The Relationship Between Alcohol Consumption and Socioeconomic Status in the U.S.

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Introduction

- Alcohol consumption is not only detrimental to the well being of many Americans but it also costs the US roughly $250 billion dollars a year and roughly 140,000 deaths each year are attributed to excessive drinking (CDC, 2024).
- Numerous studies have shown that individuals in lower socioeconomic classes often consume alcohol at a much greater rate than individuals of higher socioeconomic standing (Wiles, 2007)
- The average of alcohol-related deaths per year in the US increased drastically from 78,000 to 99,000 from 2010 to 2020 (White, et al 2022).
- This project seeks to expand on the research surrounding socioeconomic status and levels of alcohol consumption as well as how that relationship is affected when the variable "religion" is introduced into the equation

Research Questions

- What is the relationship between socioeconomic status and alcohol consumption?
- How does the relationship between socioeconomic status and alcohol use differ when religion is brought into the equation?

Methods

Sample

- Respondents (n=4,196) were drawn from the U.S. National Longitudinal Survey of Adolescent Health which is a study that follows a nationally representative group of individuals from adolescence to adulthood
- Data used was taken from Wave V (a mixed method survey of the participants of the original survey who were then in their 30s and 40s in 2016-2018) of the survey

Measures

- Income levels were determined by the question, "What was the total household income before taxes and deductions in the last calendar year for all household members who contribute to household expenses?" Responses ranged from upper (>$150,000), middle ($75,000-$150,000) and lower class (<$75,000)
- Alcohol consumption frequency (ACF) variable represents the total number of alcoholic drinks consumed in a month, calculated by multiplying the number of days one drank in the month by the number of drinks they typically drank on those days
- Active religiousness was measured using the question, "In the past 12 months how often did you attend a religious service?" This binary variable was coded dichotomously in terms if the presence or absence at religious services

Results

Univariate

- The distribution of socioeconomic status among the respondents was: 32.34% "upper class," 50.60% "middle class," and 17.06% "lower class"
- For religiousness: 66.3% of respondents were not religious while 33.9% of respondents were religious.
- The average ACF for adults was 25.66 drinks per month, widely ranging from 0 to 750

Bivariate

- The ANOVA analysis indicated a significant difference in mean ACF scores across the three socioeconomic classes (P=0.013)
- Post hoc comparison exhibited "middle class" individuals had a statistically significant lower mean ACF (mean difference = -4.89, p=0.013) then those of the "upper class"

Multivariate

- The multivariate linear regression between ACF, Income, and alcohol consumption showed that holding all other variables fixed:
  - Being religious is statistically significantly associated with lower alcohol consumption frequency (beta=-11.7, p=0.000))
  - Religion status does not confound (p-value of middle class income group association remains statistically significant) nor moderate (interaction terms: p= 0.413, p= 0.464) the previous association between socioeconomic status and drinking frequency
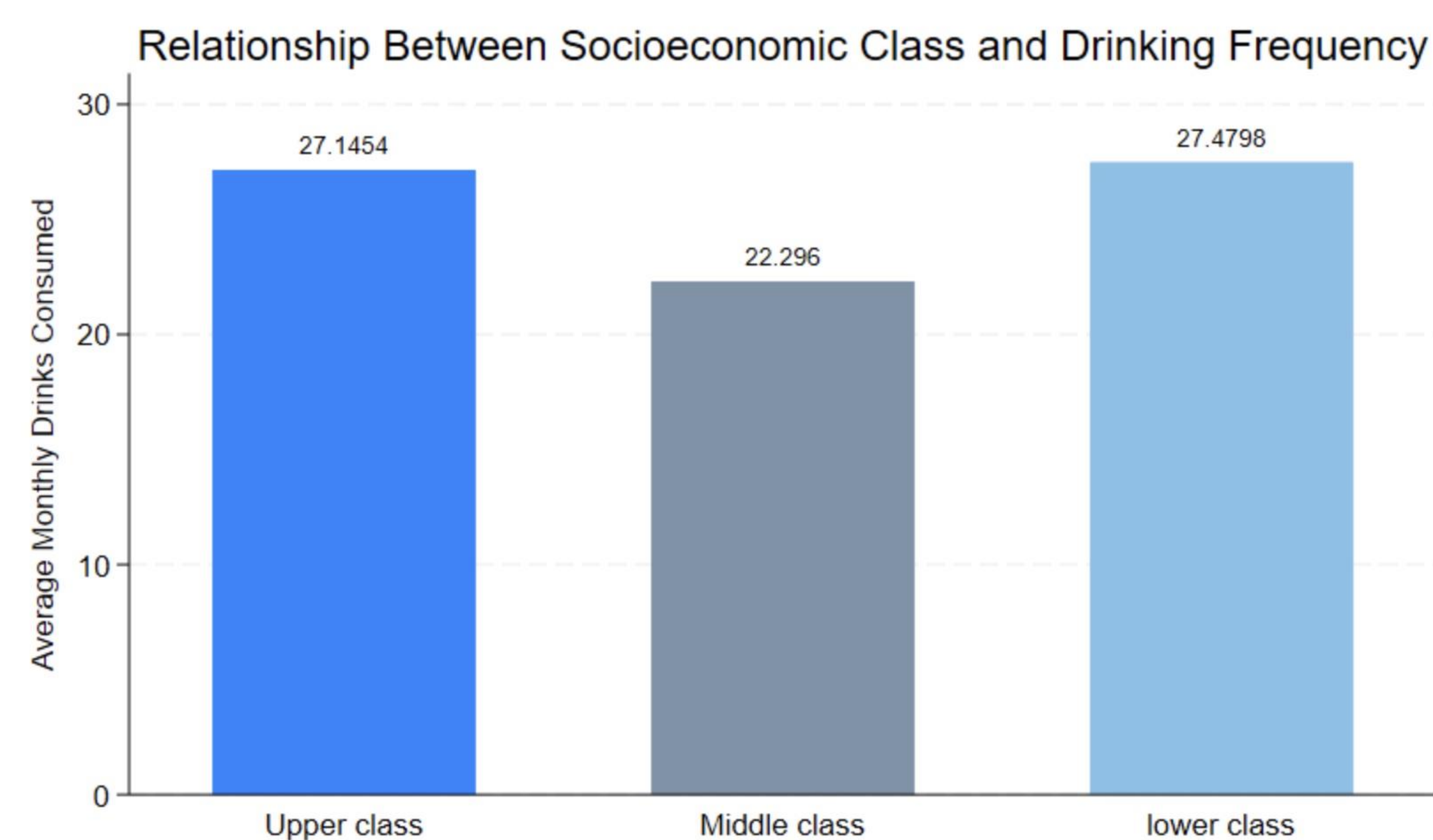

Relationship Between Socioeconomic Class and Drinking Frequency

Figure 1: **The average monthly drinks consumed across the three socioeconomic classes**

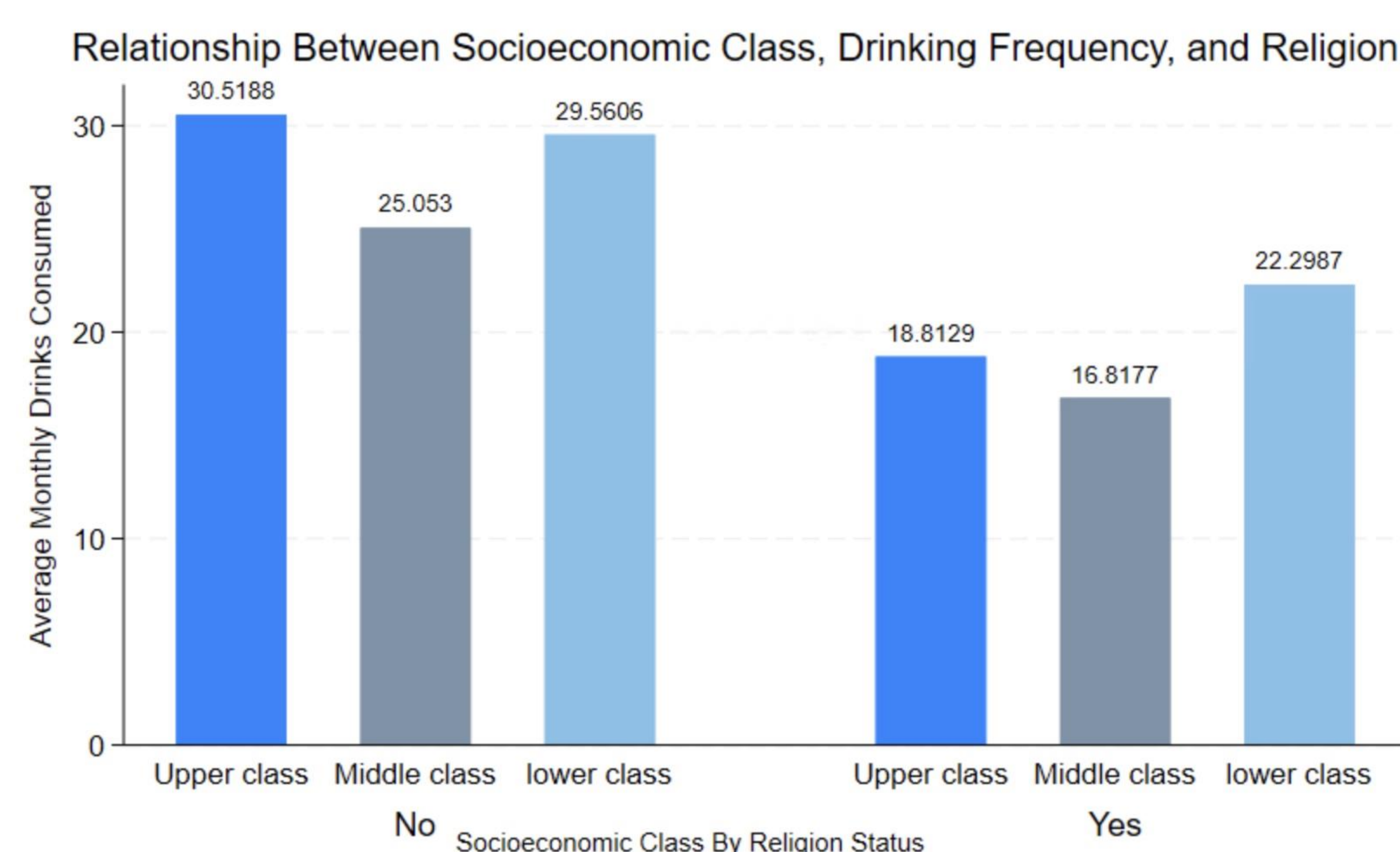Relationship Between Socioeconomic Class, Drinking Frequency, and Religion

Figure 2: **Relationship between socioeconomic status and drinking frequency when controlling for religion**

Discussion

- The average monthly drinks consumed were highest for both the upper and lower classes while the middle class was significantly less.
- Levels of alcohol consumption for members of the middle class was significantly less on average indicating the extremes of socioeconomic status can lead to increased ACF.
- Religiousness acts as a "control" for alcohol consumption across the three socioeconomic classes demonstrating that religiousness could be a better indicator for ACF than Income.
- This study's reliance on a limited amount of questions from one codebook present numerous simplified answers to complex questions and therefore could use a more comprehensive range of indicators to fully understand the relationship between socioeconomic status and alcohol consumption.
- Future studies should include the occupation of respondents and their extent of childhood trauma to evaluate if either measures are better at evaluating the relationship between alcohol consumption and socioeconomic status.

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