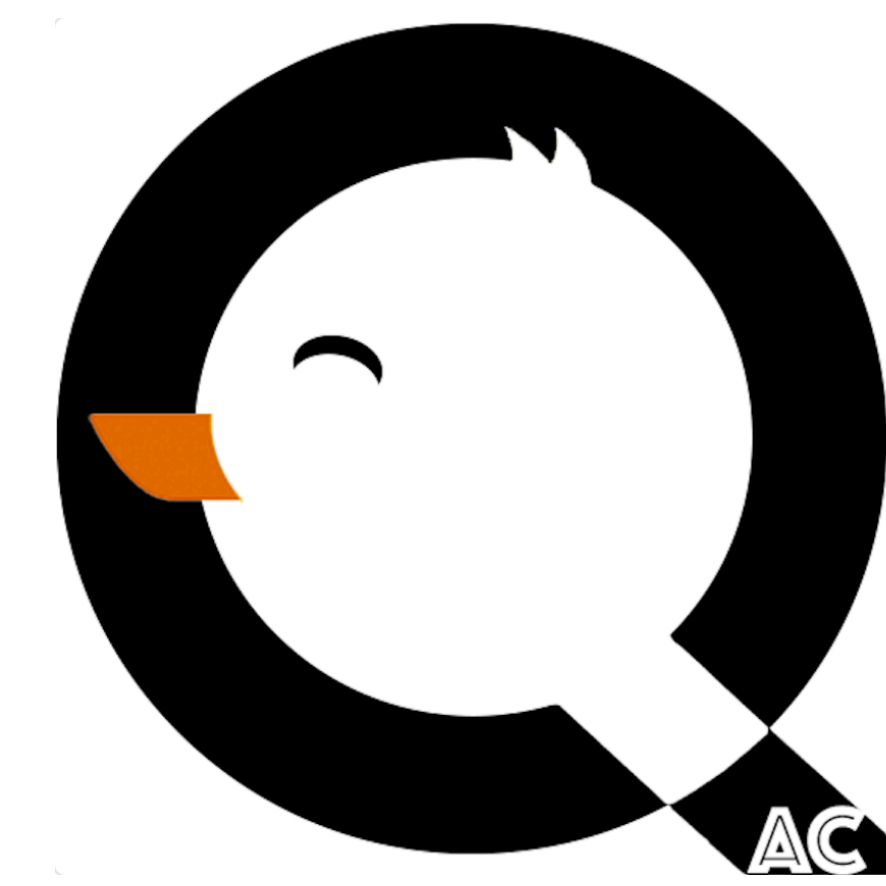




The Association Between Salvia Divinorum and Religiosity



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Introduction

- Many studies suggest that hallucinogens like psilocybin tend to occasion spiritually significant experiences in users. (Griffiths et al., 2011; Maclean et al., 2012).
- Certain studies support great decreases in self-reported atheism following these hallucinogen-induced spiritual experiences (Griffiths et al., 2019).
- Even with this research concerning similar drugs, there is a major lack of exploration into Salvia divinorum with respect to its association with religiosity.
- Similarly, many of these studies lack a focus on young adults and university students.

Research Questions

- Is lifetime use of Salvia associated with stronger self-reported religiosity?
- How do age and university status affect this association?

Methods

Sample

- The sample (n=58,633) was derived from the 2024 National Survey on Drug Use and Health (NSDUH). The NSDUH is an annual, cross-sectional survey that interviews English or Spanish-speaking, non-institutionalized, non-military participants living in the United States.

Measures

- Religiosity was measured by one's level of agreement with the following statement: "Your religious beliefs are a very important part of your life."* The four original agree/disagree-type responses were recoded into a binary, with "0" representing "DISAGREE" and "1" representing "AGREE".
- History of Salvia use was measured by the following question: "Have you ever, even once, used Salvia divinorum?" The three original yes/no-type responses were recoded into two: "NO" and "YES".
- The last three variables used in this project — age, a further-subdivided age variable, and university status — were all measured via self-reported responses.

Results

Bivariate

- A Chi-square test of independence found that Salvia use is **significantly and negatively associated** with one's religiosity, measured by agreement with the statement mentioned in the measures section* (p 1.71e-48). That is, participants who had done Salvia were less likely to agree with the statement about religiosity (**Fig. 1**).

Multivariate

- Logistic regression indicated that university status is a significant moderator of the relationship between Salvia use and religiosity (O.R. 2.13, CI 1.31-3.49, p 0.002) (**Fig. 2**). That is, those who are in university and have taken Salvia are 2.13 times more likely to agree with the statement than those who have taken the drug but are not in university.
- Neither of the age variables used in this analysis is a moderator nor a confounder of the relationship between Salvia use and religiosity.

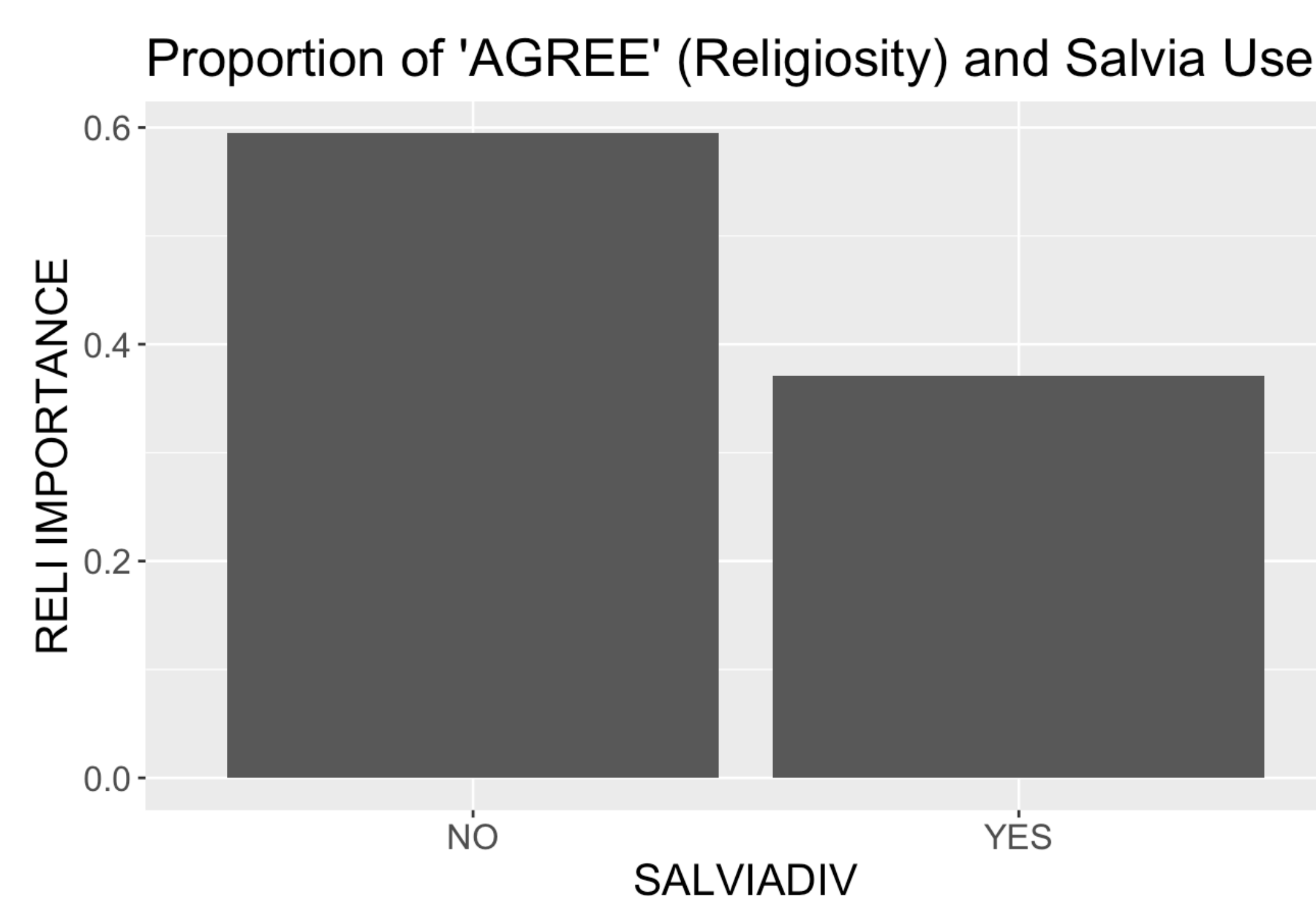


Figure 1: Proportions of participants who agree that religion is important, accounting for Salvia use

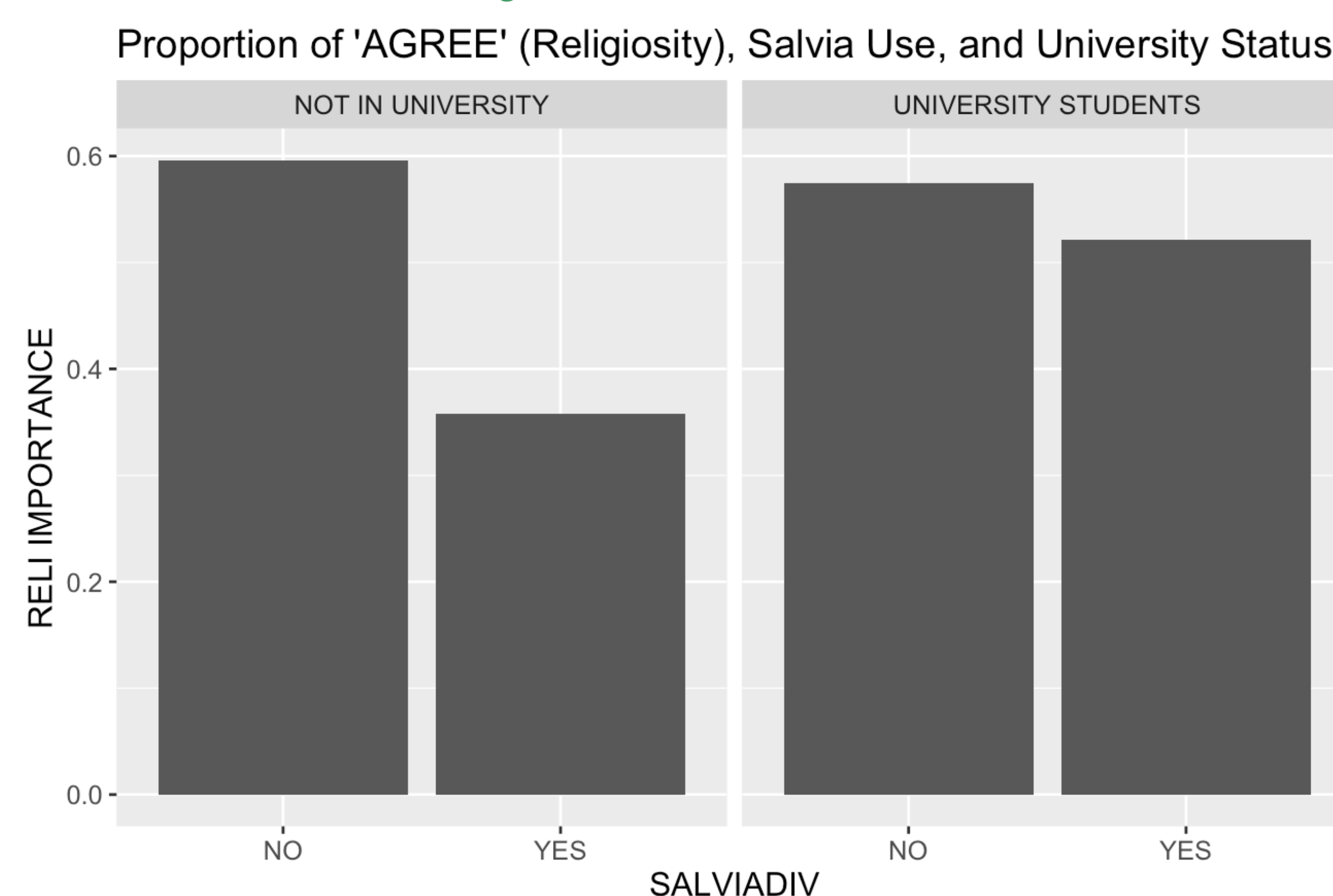


Figure 2: Proportions of participants who agree that religion is important, accounting for Salvia use and university status

Discussion

- It is interesting to see that, while one's history of Salvia use is **generally** negatively associated with religiosity, being a university student nearly doubles the odds, given that they have tried the drug, that they are strongly religious. This provokes new questions about Salvia's relationship with college life and the demographic attending these institutions.
- The nature of Salvia is heavily understudied. Hopefully, this analysis may help sustain interest in the nature of the drug and its relationship with ideology, society, and the world at large.

References

- Griffiths, R. R., Johnson, M. W., Richards, W. A., Richards, B. D., McCann, U., & Jesse, R. (2011). Psilocybin occasioned mystical-type experiences: immediate and persisting dose-related effects. *Psychopharmacologia*, 218(4), 649–665. <https://doi.org/10.1007/s00213-011-2358-5>.
- MacLean, K. A., Leoutsakos, J.-M. S., Johnson, M. W., & Griffiths, R. R. (2012). Factor Analysis of the Mystical Experience Questionnaire: A Study of Experiences Occasioned by the Hallucinogen Psilocybin. *Journal for the scientific study of religion*, 51(4), 721–737. <https://doi.org/10.1111/j.1468-5906.2012.01685>.
- Griffiths, R. R., Hurwitz, E. S., Davis, A. K., Johnson, M. W., & Jesse, R. (2019). Survey of subjective "God encounter experiences": Comparisons among naturally occurring experiences and those occasioned by the classic psychedelics psilocybin, LSD, ayahuasca, or DMT. *PLoS one*, 14(4), e0214377. <https://doi.org/10.1371/journal.pone.0214377>.