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2022

Effectiveness of an Intervention Video Education Module for High School (HS) Students on Vaping and Other Nicotine Products

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Recommended Citation

Ellenbogen, Shira; Cosme, Samantha; Hrynda, Austen; and Felice, Christopher, "Effectiveness of an Intervention Video Education Module for High School (HS) Students on Vaping and Other Nicotine Products" (2022). *Research Days Posters 2022*. 135.

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Background

Use of Electronic Nicotine Delivery Systems (ENDS), popularly known as vaping, has become an area of concern in recent years. There is an alarming number of young adults initiating nicotine use with these products, bypassing cigarettes.

- ❖ In 2021, more than 2 million US middle and high school students admitted to using ENDS (CDC, 2022).
- ❖ Many users are unaware of the effects and ingredients of ENDS

Our team developed this educational module based on focus group data (6 groups, N=45). Analysis found 4 themes:

- Social and Behavioral Influences**
- Knowledge Deficit**
- Media Influences**
- Educational Intervention Methods**

Purpose

The purpose of this study was to test the effectiveness of our newly developed video education module with high school students using the Health Belief Model.

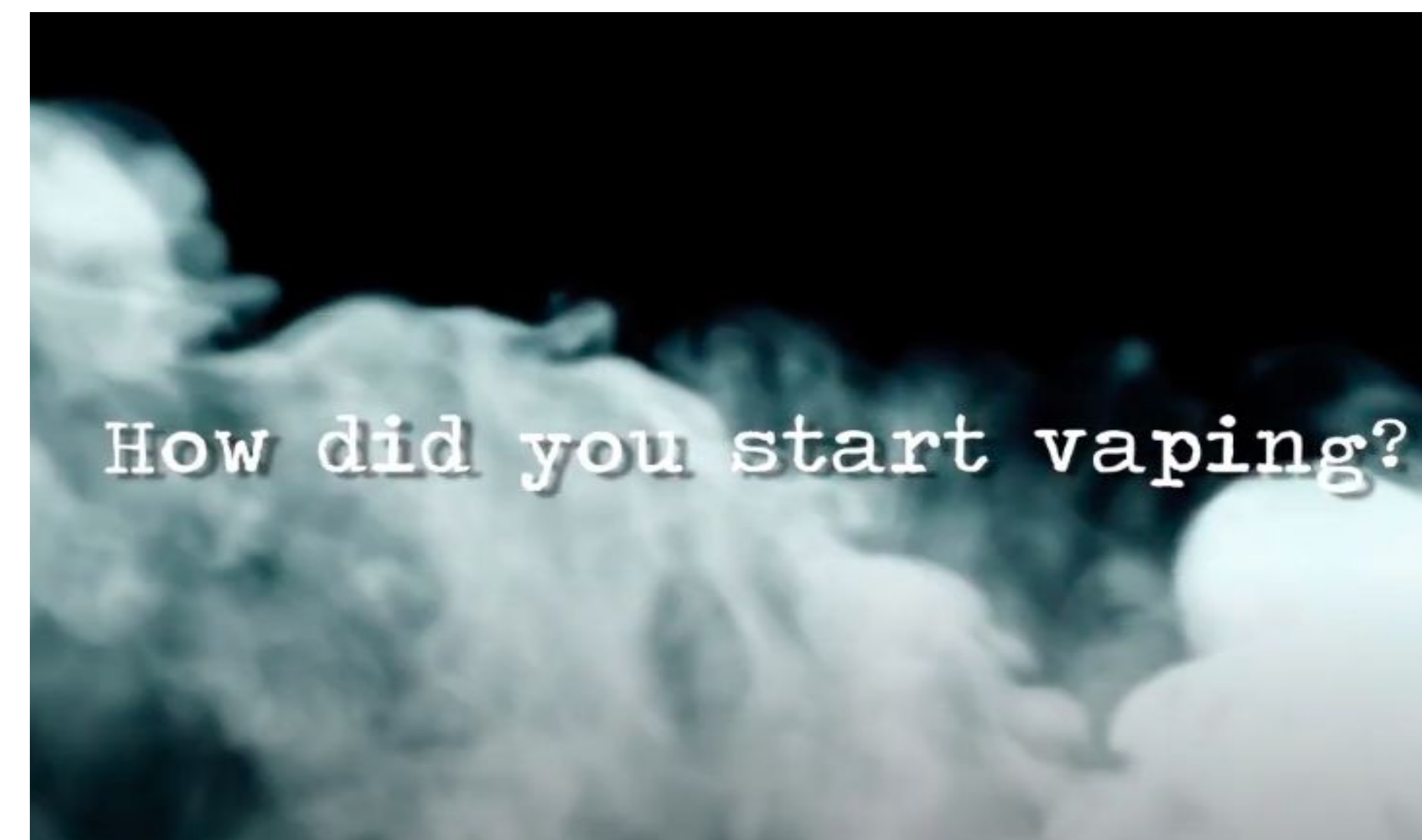
Methods

Design: Pre- Post-test

Setting: Students recruited in a small private NY high school

Sample: N=60.

- ❖ Average age = 15.7 years; 59.4% female, 37.7% male
- ❖ 37% reported trying vaping products themselves, but believed 51-75% of their peers regularly used vaping products



Intervention

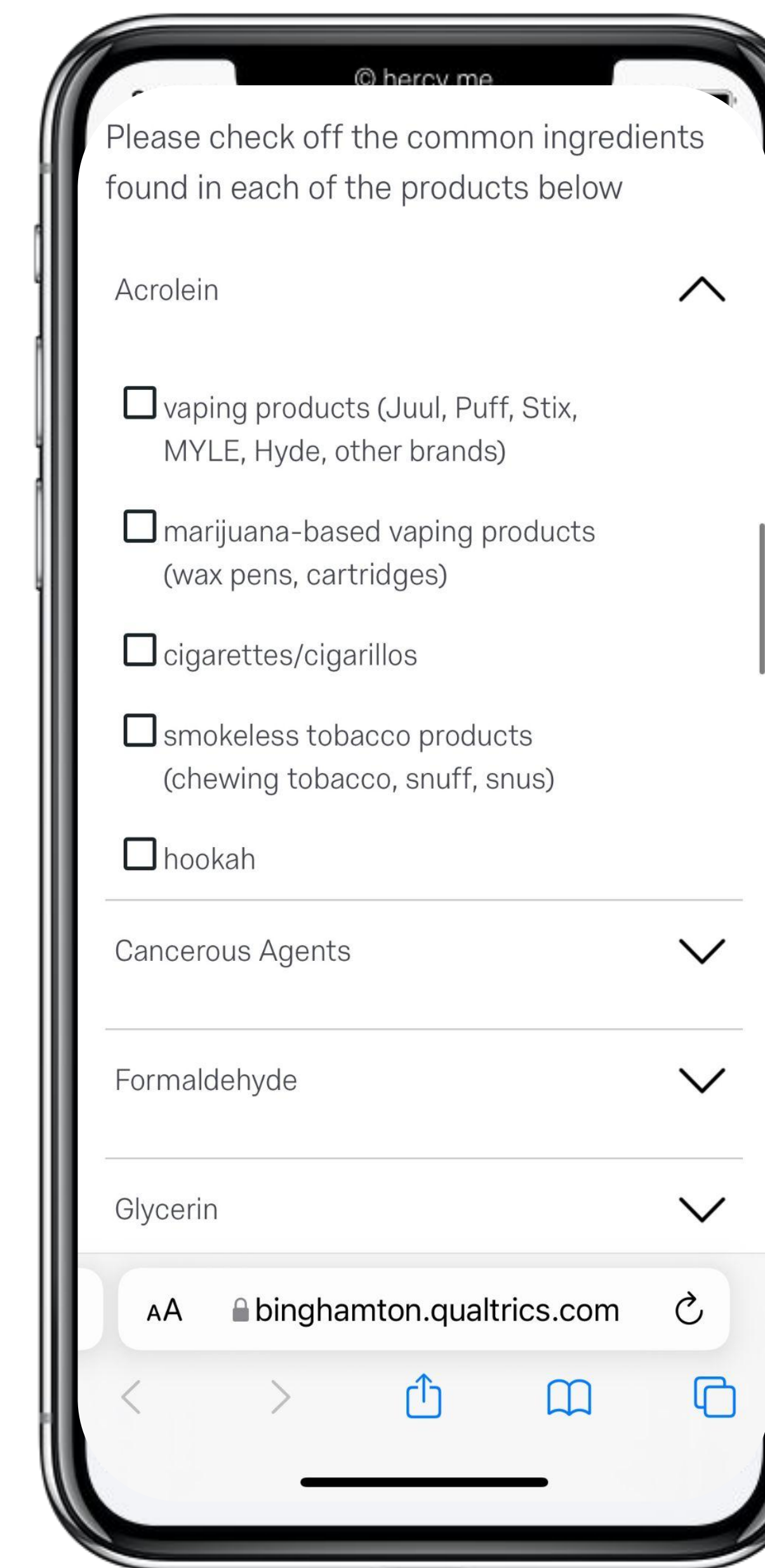
- ❖ 5 minute educational video
- ❖ 15 minute live demonstration & Q&A session
- ❖ Dramatic and informative

Analysis: SPSS v17

Measure

Tobacco Attitudes and Behaviors Survey (TABS), modified for high school students to include more vaping related questions (Lev, et al., 2020)

- ❖ Includes 32 items (1 identifying code, 4 demographic, 1 binomial, 16 likert, and 10 nominal)
- ❖ Administered via Qualtrics on personal smartphones



Results

Perceived Severity

- ❖ Increase in the perception that vaping causes heart damage (p=0.042)

Self-efficacy

- ❖ Increase in those who intended to quit (p=0.035)

Perceived Barrier/Benefits

- ❖ Increase in the perception that vapers are considered smokers, even if it is only socially (p=0.004)
- ❖ Increase in those who reported using vapes to improve alertness (p=0.032)

Knowledge

- ❖ Significant increase in knowledge that vapes contain: acrolein (p=0.001), glycerin (p=0.013), tar (p=0.044), vitamin E (p=0.01),
- ❖ Non-significant decrease in knowledge that vapes contain nicotine (p=0.089)

Conclusion

Our intervention appeared to have a positive impact. Based on results, we have added more information on nicotine and its effects.

This health risk needs to be addressed by pediatric providers. Future research will use a reformatted survey, a larger sample, and also survey nurses.

References

- Centers for Disease Control and Prevention (2022, March 11). Tobacco product use and associated factors among middle and high school students - National Youth Tobacco Survey, United States, 2021, *Morbidity and Mortality Weekly*, 71(5), 1-29.
- Lev, S., Louis, S. S., Collier, R. & Britton, G. (2020) TABS: The development and testing of a nicotine and tobacco use research tool. *Journal of Nursing Measurement*, 28(2), 419-433