months. In conclusion, finding out what causes the pattern of absence would help increase attendance in those months.

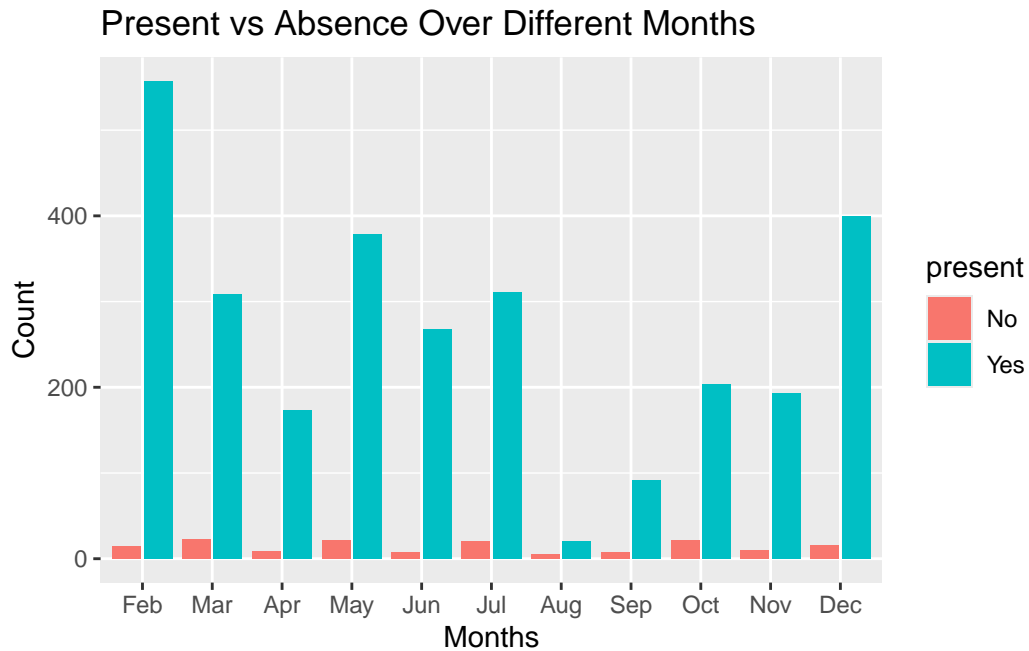


Figure 2: Comparison of Attendance over Different Months

Finally, a comparison between the years since the beginning of the term was done by plotting a bar chart.

Figure 3 has x-axis of years and y-axis counting attendance. The blue bars represent the attendance of those who went to meetings while red bars count those absent. Like how there were many meetings conducted in 2023 there are also many absences which makes sense. Therefore, it is likely that as 2024 continues the absences will increase showing a similar pattern to 2023. Meanwhile, 2022 in this bar chart shows little to no absence, which may be due to external factors. Overall, investigating which meeting type, month, and year gives an idea as to what causes absences during meetings but more variables should be looked at to get a bigger and better picture of the circumstances.

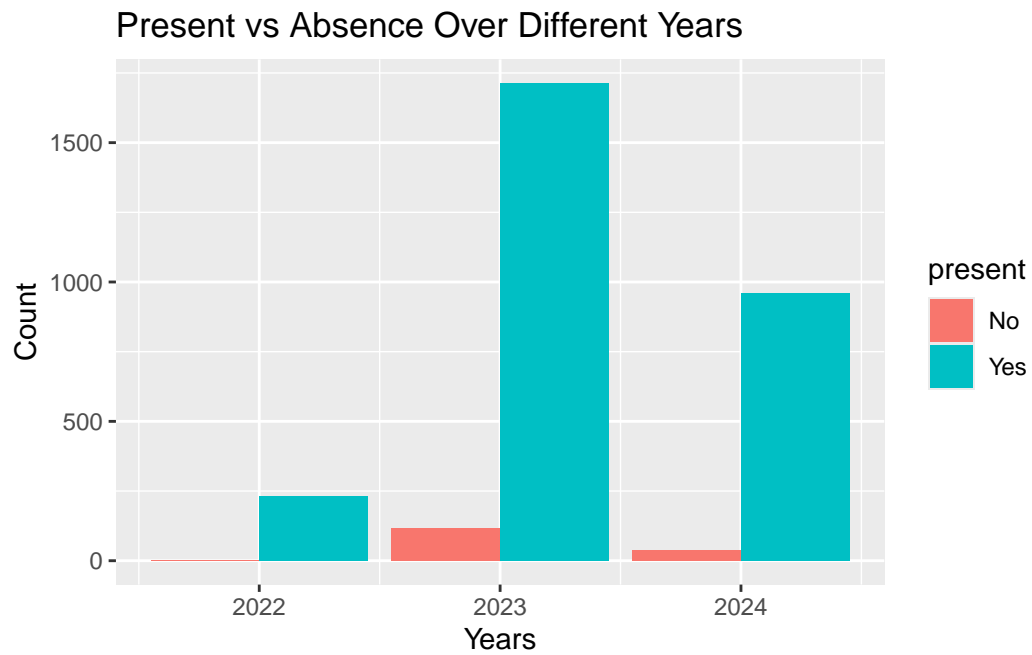


Figure 3: Comparison of Attendance between 2022 to 2024

3 References

TODO: figure out how to do references + in text references