

Understanding Cannabis Usage in Canada: Consistent Demographic Patterns in Cannabis Use Across Canada May Positively Correlate to High Frequency Use*

An analysis of the 2021 Canadian Tobacco and Nicotine Survey (CTNS)

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The widespread use of tobacco, vaping, and cannabis in Canada has been an ongoing public health concern given their commonly associated negative health impacts including respiratory issues, impaired cognitive development, and addiction. To gain a deeper understanding of the factors driving usage rates for cannabis specifically, this paper aims to investigate the relationship between demographics such as gender and region, versus consumption method and frequency in Canada. By utilizing the data from Statistics Canada, we found that young adults and males are more likely to use cannabis products with higher usage rates in certain regions of Canada. The implications and possible solutions for addressing high usage rates are also discussed.

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*Code and data are available at: <https://github.com/emilykimto/CTNS-analysis.git>

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1 Introduction

In 2018, the Canadian government, led by Prime Minister Justin Trudeau, made the landmark decision to legalize the use of marijuana after a century of prohibition. While this move was praised as a step towards progressive drug policy by some, others expressed concerns about the potential negative effects on public health. Of particular concern was the potential increase in cannabis usage rates among the general population, especially young adults who would be at a higher long-term risk of negative health outcomes similar to those associated with tobacco, such respiratory issues, impaired cognitive development, and addiction.

In light of this recent legalization and the still ongoing research surrounding the effects of marijuana, I analyzed data from the 2021 Canadian Tobacco and Nicotine Survey (CTNS) obtained from Open Government Data of Statistics Canada to uncover the demographic that would be the most impacted by any negative health effects of cannabis products. To gain a more comprehensive understanding of what factors drive usage rates, I explore the estimand, how does user characteristics such as age, gender, and region correlate with cannabis consumption methods (smoking, vaping, taking edibles) and their respective frequencies of usage in Canada.

I will first discuss the source of our data, its biases, and review the CTNS sampling and key features. Then, I will create a model and discuss analysis results to identify the demographic patterns of cannabis usage in Canada, cannabis product type, and consumption frequency to discuss potential underlying user behaviour and motivations. Finally, I discuss the implications of the findings and possible solutions as to how public policy can better tackle the ongoing phenomenon of increasing substance use, as well as the weaknesses and future steps of this paper.

2 Data and Methods

2.1 Data Management

2.2 Source

2.3 Sampling

2.4 Key Features

2.5 Bias and Ethics

3 Model

4 Results

5 Discussion

5.1 First discussion point

The demographic patterns of cannabis usage across Canada.

Data - consider age (or) gender and region

5.2 Second discussion point

Data - cannabis product types and their consumption frequency.

Discuss potential underlying user behaviour and motivations.

Why do Canadians use cannabis?

5.3 Weaknesses and Next Steps

Discuss implications and possible solutions

A Appendix

B References