Can We Predict Who Tries E-cigarettes?

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INTRODUCTION

Background
- E-cigarettes have become the most widely used tobacco product among U.S. youth and contains nicotine, which is highly addictive and can damage the developing brain[1].
- Problem Behavior Theory explains problematic behaviors as a function of personality, social norms, and environment, which aids in identifying risks for engagement in a problem behavior[2].

METHOD

Research Goal
- *Objective:* To examine person-characteristics and the twenty-nine outlined PBT factors to identify which factors are most salient in differentiating between non-users and e-cigarette users.

Participants
- Enrolled college students were recruited from a Psychology research pool as well as university announcements
- N = 1,083 college students
  - Ages 18 – 42 (M = 20.04)
  - 75.3% female, 40.5% Black or African American

Collection
- Data were collected via online survey that was estimated to last around 60 minutes.

ANALYSIS & RESULTS

Recursive Partitioning Analysis (RPA)
- RPA creates a hierarchy of variables using all survey factors.
- Participants who reported at least one lifetime use of e-cigarettes were coded as ever users.
- Resulting tree shows which variables of the 30+ examined were best able to separate the two user groups.

Scores in Context
- *Positive-Negative function discrepancy* scores ranged from -4 to 4.
- -4 indicates endorsement of all negative reasons not to use and 4 indicates endorsing all positive reasons to use
- *Marijuana involvement* ranged from 0-8, with a higher score indicating higher commitment to cannabis.

Figure 1. Never User and Ever User RPA Tree
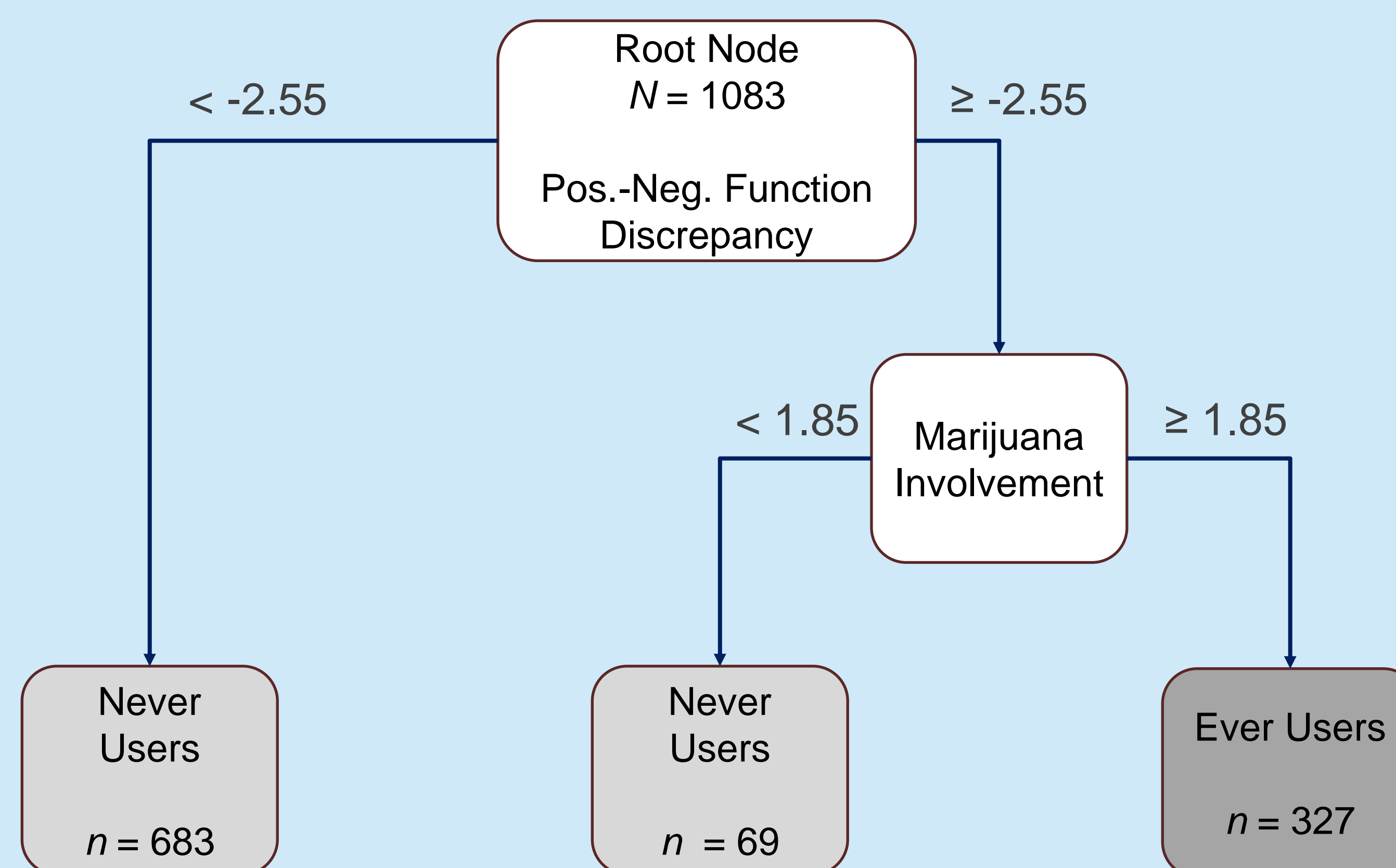
CONCLUSION

Conclusions
- Students who reported less negative and more positive functions of e-cigarettes as well as lifetime use of marijuana were sorted as e-cigarette ever users.

Discussion
- Past cannabis use and perceived positive functions of using e-cigarettes predict current use of e-cigarettes, which builds on previous research that found e-cigarettes associated with other substance use[1].
- These findings provide methods for policy makers and interventionists to reduce the risk of e-cigarette use among young people.

Future Directions

Examine specific functions	Identifying which functions are most predictive of use on their own
Intervention methods	Incorporate the identified variables into intervention and prevention work
Changing perceptions of e-cigarettes	Focus on how we can properly inform youth regarding harm AND combat positive functions

REFERENCES

1. US Department of Health and Human Services. (2016). E-cigarette use among youth and young adults: A report of the Surgeon General.
2. Jessor, R. (1987). Problem-Behavior Theory, Psychosocial Development, and Adolescent Problem Drinking. *Addiction*, *82*(4), 331–342. https://doi.org/10.1111/j.1360-0443.1987.tb01490.

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