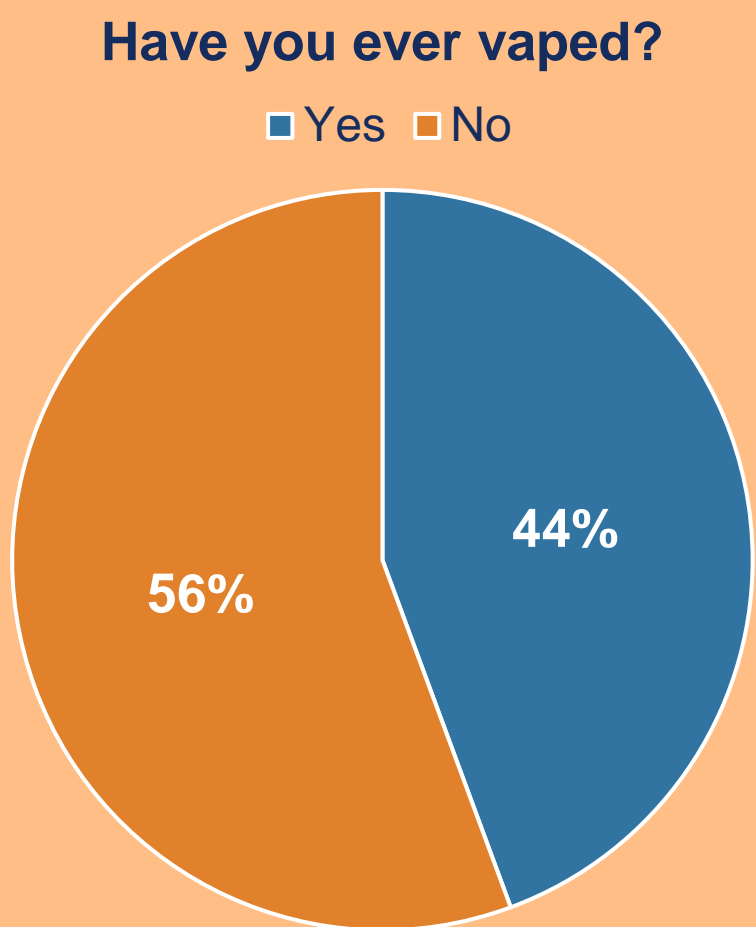


Who is Vaping in High School?

Examining the Association Between Adolescents' Characteristics and Vaping Use

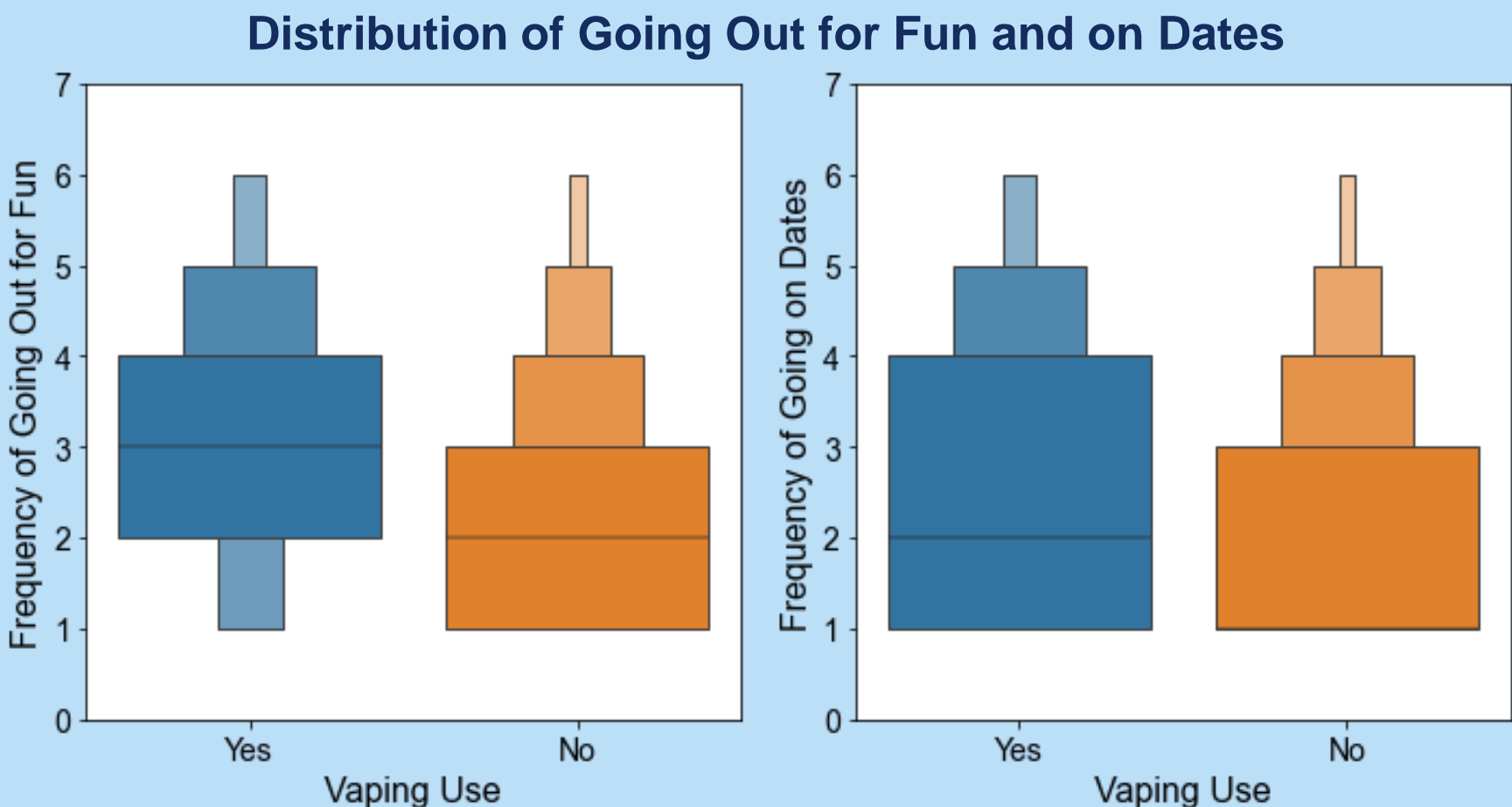
Introduction

Vaping use in the United States has increased dramatically in the past decade especially among teenagers and young adults, causing a rise in public concern for their health. What is relatively scarce in the previous research and the current discussion is the question about what groups of adolescents may be more vulnerable to vaping. This project investigates this issue by analyzing the association between vaping use and adolescents' individual characteristics using data from a national survey of drug use among U.S. high school seniors ("Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey), 2018").

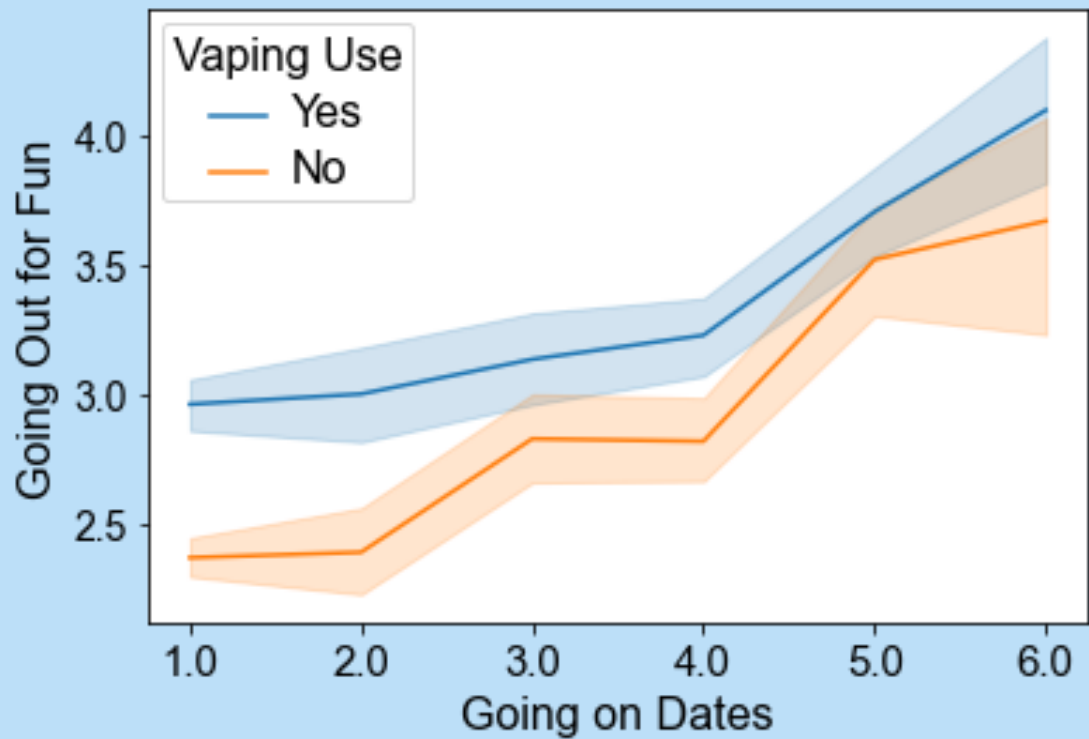


The survey data of drug use by U.S. high school seniors included questions about substance use and various demographics. It had a total of 4,323 valid samples that answered the question, "Have you ever vaped," with **2,405 responses as 'No'** and **1,918 as 'Yes.'**

Social Activity

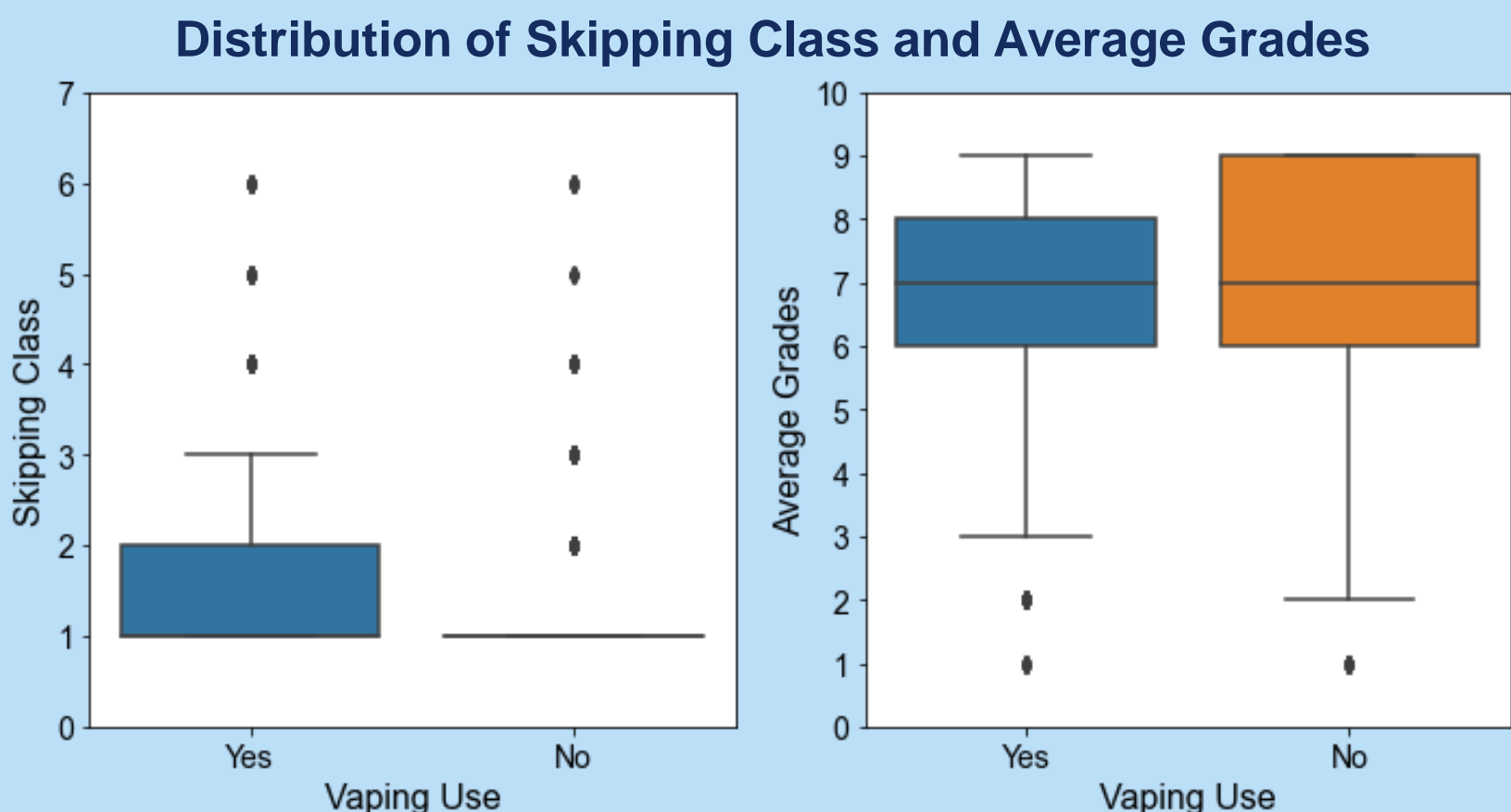


For the two variables summarizing social activity, higher values indicate high frequencies of going out for fun and on dates. **High school seniors who have vaped go out for fun more frequently** with an average of 3.17 compared to 2.58 for those who have never vaped. The **dating variable shows similar results** with an average of 2.56 for those who have vaped and 2.02 for those who have never vaped.

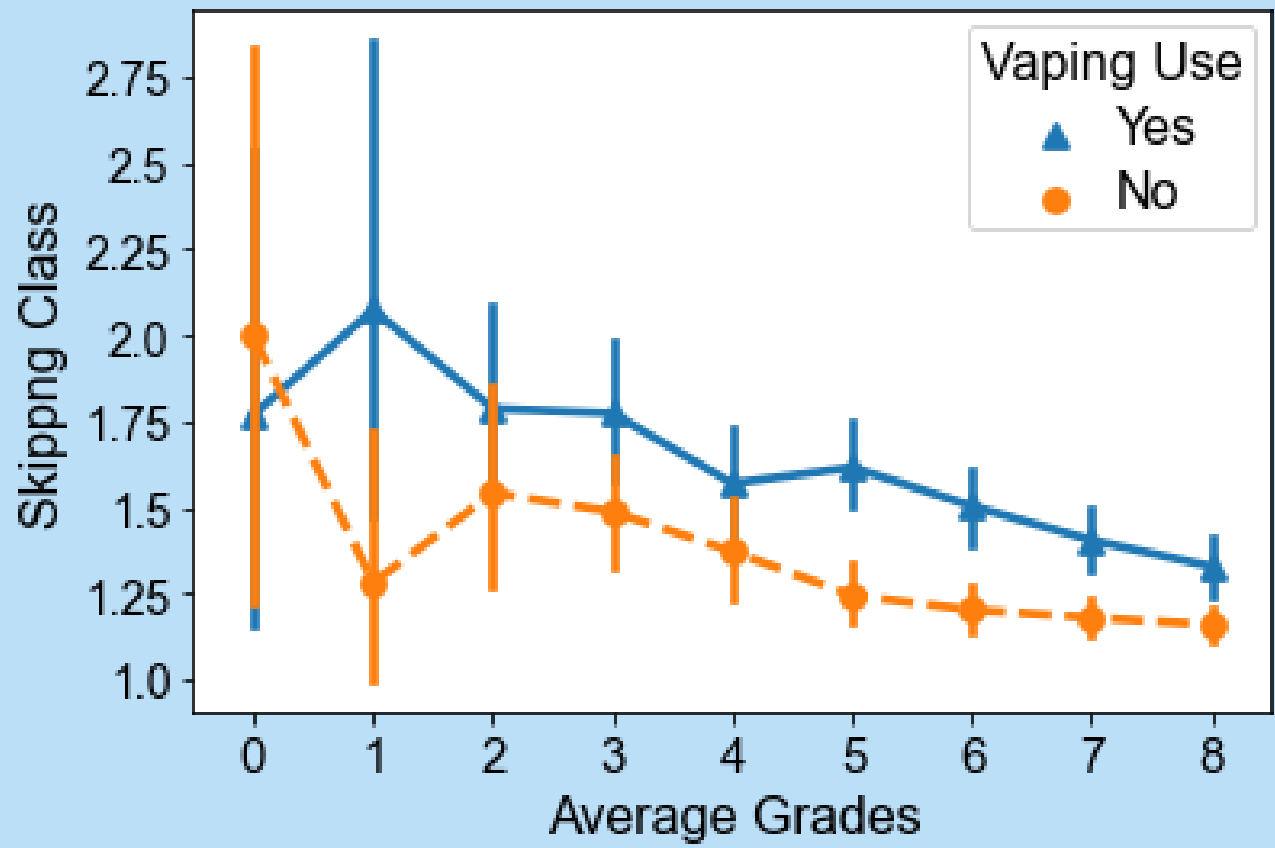


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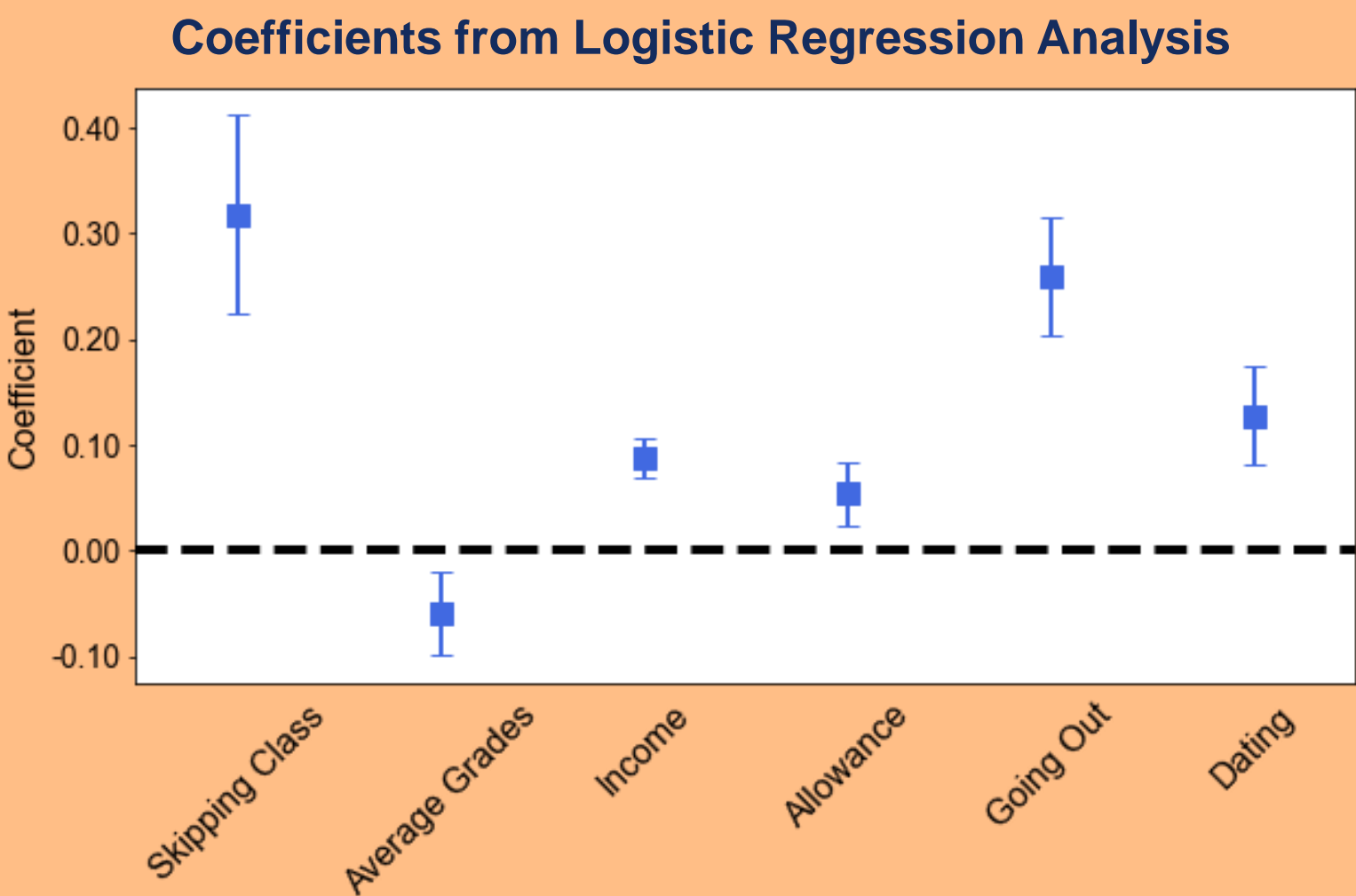
School Performance



In summarizing school performance, higher values in the 'Skipping Class' variable indicate higher frequencies of skipping class, while higher values in the 'Average Grades' variable indicate higher overall grades in school. **Skipping class is more frequent for vape users** with a mean of 1.51 compared to non-users with an average of 1.24. Additionally, **average grades are higher for non-users** with an average at 7.03 than vaping users at 6.73.

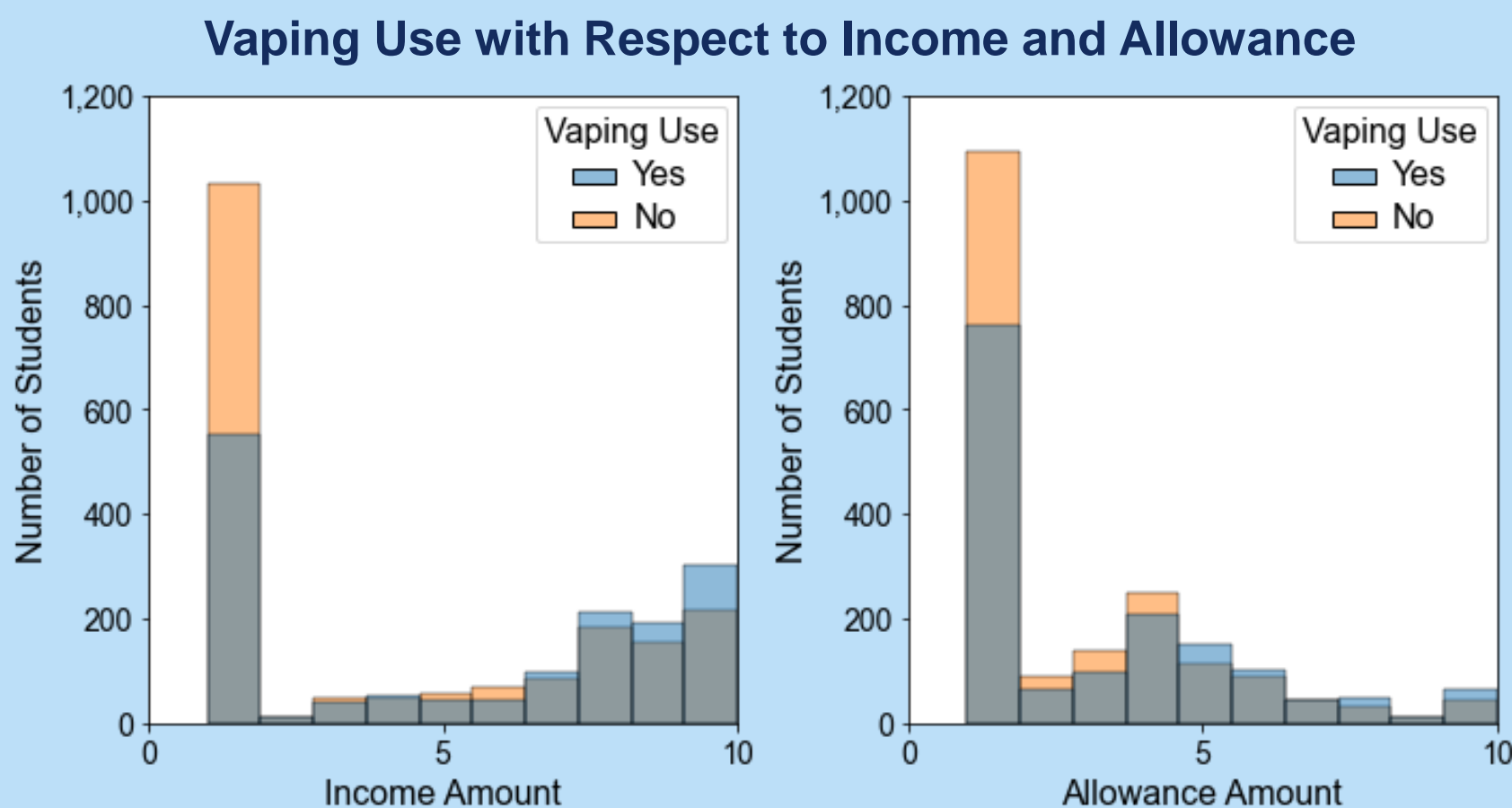


Conclusion



This project finds that **school performance, social activity, and money availability could all be important factors that correlate to vaping use** among high school seniors. All six variables from the survey data were considered significant based on the logistic regression analysis. Those who struggle with academics and skip school are more likely to be involved with vaping than other students. In addition, there is a greater chance of vaping for those students going out more often for fun and for dates than others. While being considered less significant, the amount of money students earn from a job and allowance may be increasing the chance for vaping use.

Money Availability



For the two variables summarizing finances, higher values indicate high amounts of money received from a job or allowance. **Teenagers who have vaped had overall more income and allowance** compared to those who have never vaped. Income frequencies for those who vape and do not vape, respectively, have a mean of 5.5 and 4.05. Allowance frequencies show similar trends with an average of 3.1 for vape users and 2.58 for non-users.

