

Substance Abuse Amongst Young Adults

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Introduction

College students aged 18-25 face the highest prevalence of binge drinking and heavy alcohol consumption, in comparison to other age groups. National data indicated that approximately 33%-38% of college students reported binge drinking in the past month. Nearly 10% of young adults reported having consumed 10 or more drinks on a single occasion within the past two weeks. Additionally, there are other substances that are frequently abused in this demographic alongside alcohol. These consist of marijuana and cannabis products, prescription stimulants, vaping, nicotine, and illicit and synthetic drugs.

Research Goal

This study identifies patterns in substance abuse among young adults (18-25) using 2024 NSDUH data. It analyzes prevalence, correlates use with family income, and evaluates links to psychological distress to guide public health interventions.

Methods

Software Used

- ◆ Google Slides - Compiling the poster
- ◆ R Studio - Visualizing the project
- ◆ Posit.cloud - Collaborate on one project concurrently



Data Collection

- ◆ We looked for a dataset with a large number of respondents and unique variables.
- ◆ Used the most recent data, the 2024 National Survey on Drug Use and Health.

Sorting Through Data

- ◆ Starting dataset - 58,633 observations and 2,632 variables (34.3 MB).
- ◆ Filtered amount - 21 variables.

Most Notable Variables

- ◆ Alcohol, Cigarette, and Drug consumption among young adults with regards to age, depression, income and variance other variables.

Problems & Adjustments

- ◆ The raw dataset presented a significant computational and analytical footprint, containing an excess of observations and variables. To prepare this data for meaningful analysis, a comprehensive data-cleansing process was executed to filter target demographics, manage non-responses, and validate the variables utilized in the final models.

Results

The Usage of Certain Drugs Across Respondents

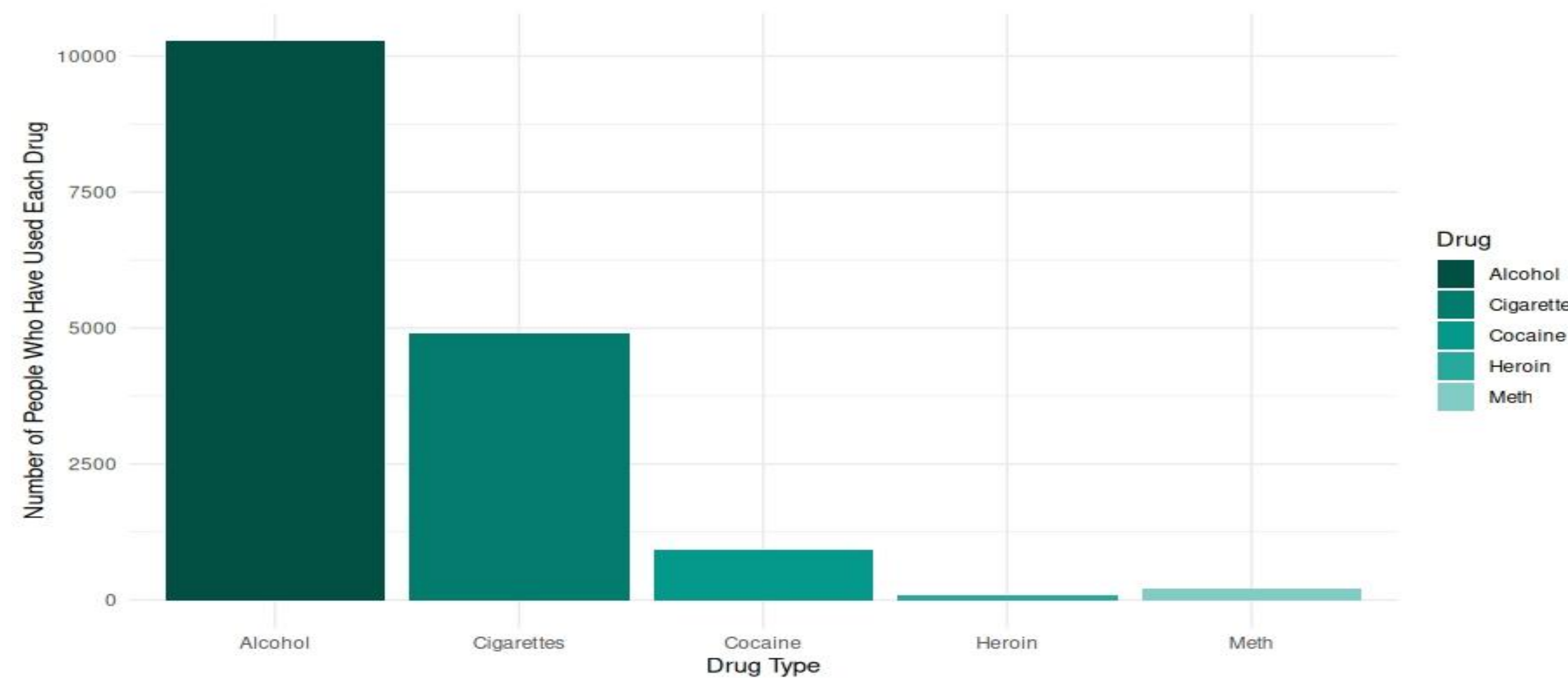


Figure 1: Prevalence of Each Drug Across Respondents

Psychological Distress Based on Substance

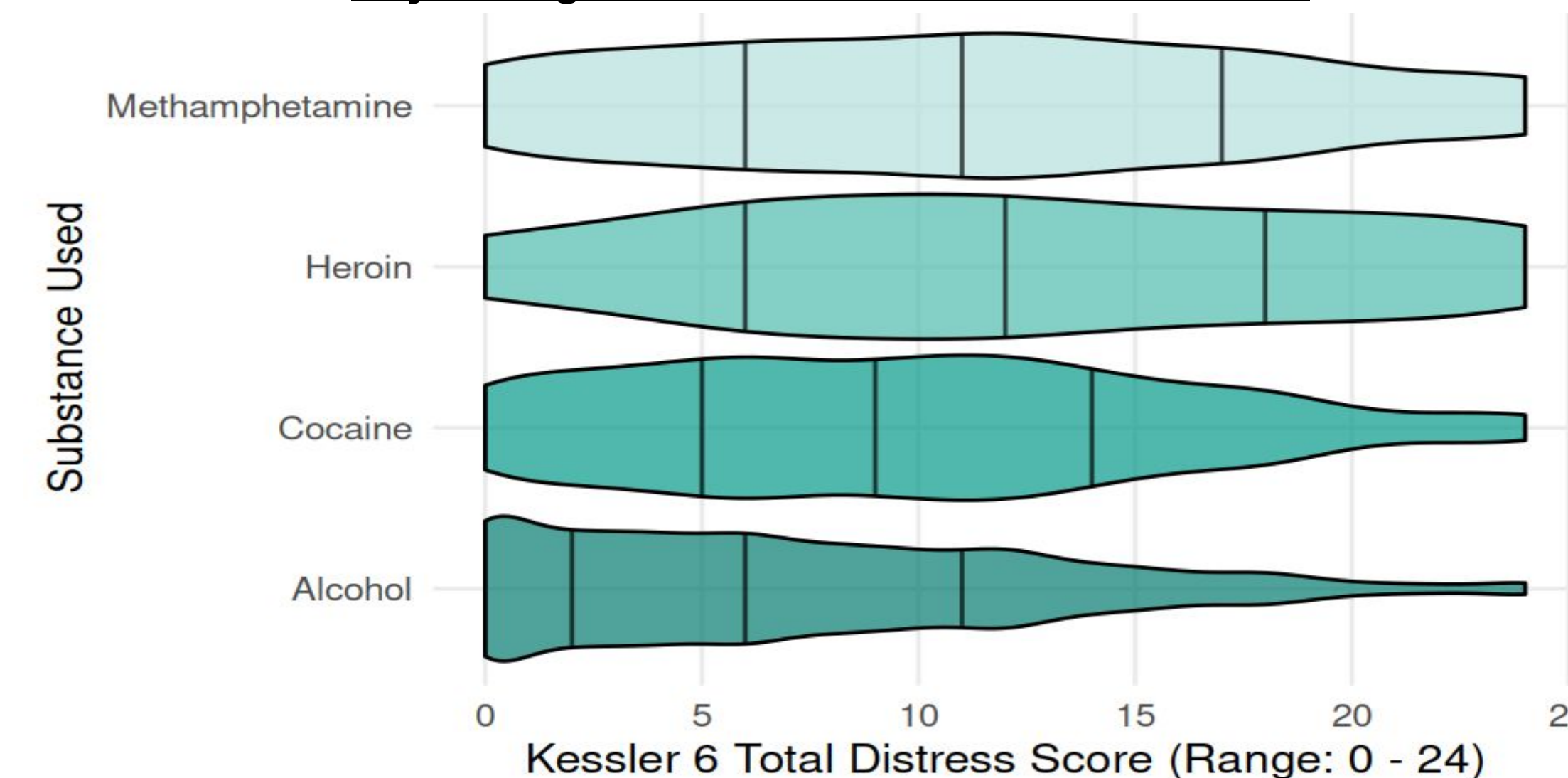


Figure 2: Level of Distress Based on the Substance Used

Usage of Substances v/s Income

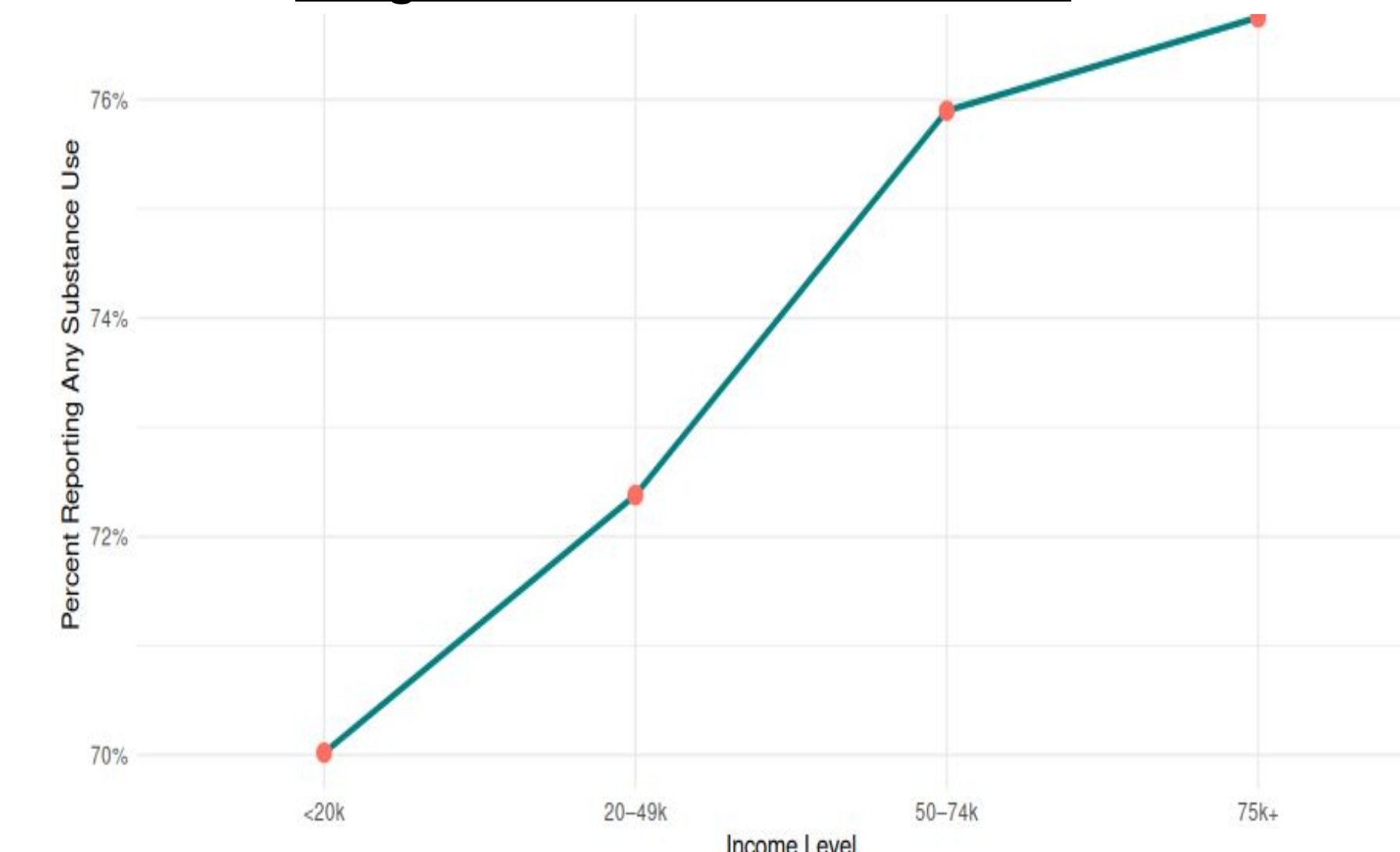


Figure 3: Substance Abuse Based on Family Income

Substance Use and Depression Severity

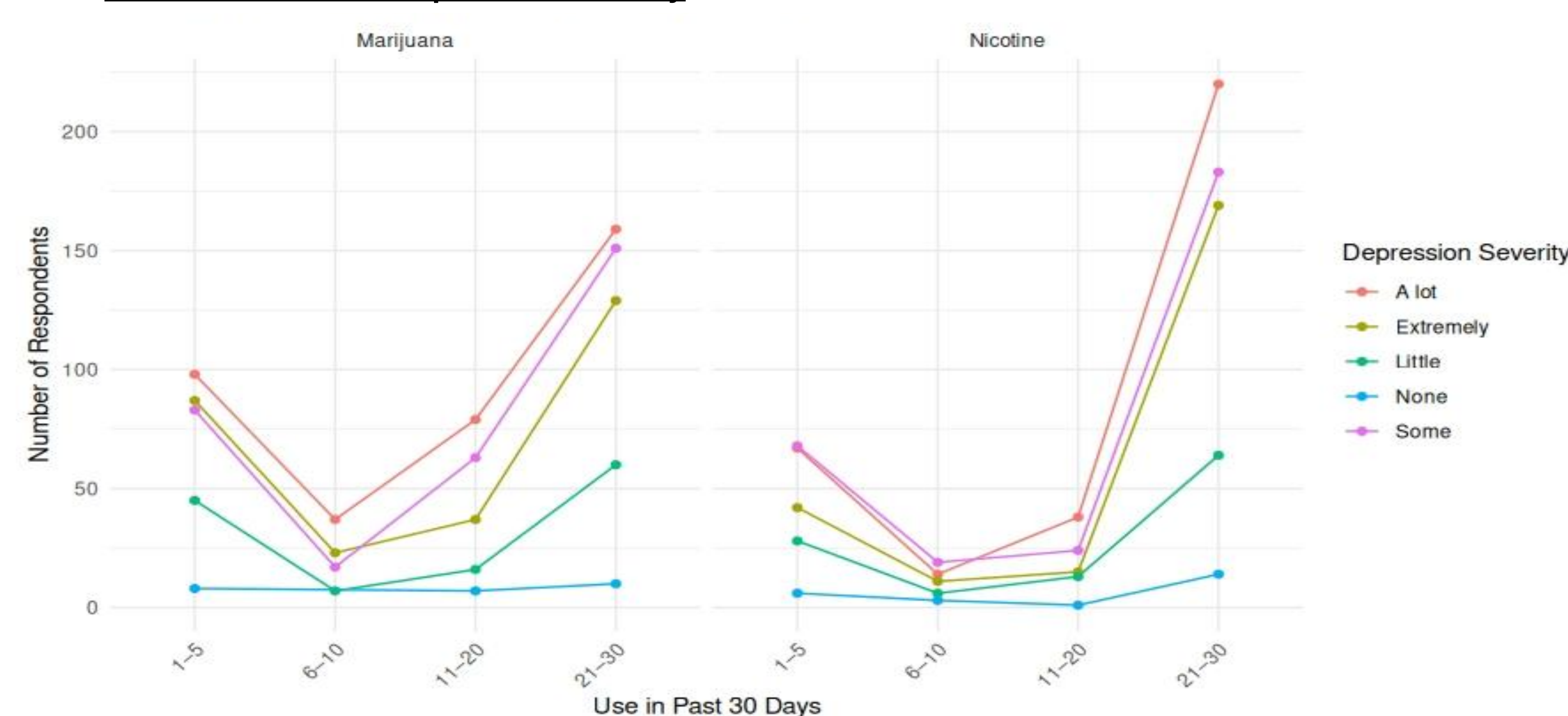


Figure 4: The Number of Days Each Substance is Used versus the Depression Severity in Respondents

[4] This graph explores the relationship between the usage of Marijuana and Nicotine with the severity of depression within individuals. By examining this figure, we can see that respondents with a higher consumption of these drugs also reflected a more extreme level of depression.

Nicotine Choice Based on Age Group

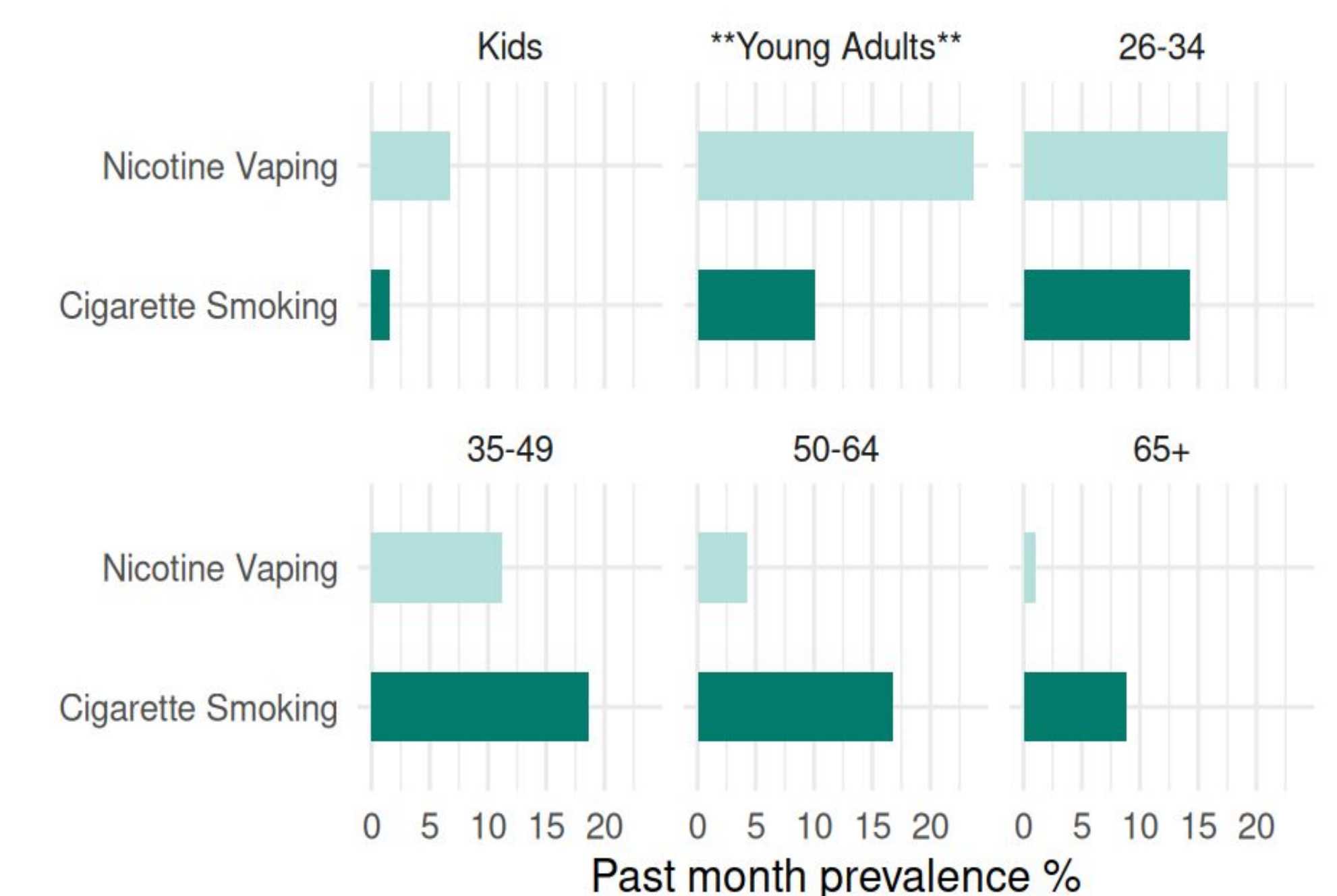


Figure 5: The Variance of Nicotine Choice with Age

Conclusions

Prevalence of Alcohol: Alcohol is the most commonly abused substance within the target age demographic.

Heroin and Depressive Outcomes: Heroin use correlates with the highest and most severe rates of depressive episodes.

Socioeconomic Trends: Substance use unexpectedly rises with income, peaking at 77% (75k+) compared to 70% (<20k).

Impact of Abuse Duration: Longer durations of substance abuse directly link to increased depression severity.

Shifting Nicotine Preferences: Vaping has heavily superseded traditional cigarette smoking among younger adults.

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