

## Introduction

- Smoking is the #1 preventable cause of death in the U.S.
- ENDS use is a gateway to smoking in previous non-smokers
- 9 out of 10 adult smokers, started before the age of 18
- ENDS health risks - nicotine addiction and inhalation of heavy metals and carcinogens
- 2003 – the first ENDS were created commercially
- 2007 – ENDS were first imported into the U.S.
- 2010 – FDA banned free samples of tobacco products (so ENDS companies made the \$1)
- 2018 – FDA mandated the black box warning label to be placed on tobacco merchandise
- 2019 – the Tobacco 21 law was passed, which raised the age to purchase tobacco up to age 21 from age 18

## Methods

### 2019 National Youth Tobacco Survey (NYTS)

- Organized by the Food and Drug Administration (FDA)
- Administered to middle and high schools from February 15, 2019 to March 24, 2019
- Given to the selected classrooms by tablet
- Used a stratified, three stage cluster sample design:
  - Primary sampling units (PSU)
  - Secondary sampling units (SSU)
  - Selection of students
- Total of 104 questions
- Total of 22,153 students for their sample size

### Secondary Analysis of the 2019 NYTS

- The made the 2019 NYTS data free to the public
- Statistical Package for Social Sciences (SPSS) was used to analyze the data
- Confidence interval (CI) was 95%
- P-value of 0.05 was used to indicate statistical significance
- Different forms of logistical regression analyses
- The “include” and “exclude” function was used in SPSS to create a targeted audience
  - I.e., only including those under the age of 18

## Discussion and Limitations

### Future Implications, Policies, and Recommendations

- Educational programs
- Create assistive cessation programs for youth specifically
- Ban flavors
- Use different social media platforms to advertise anti-tobacco or anti-ENDS campaigns
- Need further research on ENDS
  - Exposure to ENDS through social media platforms
  - Questions pertaining the nicotine levels
  - Specify what is included in the “Internet” category

### Strengths

- Large sample size
- Done electronically for the first time

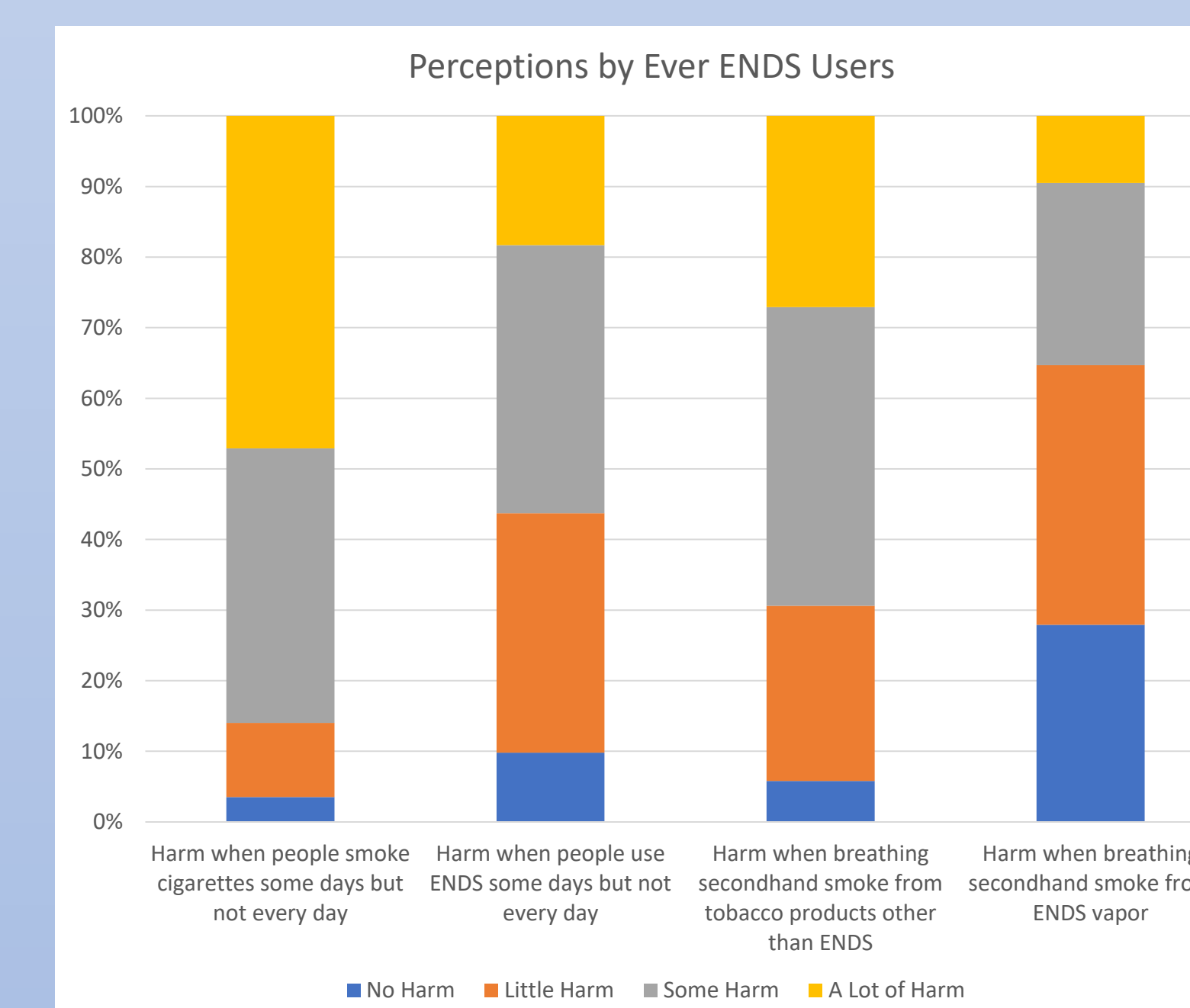
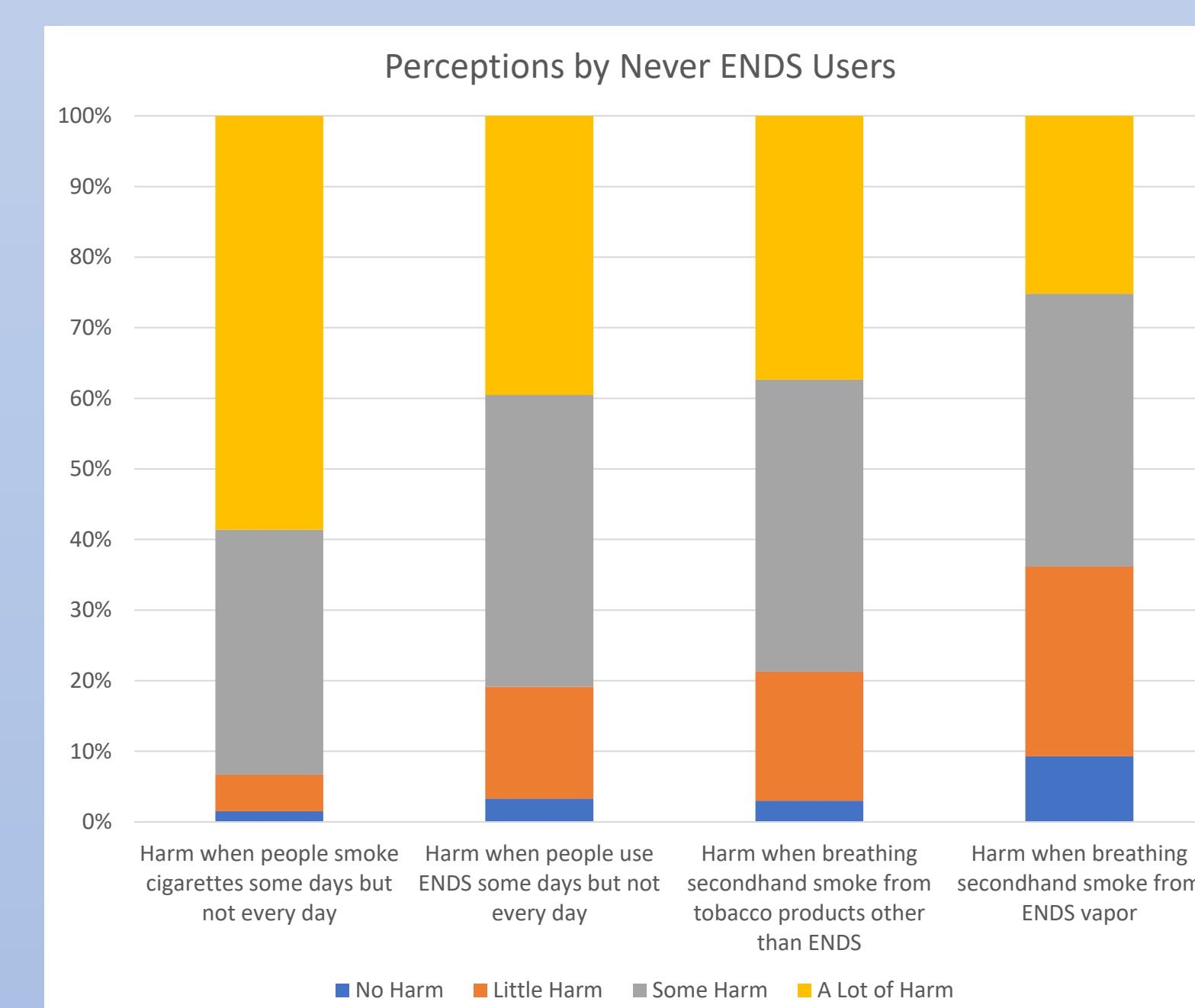
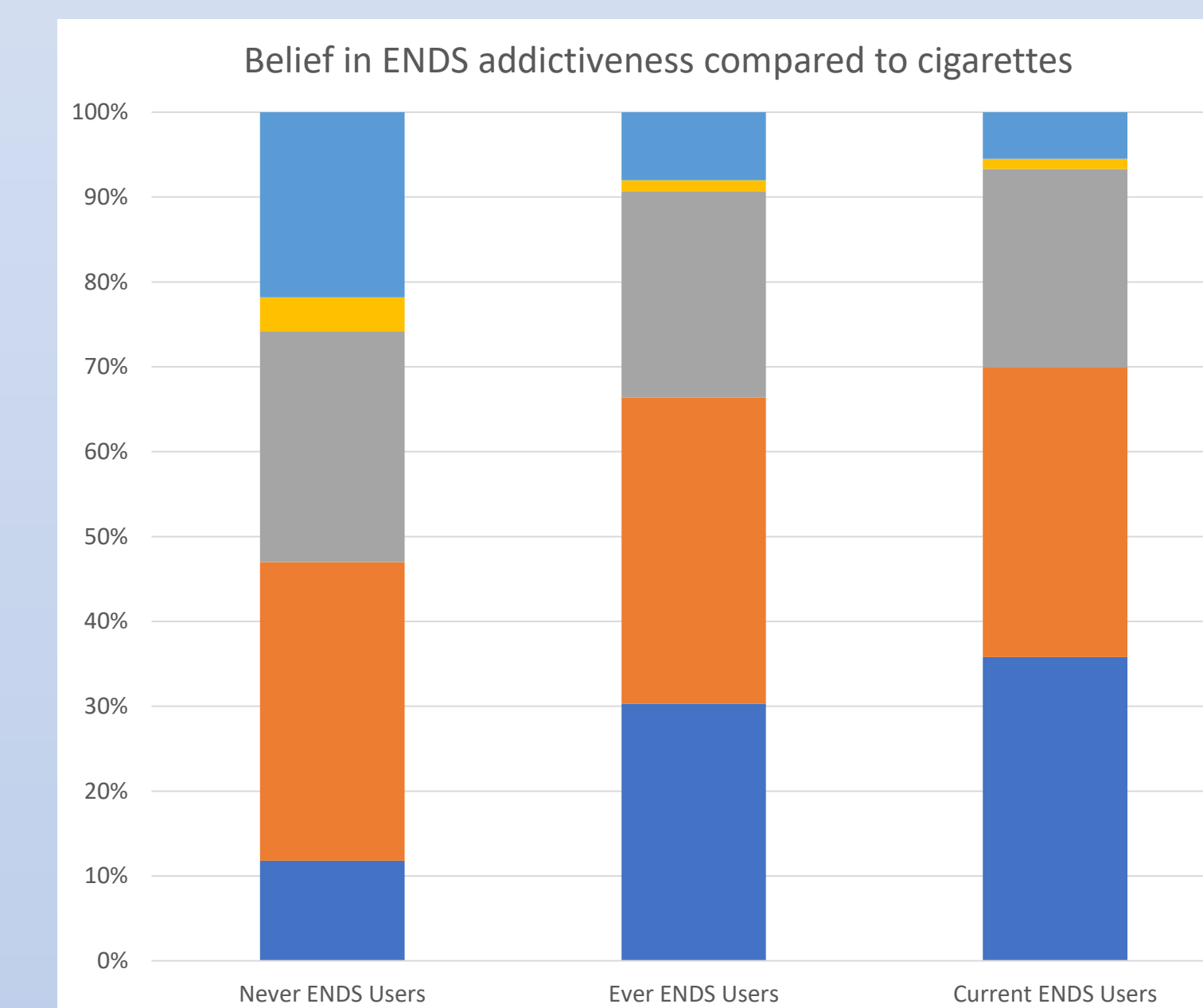
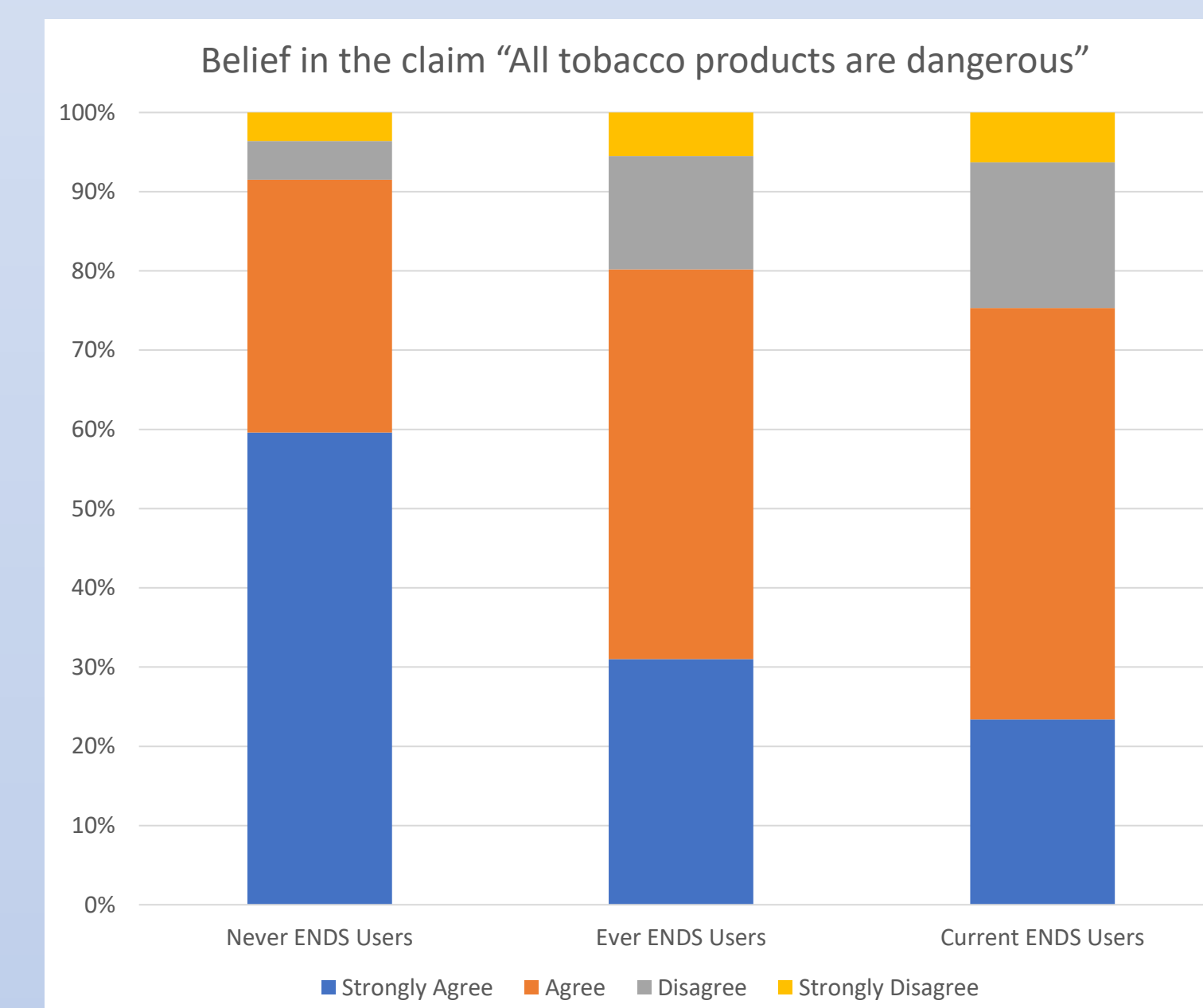
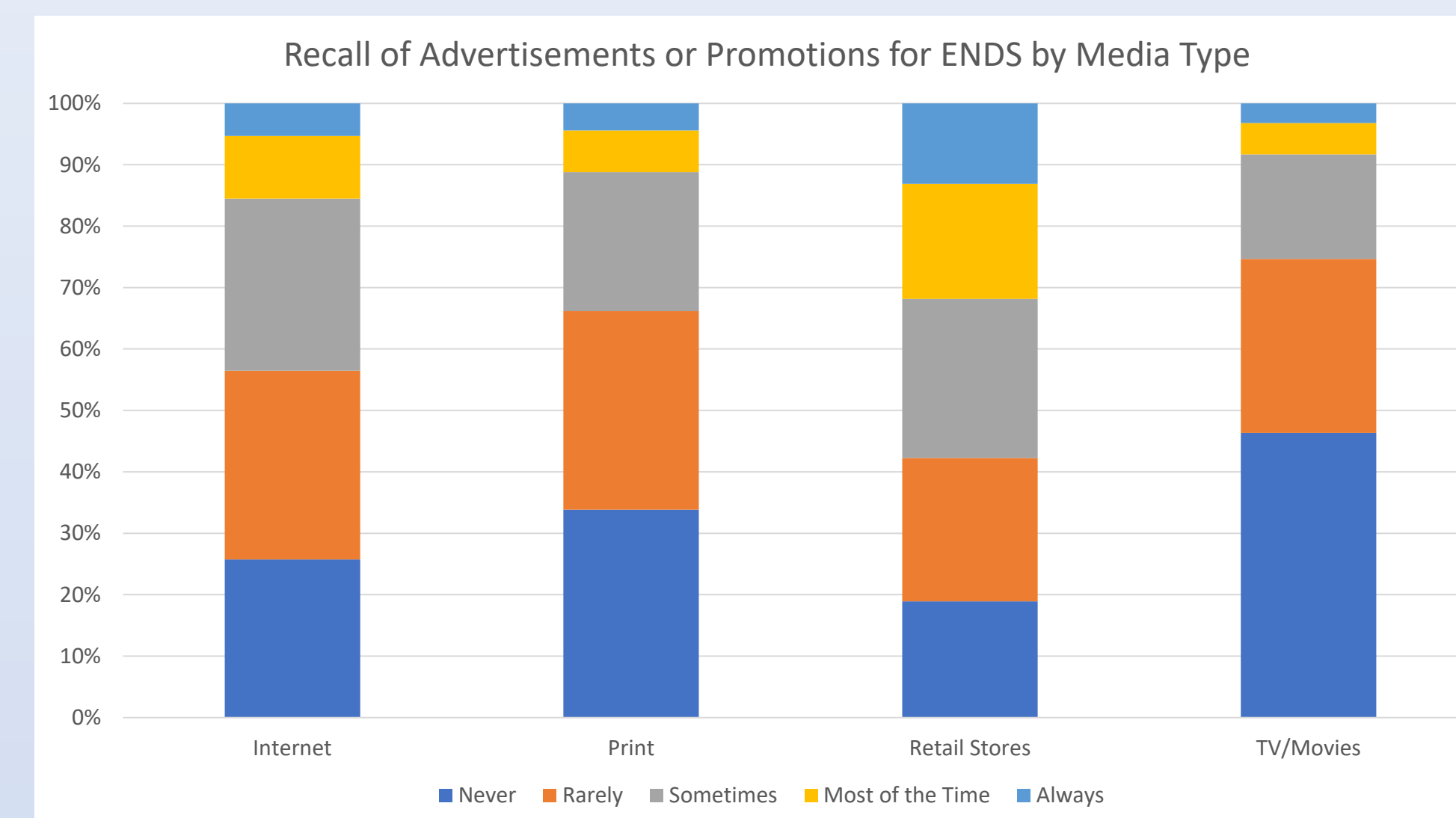
### Limitations

- Limited to 4 forms of media and did not include social media
- Self reported
- Public and private schools only
- Given in English & Spanish only
- This is a secondary analysis

## Conclusions

The socioecological model (SEM) was used to show the level of impact certain factors will have on the youth population

- Intrapersonal** – factors were the most influential because their attitudes, beliefs, and perceptions indicated if they were more like to use ENDS or not
- Interpersonal** – they were more likely to try ENDS if a friend offered it to them
- Organizational** – seeing their friends use ENDS and post about it causes them to want to in order to feel included with the popular trends
- Communities** played a role in access to ENDS
- Society and public policy** have the least impact on their behavior, as evidenced by using ENDS because they are easier to conceal even if they are prohibited



## Results

- ENDS users tended to be less inclined to believe that all tobacco products are dangerous
- ENDS users were more likely to believe that ENDS were less addictive than cigarettes
- Common belief that using cigarettes and the secondhand smoke from them were more dangerous than using e-cigarettes and their secondhand smoke
- ENDS users believed using ENDS occasionally & their secondhand smoke caused little to no harm
- #1 reason for trying ENDS was curiosity
- TV, movies, or online had little influence on using ENDS
- 6% reported not using flavors with any tobacco product

