

Team Huluan-Analysis -Datafest 2021

Members: Jue Gong, Qianqi Jia, Xinyi Qian, Jingyou Zhou, Yiwei Zong

Introduction

Drug intake is one of the most effective and convenient methods in disease treatment, but the phenomenon of irrational drug use, especially for drug abuse, is becoming a global public health problem. Our team Huluan-Analysis analyzed the demographic characteristics of drug abusers using the non-medical use dataset of the Canadian survey of Non-Medical Use of Prescription Drugs Program (NMURx). We tried to analyze the relationship between drug abuse and gender, age and different regions through visual analysis, which may help us to predict drug abuse cases in the future.

Primary Questions

Whether a certain trait within the demographic variables is correlated to the drug abuse? We delved into the following three questions:

- Whether age has effects on drug abuse?
- What are the proportions of male and female abusers on different types of drugs?
- What is the number of drug abusers in different provinces in Canada?

Methods We Used and Our Findings

We filtered the dataset to make comparisons for analysis and made some visualizations through R:

- A series of bar charts which are concerned with the gender and the 5 main drug types. It shows except from “Benzodiazepines”, males occupied relatively larger proportion of the total number of drug abusers for other 4 drug types. The gender difference in drug abuse for the “GABA-analogue” reveals that there may be a certain factor accounts for this difference, for example, different physical mechanism due to the “Gender” factor.
- A bar chart which visualizes different age groups against 4 regions in Canada, in the age groups are people who claimed that they have engaged in drug abuse at least once. We found Middle-age group accounted for the largest proportion in the four regions.
- A bar chart presents the total number of drug abusers in 11 different locations. The result indicates Quebec has the largest amount of people engaged in drug abuse, Northwest only has 1 drug abuser reported in the survey, probably due to a smaller sample collected from this area.
- Our interactive app: <https://candlelight.shinyapps.io/Huluan-Analysis/>