

Analysis of Health Survey Data of the United States

Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is a public health survey conducted every year by the Centers for Disease Control and Prevention (CDC) in the United States. It is one of the largest telephonic surveys which collects data on health-related behaviors, chronic condition, and preventive health practices among adults. It contains information on factors such as smoking, alcohol consumption, physical activity, diet, and mental health. It also includes data on demographic characteristics such as age, sex, race/ethnicity, education, and income. The data is a valuable resource for researchers, policymakers and public health officials interested in studying and addressing various health issues in the US population. The idea behind working on this data is to find out the percentage of people affected by poor health behavior. As this is a recent survey data, we focused on different health-related trends. Also, we assume that our analysis will help people take some preventive measures in order to avoid future health issues as well as the new generation from affecting from different health-related risk factors.

Data description

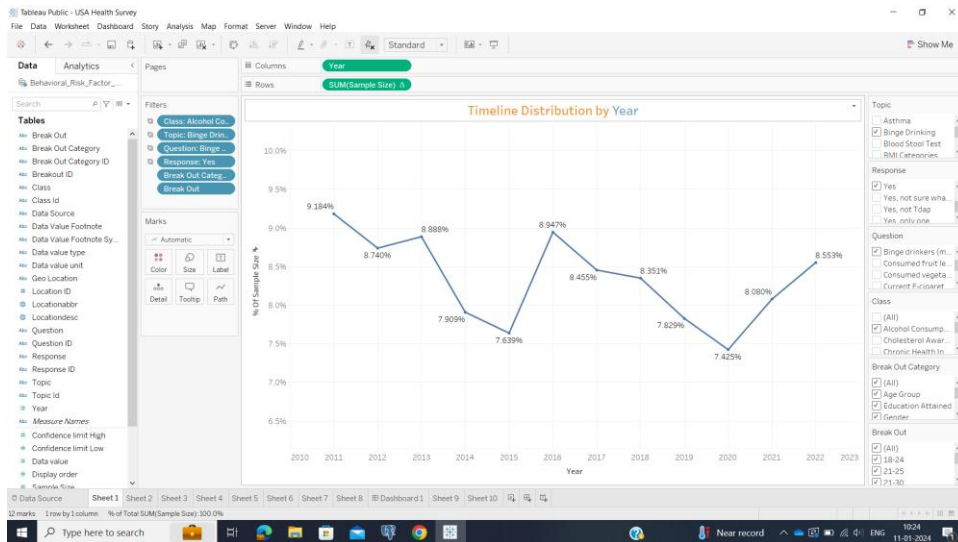
BRFSS is a publicly available data downloaded from CDC website. It is a direct survey data collected over telephone and recorded in the csv format. It contains following details:

- Dataset Link: BRFSS data
- Total Records: 2.2 M
- Columns: 27
- Year: 2011 to Present
- Location: 50 states, district of Columbia and 3 U.S. territories

Year	Location	Locationdesc	Class	Topic	Question	Response	Break_Out	Break_Out_Category
2022	WY	Wyoming	Colorectal Cancer Screer	Blood Stool Test	Adults aged 45-75 who have ha	Had a blood stool test in the pa	\$35,000-\$49,999	Household Income
2022	WY	Wyoming	Colorectal Cancer Screer	Blood Stool Test	Adults aged 45-75 who have ha	Had a blood stool test in the pa	\$25,000-\$34,999	Household Income
2022	WY	Wyoming	Colorectal Cancer Screer	Blood Stool Test	Adults aged 45-75 who have ha	Had a blood stool test in the pa	\$200,000+	Household Income
2022	WY	Wyoming	Colorectal Cancer Screer	Blood Stool Test	Adults aged 45-75 who have ha	Had a blood stool test in the pa	\$15,000-\$24,999	Household Income
2022	WY	Wyoming	Colorectal Cancer Screer	Blood Stool Test	Adults aged 45-75 who have ha	Had a blood stool test in the pa	\$100,000-\$199,999	Household Income
2022	WI	Wisconsin	Colorectal Cancer Screer	USPSTF Recommendation	Respondents aged 45-75 who l	Received one or more of the re	Other, non-Hispanic	Race/Ethnicity
2022	WI	Wisconsin	Colorectal Cancer Screer	USPSTF Recommendation	Respondents aged 45-75 who l	Received one or more of the re	Native Hawaiian or other Pacific	Race/Ethnicity

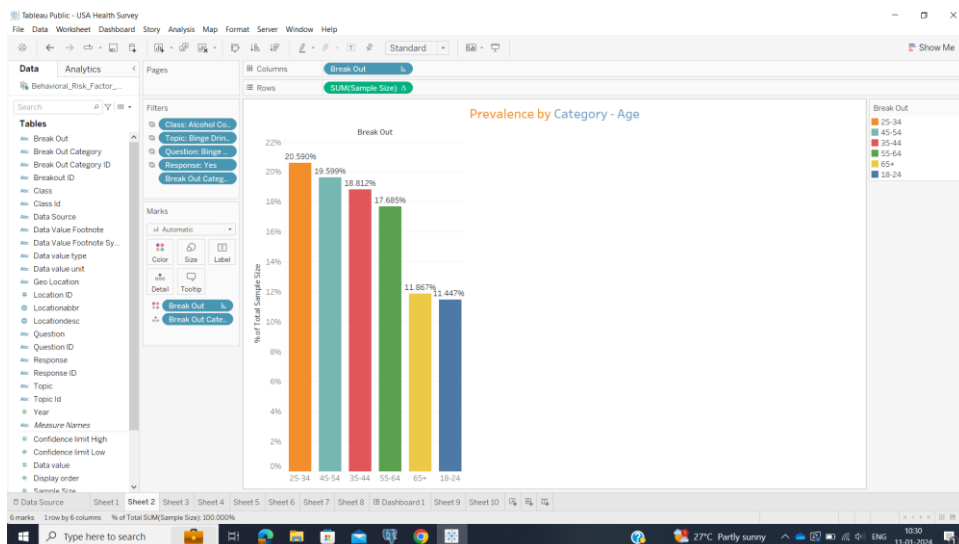
Findings From Analysis

The timeline graph presented herein has been generated by applying filters such as class, topic, question, and response. The graph exhibits a visual representation of the trend of alcohol consumption over a period of time, with the x-axis depicting years and the y-axis showing sample size. The data analysis indicates that the overall trend of alcohol consumption has decreased consistently over the entire timeline. Notably, the highest percentage of alcohol consumption was observed in the year 2011, while the lowest percentage was recorded in 2020, which could be attributed to the impact of the COVID-19 pandemic. It is imperative to acknowledge that the observed trend suggests that individuals have been making more informed decisions regarding their alcohol consumption, leading to a decline in its usage.



Timeline Graph for binge Drinking over 10 years.

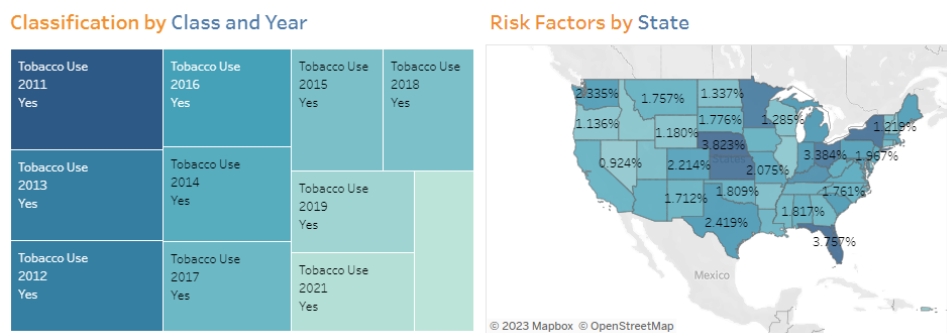
Based on the presented bar graph, it can be observed that the age group ranging from 25-34 years old has the highest percentage of alcohol consumption, followed by the other age groups. Interestingly, the 65+ and 18-24 age groups have a similar percentage of drinking habits, both around 11.5 percent. Such insights into alcohol consumption patterns can be valuable for informing public health policies and interventions.



Alcohol consumption by Age group.

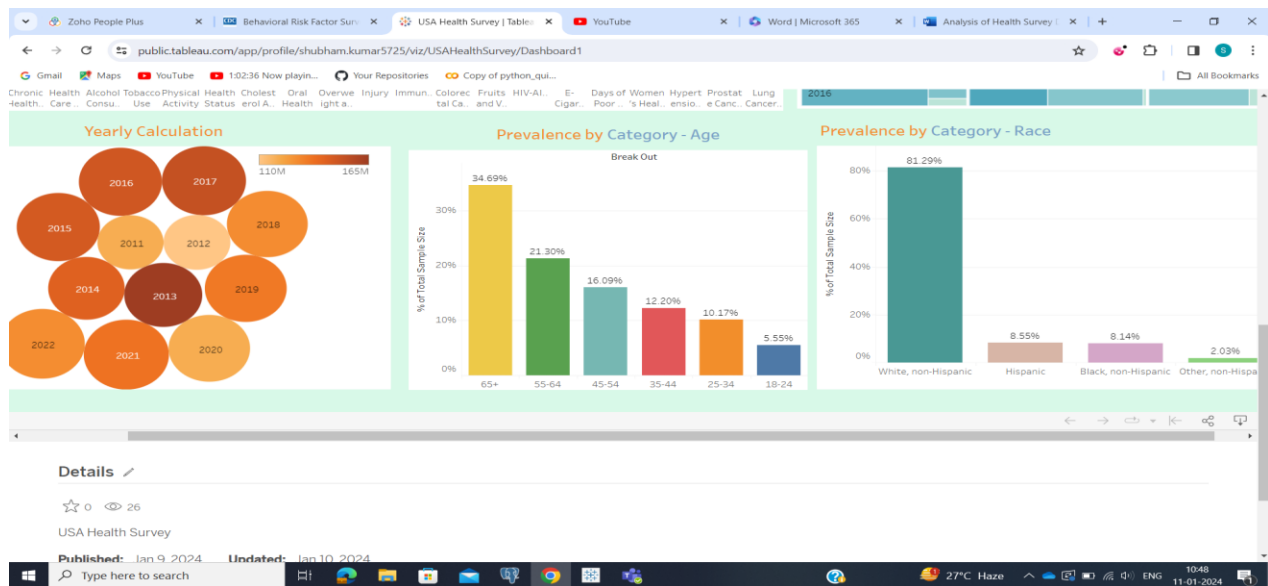
The presented heat map illustrates the consumption of tobacco products over a span of several years. Notably, the data analysis reveals that the year 2011 witnessed the highest percentage

of tobacco consumption. Furthermore, the risk factor assessment of tobacco usage by state indicates significant variation, with some states exhibiting higher levels of tobacco consumption than others. Specifically, Nevada was found to have the lowest usage of tobacco products, while Kansas and Nebraska were observed to have the highest usage compared to other states in the USA. These findings shed light on the alarming prevalence of tobacco usage and its potential health implications, emphasizing the need for effective public health interventions to mitigate this issue.



Heatmap & state was Map for Tobacco use

The following distribution chart depicts the prevalence of overweight and obesity based on Body Mass Index (BMI), categorized by gender, age group, and race. Our analysis reveals that females have a higher percentage of obesity than males. Furthermore, as we examine the data based on age groups, we found that individuals aged 65 and above are more likely to be overweight and may require additional assistance to address their health concerns. In contrast, individuals in their younger ages are observed to have lower levels of obesity. Additionally, when we investigate the data based on race, we found that individuals from the White (non-Hispanic) race had the highest percentage of high BMI. These findings underscore the need for targeted interventions and public health initiatives to address the issue of obesity and associated health complications.



Over weight and obesity (BMI) by Gender, Age, Race

References

- https://chronicdata.cdc.gov/Behavioral-Risk-Factors/Behavioral-Risk-Factor-Surveillance-System-BRFSS-P/dttw-5yxu/data_preview
- <https://public.tableau.com/app/profile/shubham.kumar5725/viz/USAHealthSurvey/Dashboard1>