

Graphic Images on Tobacco Packaging and the Perception of Tobacco Products Among College Students in the United States

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Introduction

- Cigarette smoking is a significant public health issue in the United States. The burden of disease and death of cigarette smoking is large-scale, with over 480,000 deaths among Americans each year associated with tobacco use and exposure to secondhand smoke (1)
- In 2019, the United State's Food and Drug Administration (FDA) proposed **13 graphic warning labels** to be featured on cigarette packages and advertisements.
 - Include text statements and corresponding graphic images
- There have been former studies that demonstrate efficacy of graphic labels as a means to curb cigarette consumption (2, 3, 4, 5)

Objective

To determine if there is a relationship between the addition of graphic images on tobacco packaging and the consumption of tobacco products among college students in the United States.

FDA's Proposed Warning Labels



WARNING: Smoking causes type 2 diabetes, which raises blood sugar.

These labels are two examples of the 13 proposed graphic warning labels



WARNING: Smoking can cause heart disease and strokes by clogging arteries.

The purpose is to promote greater public understanding of the negative health consequences of smoking

Methods

Platform for Survey

- A Google Form survey consisting of a series of questions adapted from previously validated surveys, such as the National Youth Tobacco Survey and International Tobacco Control Four Country Survey was developed and used to collect data
- The survey was sent to college students through the Department of Family Medicine and Public Health at the University of California San Diego (UCSD). It was estimated to be completed in less than twenty minutes and taken anonymously.

Survey Components: Four Sections

- 1. Demographics, 2. Smoking-related knowledge, 3. Awareness of tobacco promotion and packaging, and 4. Perception of graphic warning labels and their role in cigarette consumption; Survey answers were assigned numerical values (1-4, 1-5)
- Example of survey question: "To what extent do you think warning labels make cigarette users think about quitting?"

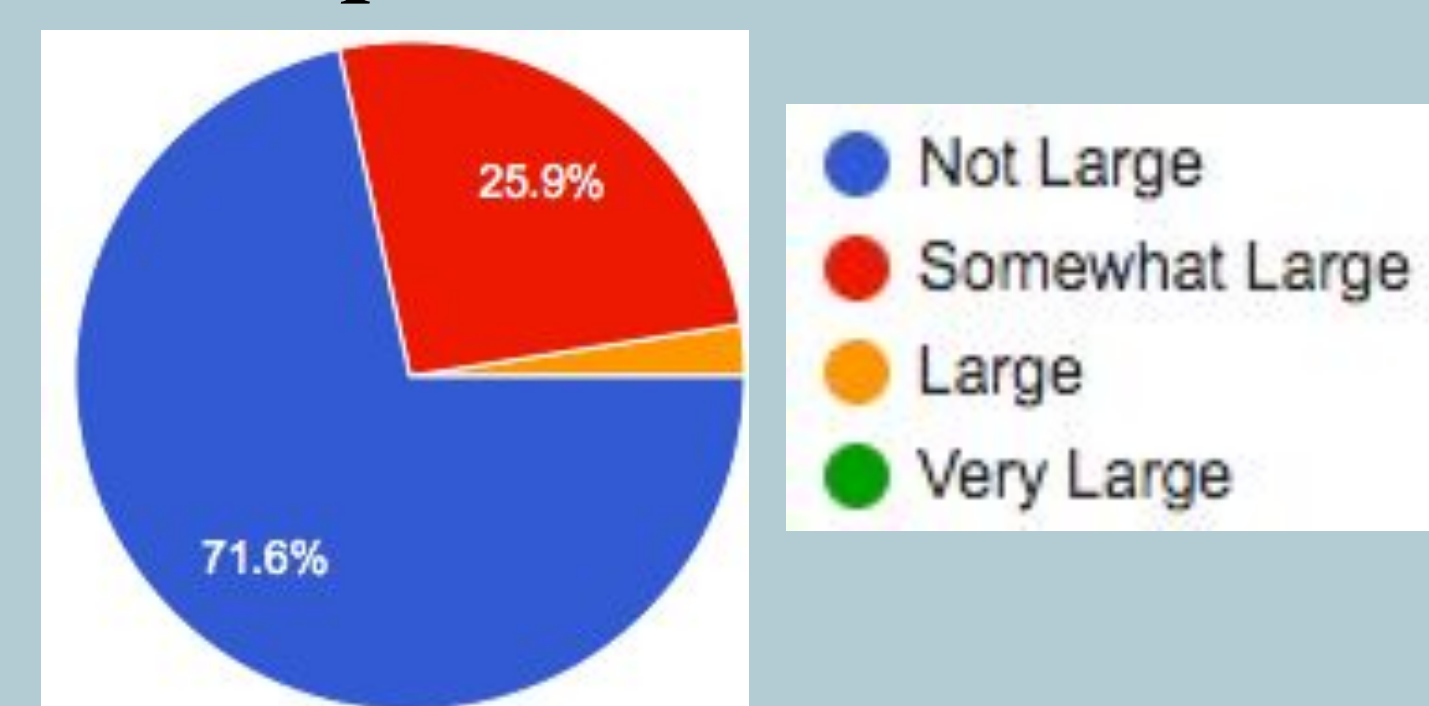
Statistical Analysis

- SPSS Software, and more specifically Fisher's Exact Test, was used for data analysis to determine the association between graphic warning labels and the perception of them in regards to consumption among college students

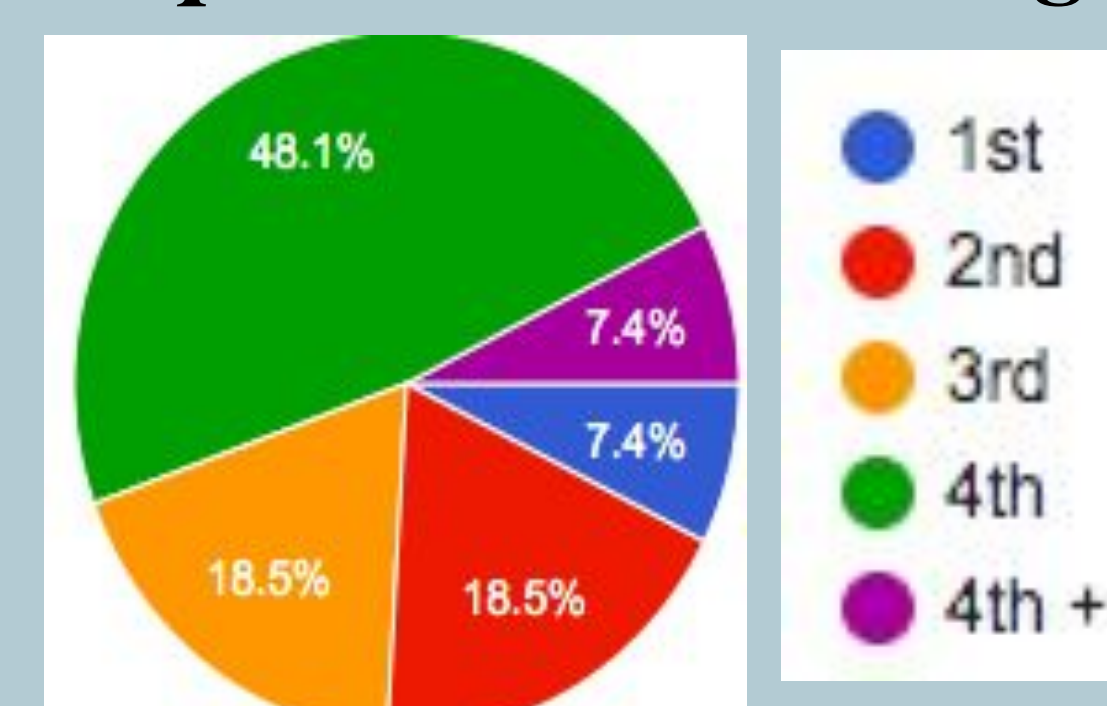
Results

Sample Characteristics: 81 Participants

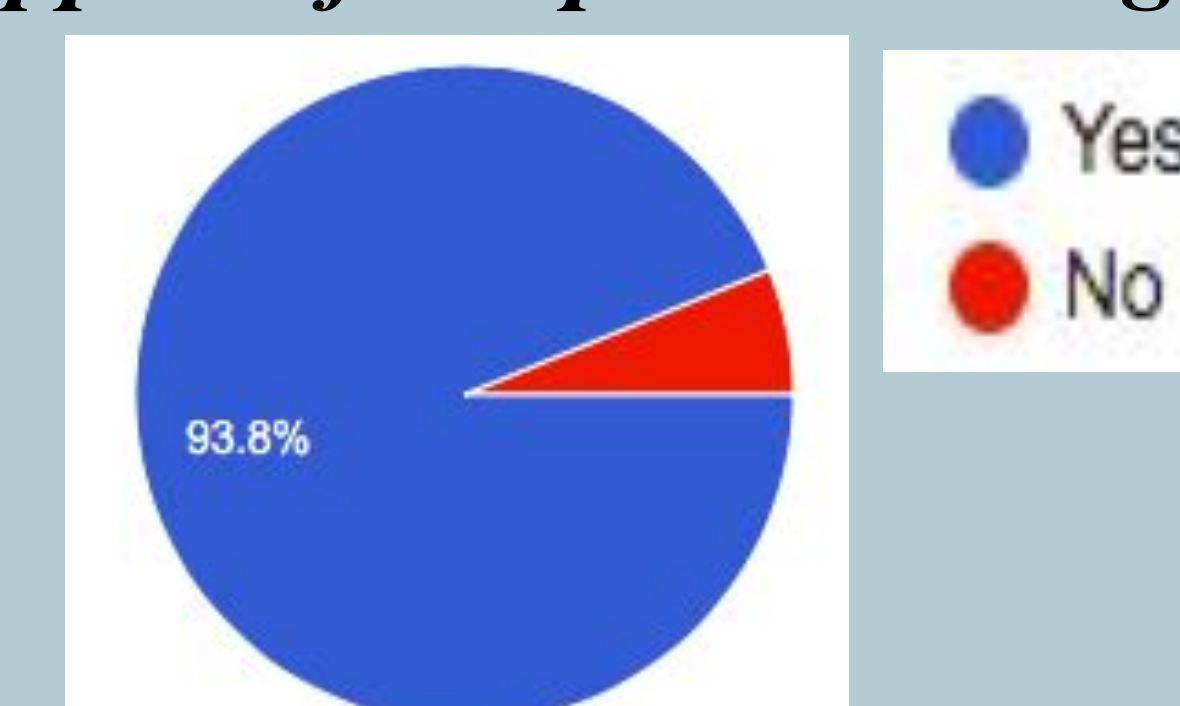
Participant Gender



Participant Class Standing

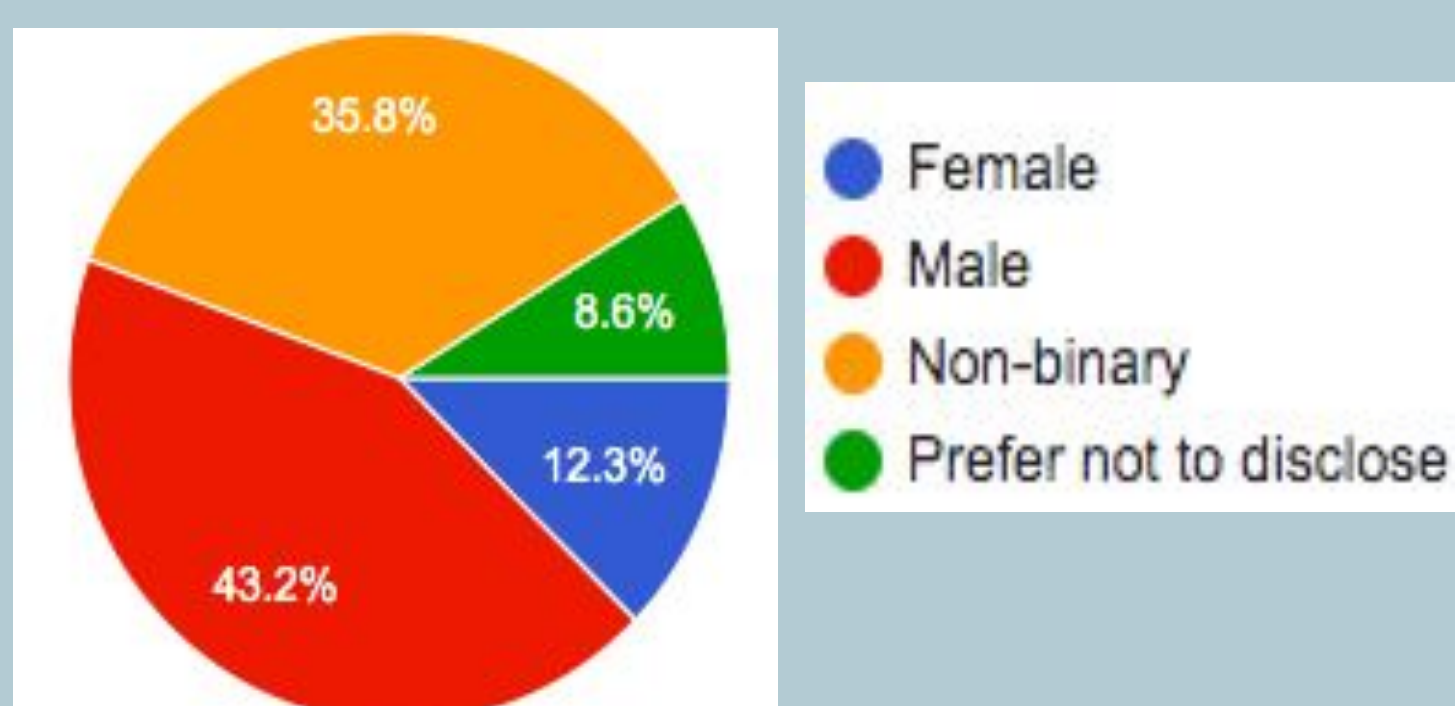


Support of Graphic Warning Labels

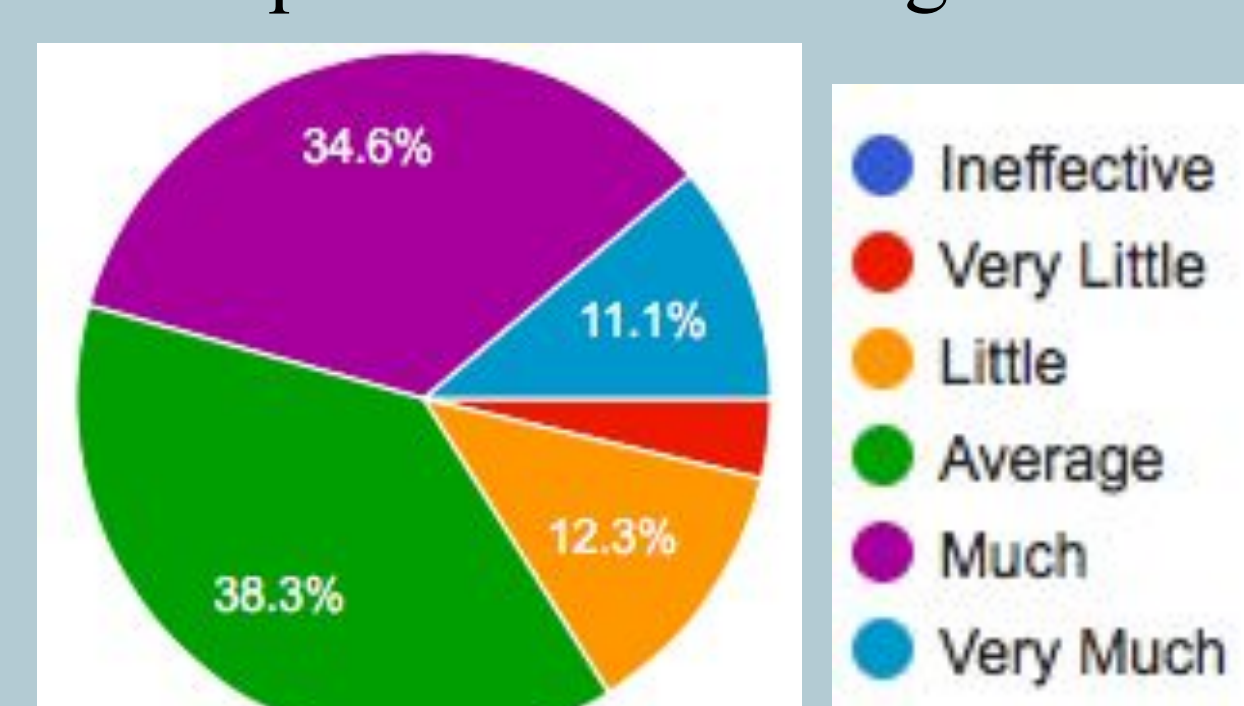


Respondents' Attitudes and Beliefs on Smoking and Graphic Warning Labels

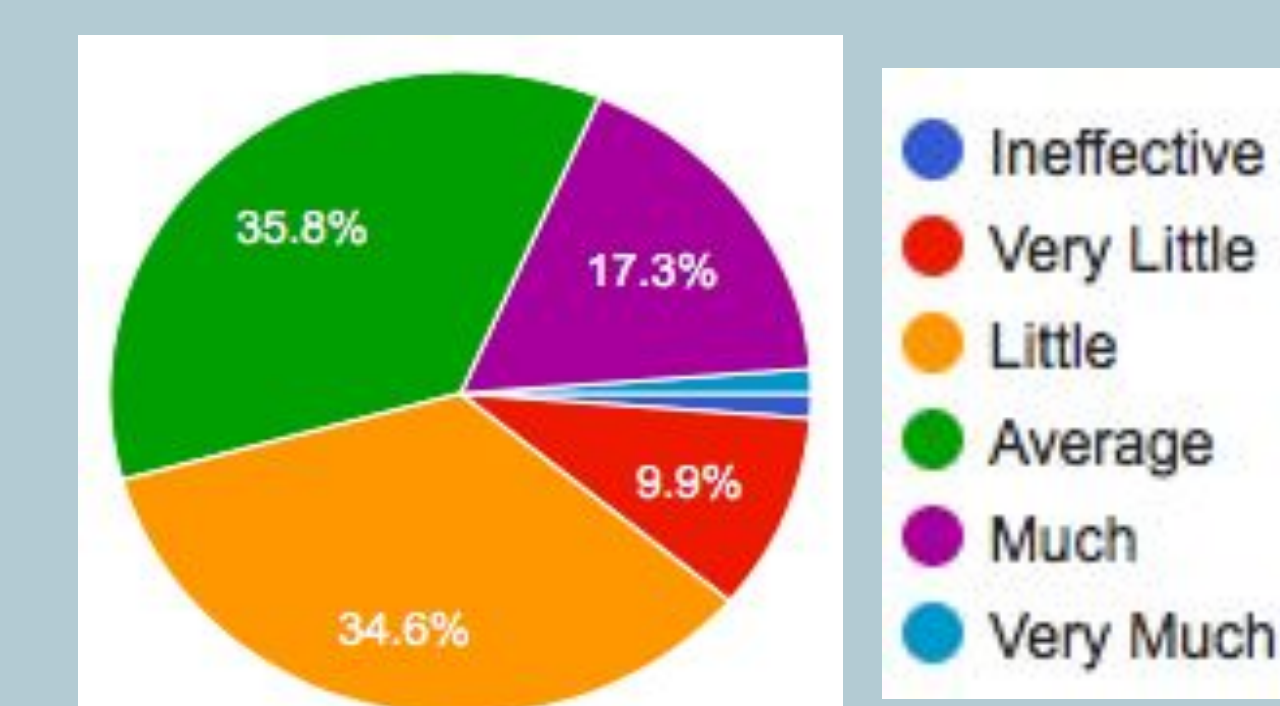
How large of a problem do you think cigarette smoking is among college students aged 18-25?



How much of an effect do you think these images have on communicating information about the health consequences of smoking?



How much of an effect do you think these images have on decreasing cigarette use among smokers aged 18-25?



Relationship

- This indicates that the believability of graphic warning labels (from *not at all believable* to *extremely believable*) has an effect on the consumption of cigarette products among college students (P-value < 0.01)
- Consumption includes cigarette product purchases and smoking.

Policy Implications

- The data **supports** that the government should mandate adding graphic warning labels to cigarette packaging as a means to provide health information and consequently influence cigarette users' perception.
- Can be an addition to the Family Smoking Prevention and Tobacco Control Act

Conclusion

- Results suggest that there is a link between the perception of graphic warning labels and cigarette consumption
- Current findings support the potential value of the addition of the FDA's proposed graphic images to cigarette packaging
- Further research is needed to determine what elements of graphic labels can be adjusted to make them more effective and efficient

References

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