The Interplay of Peer Crowd Affiliation and Mental Health on Vaping Behavior



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INTRODUCTION

New Hampshire conducted a formative research project to inform the development of a youth-segmented, social marketing campaign to prevent youth vaping and determine the existence of and percent of peer crowds in NH who are vaping. The campaign was called *Save Your Breath*.

- Peer crowds share cultural similarities, including values, activities, aspirations, or style¹. Youth and young adults follow social norms because they want to fit in with the people around them. Researchers have characterized and named several peer crowds (mainstream, popular, country, alt, and hip hop) and found risk taking behavior varies by peer crowd^{2,3,4,5}.
- In 2019, primary data collection was via web-based survey to ascertain vaping behavior & knowledge, attitudes and beliefs, peer crowd affiliation, mental health, interests, and demographics of NH youth.
- Vaping was very common; 60% of respondents had vaped at least once in their lifetime. This analysis examines the association of both peer crowd affiliation and mental health on *current vaping behavior* (>=1 vape in the past 30 days).

METHODS

Sample: 2,220 youth aged 13-18 years assented to, and completed the survey.

- Recruited via social media ads aimed at NH residents
- Incentive to participate: \$5 gift card, enrolled in raffle for GoPro or iPad Mini

This analysis focuses on 1,817 high school aged teens (15-18 years old) among whom peer crowd identification is well researched.

- Peer crowds are social groups that share normative beliefs and behaviors. Members share attitudes, values, beliefs, behaviors, and/or style.
- Recent anti-vaping campaigns have successfully targeted peer crowds.
- Mental health (MH) struggles or diagnosis and substance use (SU) are highly associated with tobacco use.

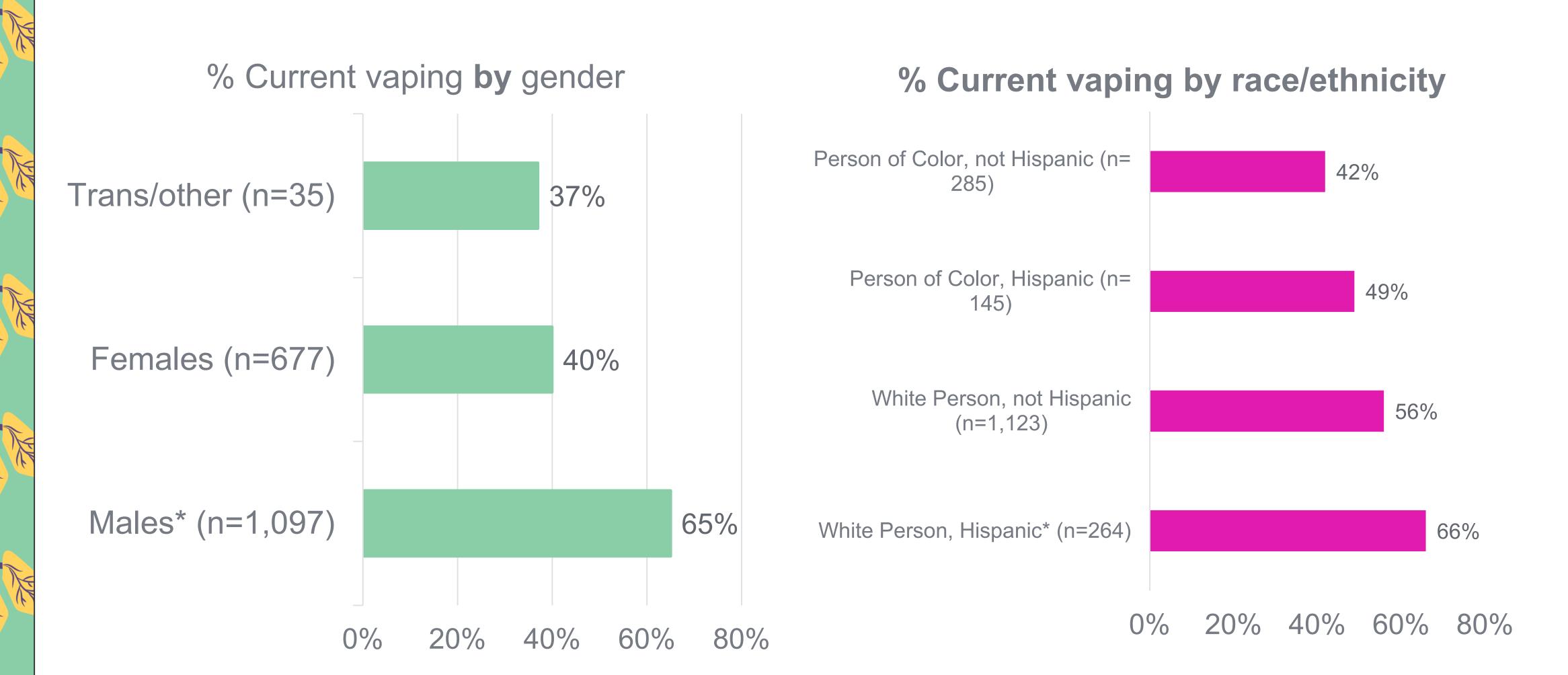
Bivariate associations were examined using chi-square tests and 95% confidence intervals. A general linear model, fit using weighted least squares, was used to test for the main and interaction effects of mental health and peer crowd on average vaping prevalence.

Analyses were completed in SAS 9.4 (proc freq, proc catmod).

RESULTS

Demographic Information: Gender Identity and Ethnicity

* 95% CI indicates vaping was statistically more common in that subgroup of gender or race/ethnicity.



Current vaping prevalence, by depression and

living with someone with substance use

Rates of vaping were greatest among youth who had perceived

Our model found a significant interaction between MH and peer

crowd in addition to significant main effects. Stratified analysis

• Among youth who did not experience depression or substance

use in the home, vaping prevalence varied significantly by

living with someone with SU and had depression symptoms;

Among youth with neither risk factor the rate of vaping was

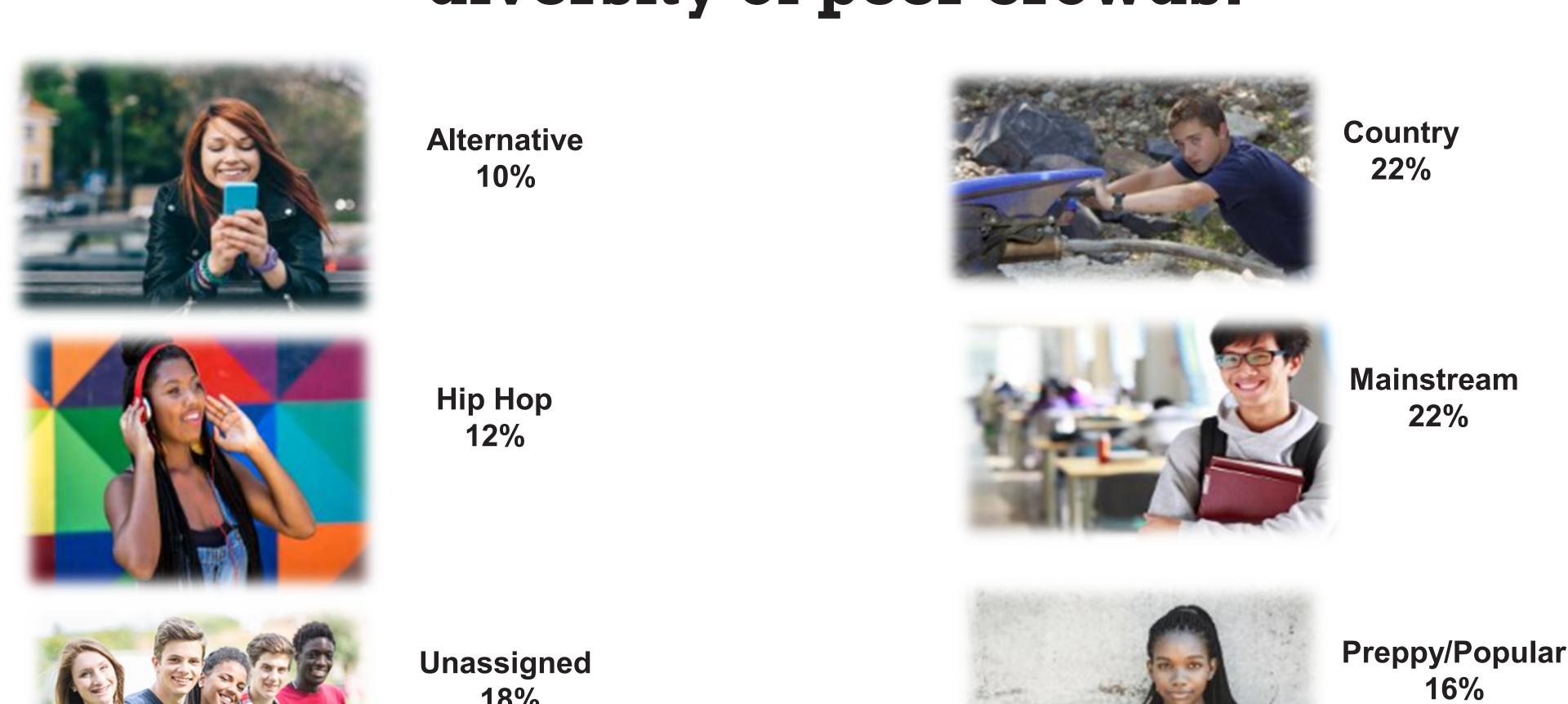
most of these youth were current vapers (83%).

35% - more comparable to the 2019 NH YRBS.

was consistent with the model.

peer crowd (Row 1 of table).

New Hampshire teens represent a diversity of peer crowds.



Self-assessment of depression symptoms and perception of substance use in the home

Have you ever lived with someone with a problem with alcohol or drugs?

• 40% of youth reported perceiving that they had lived with someone with an alcohol or drug problem. This was a bit more than the 2019 NH YRBS result of 30%.

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in row that you stopped doing your usual activities?

- 50% of the sample reported depressive symptoms in the past year, which is greater than the 2019 NH YRBS result of 34%.
- One-third of youth reported both situations, 43% reported neither.

Vaping prevalence by peer crowd, stratified by depression or living with someone with a substance use disorder

	Alternative	Country	Hip Hop	Mainstream	Prep/Popular	Unassigned
Neither risk factor*	39%	37%	47%	26%	25%	40%
Depression	56%	58%	46%	34%	48%	56%
Live w/ SU	14%	63%	33%	36%	44%	62%
Depression + Live w/ SU	83%	68%	80%	88%	84%	88%
Overall	60%	50%	55%	55%	50%	62%

• Among youth with one or both factors, current vaping was similar and much greater across peer crowds (except Country, 68%).

CONCLUSION

- The <u>overall</u> vaping rates by peer crowd were very high and similar because of the confounding factors of depression and perception of ever living with someone with alcohol or drug problem.
- When <u>neither</u> risk factor (MH or SU) was present, vaping prevalence varied as one might expect from the research. The Mainstream and Preppy/Popular crowds had lower rates of vape use, while the Hip Hop, Alternative, Country, and the Unidentified youth had higher rates.
- Among youth for whom <u>both</u> risk factors were present, vaping prevalence was over 80%, regardless of peer crowd (exception Country, at ~70%).

RECOMMENDATIONS

- A larger scale survey has more power to examine more nuanced concepts, such as the interplay of peer crowd and mental health.
- Survey questions that do not just focus on negative behaviors and 'risk factors' provide a more holistic view of young adults.
- Incentive-based online recruitment for surveys = beware of scams and bots! Check your data!
- Limitations of a convenience sample of vaping was higher in our survey than YRBS difficult to determine why.

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[4] Lisha NE, Jordan JW, Ling PM. Peer crowd affiliation as a segmentation tool for young adult tobacco use. Tob Control. 2016;25 Suppl 1:i83-i89.

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