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Nicotine and Tobacco Use among College Students in Texas

Speakers:

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Teresa Lozano Long Endowed Chair in Kinesiology & Health Education

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FINDINGS FROM THE TEXAS COLLEGE TOBACCO SURVEY, 2015-2025

CAROLINE NORTH, PHD

Postdoctoral Research Fellow

Tobacco Research & Evaluation Team



The University of Texas at Austin

Kinesiology and Health Education

College of Education



**TOBACCO RESEARCH
& EVALUATION TEAM**

THE UNIVERSITY OF TEXAS AT AUSTIN



TEXAS

Health and Human Services

**Texas Department of State
Health Services**



Cigarettes



Cigars



Hookah



Pipe tobacco



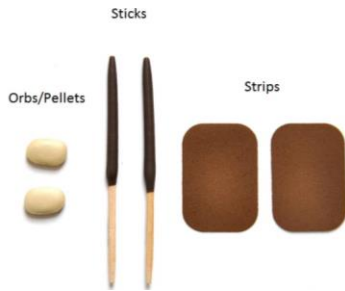
“roll your own”
tobacco



“Smokeless”
tobacco



Nicotine gels



Dissolvables



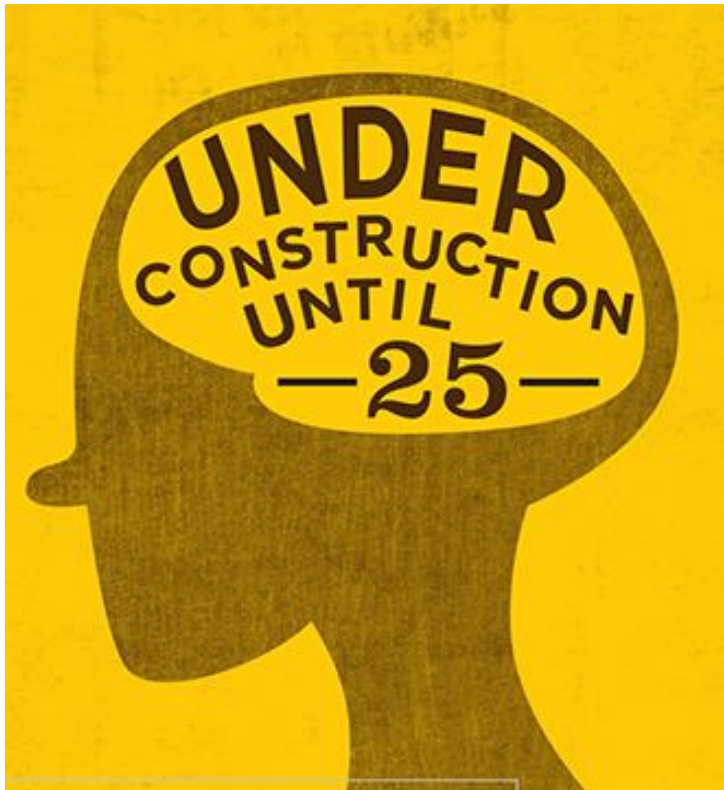
Heated tobacco
product



Nicotine pouches



E-cigarettes



- Young adulthood (ages 18-25 years) is an age period when:
 - Substance use increases
 - Health behaviors are established
 - Nicotine addiction is most often solidified
- Nicotine exposure during young adulthood:
 - Negatively impacts brain development
 - Results in emotional dysregulation
 - Conditions brain for addiction to other substances

Texas College Tobacco Survey

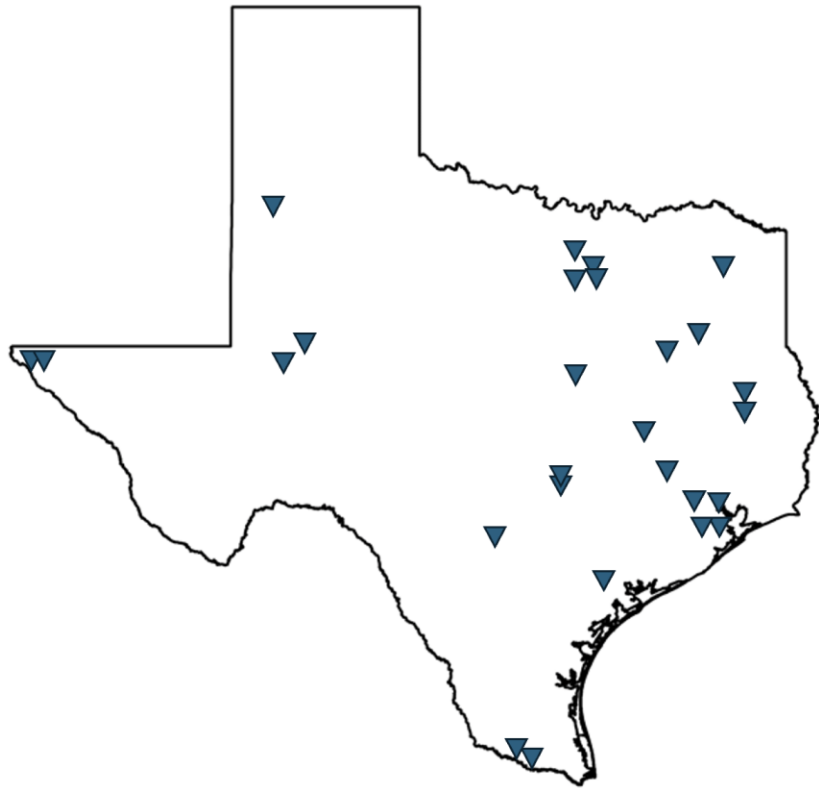
- Purpose: to determine college students' knowledge, attitudes, norms, and behaviors related to conventional and alternative tobacco products, including campus policies and prevention programming surrounding tobacco.
- Eligibility: 1) 18 years of age or older and 2) enrolled as a part-time or full-time student in a 2-year or 4-year college or university in the state of Texas.



Texas College Tobacco Survey – Number of participating schools and participants by year

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Number schools	18	22	13	14	15	17	13	19	22	27	27
2-year schools	4	5	3	2	0	1	1	2	7	13	13
Number participants	6,897	8,915	1,3083	17,739	11,045	20,583	19,977	17,388	16,939	16,937	14,227

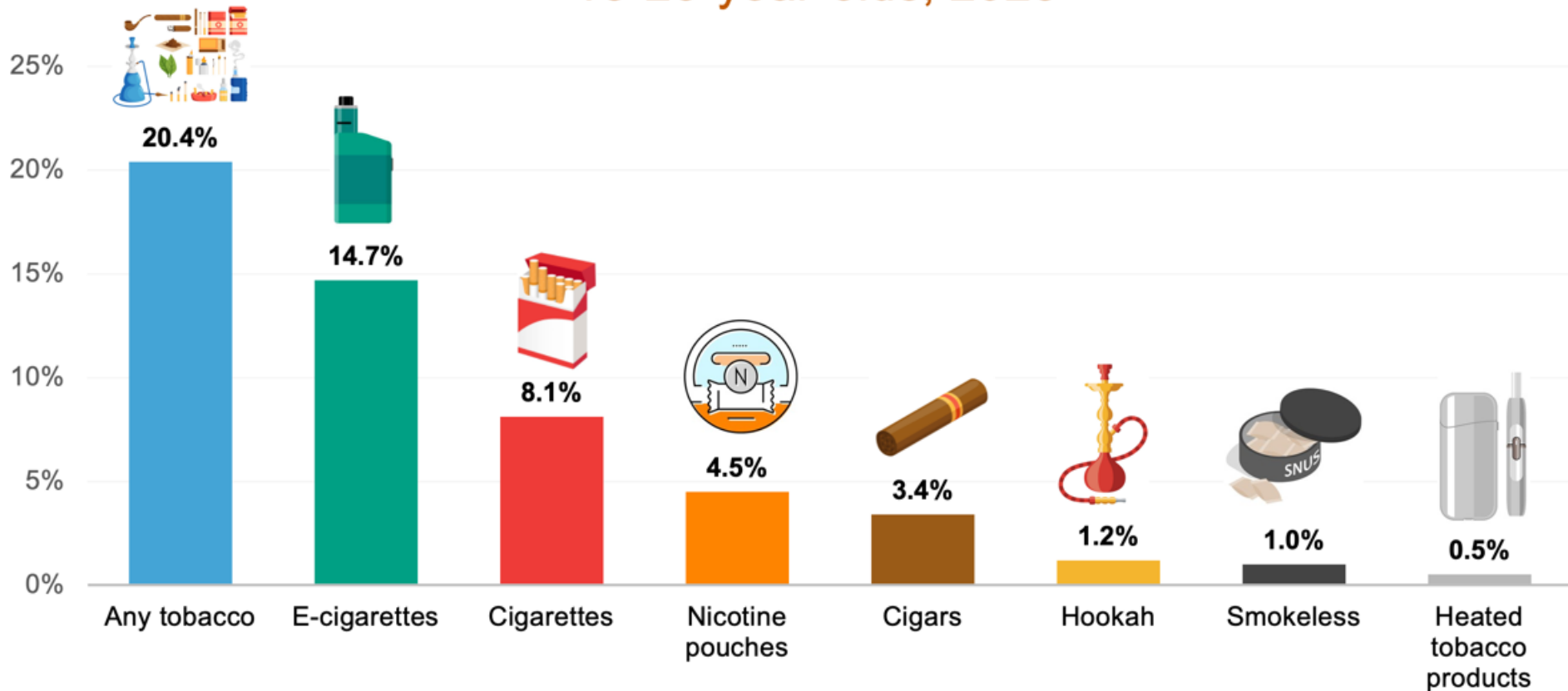
Texas College Tobacco Survey – Map of participating schools in 2025



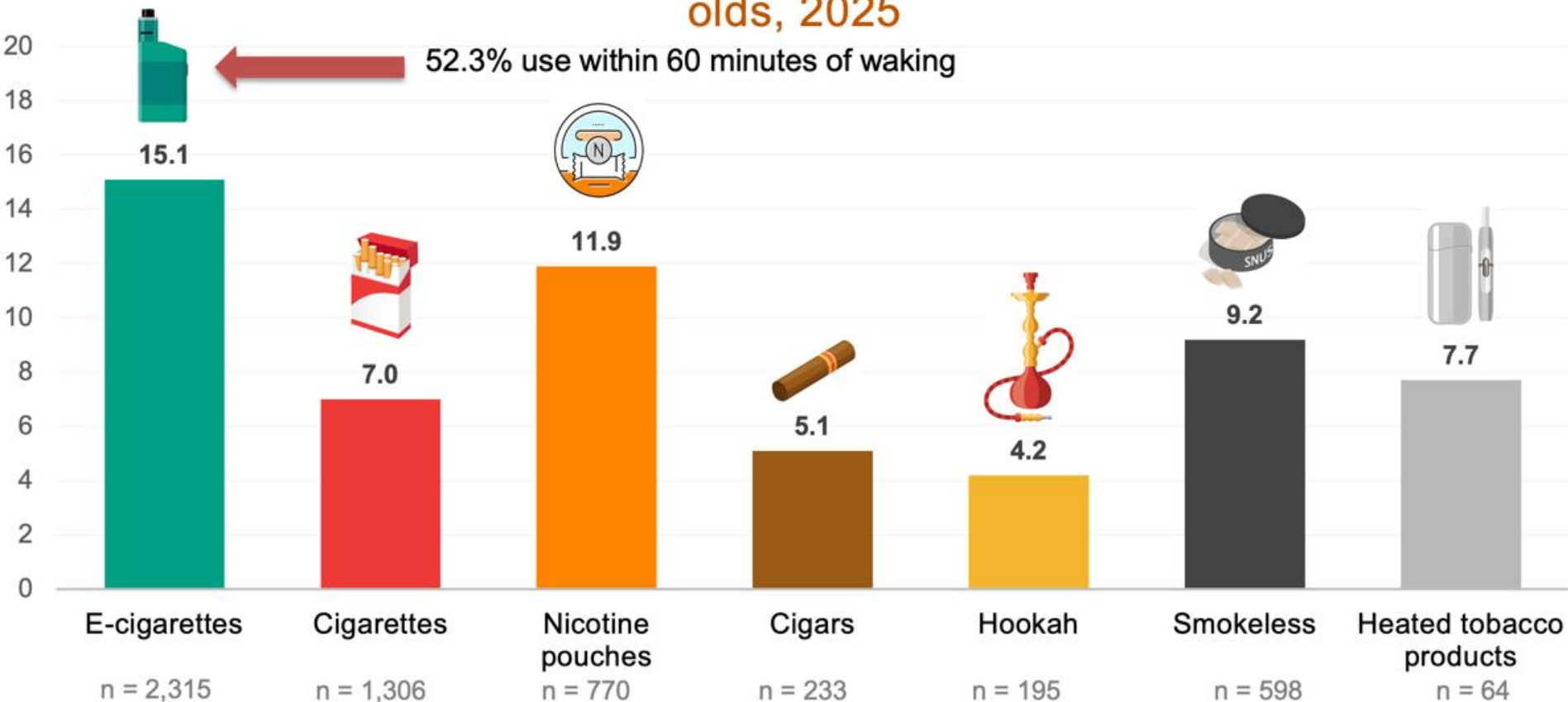
Measures

- Socio-demographics
- *“DURING THE PAST 30 DAYS, how many days did you use ...”*
 - conventional/combustible cigarettes
 - cigars, cigarillos, or little filtered cigars
 - hookah
 - smokeless (e.g., chewing tobacco, snus, snuff, dip)
 - electronic nicotine delivery systems (e.g., e-cigarettes, vape pens, e-hookahs, vape pods)
 - nicotine pouches such as ZYN, on!, VELO or Rogue
 - “heated tobacco products” such as iQOS, glo, and Eclipse
- *“How soon after you wake up do you typically use your first e-cigarette to vape nicotine?”*
 - Within 5 minutes of waking
 - 6-30 minutes after waking
 - 31-60 minutes after waking
 - I am not a daily user of e-cigarettes with nicotine

Prevalence (%) of past 30-day tobacco product use among 18-25-year-olds, 2025



Mean number of days used in past 30 among 18-25-year-olds, 2025



How has the prevalence of tobacco use among Texas college students changed over time ?

Findings from the 2015 - 2025 Texas
College Tobacco Surveys

Data analysis

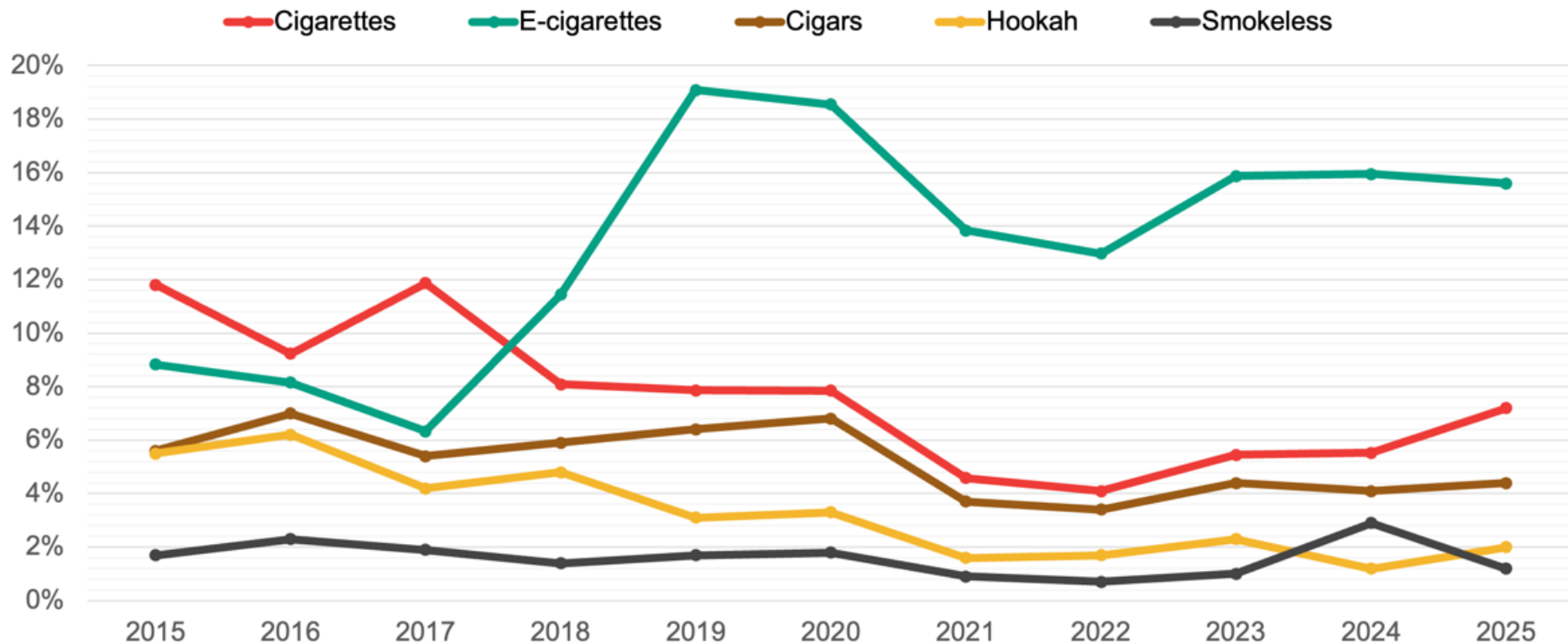
- Descriptive statistics for each year across all tobacco products
- Sample limited to same 7 colleges for all 11 years of assessment



- Mixed effect growth curve models for e-cigarettes and cigarettes
 - Random effect around college participants attended
 - Covariates: sociodemographic characteristics and use of other tobacco product

Full sample 2015-2025 (N = 48,720)	
Mean age (SD)	21.4 (1.9)
Female	65.2%
Sexual gender minority	17.7%
White	28.3%
Hispanic/Latino	43.7%
Black	7.8%
Asian	14.9%
Another race/ethnicity	4.2%

Prevalence (%) of past 30-day tobacco product use among 18-25-year-olds, 2015-2025



Observed prevalence of past 30-day e-cigarette use, 2015-2025



Odds ratios and 95% confidence intervals for mixed-effect growth curve models predicting past 30-day e-cigarette use, 2015-2025

	Odds Ratio (95%CI)	z	p
Age group (18-20 vs. 21-25 years)	1.03 (0.97, 1.10)	1.12	.263
Male sex	1.37 (1.29, 1.46)	10.17	< .001
Sexual gender minority	1.37 (1.28, 1.47)	8.73	< .001
Hispanic/Latino	0.90 (0.84, 0.98)	-2.55	.01
Black	0.60 (0.52, 0.70)	-6.67	< .001
Asian	0.65 (0.59, 0.72)	-8.17	< .001
Another race or ethnicity	0.92 (0.80, 1.06)	-1.18	.239
Past 30-day cigarettes	11.90 (10.97, 12.90)	59.99	< .001
Time - linear	1.75 (1.67, 1.85)	21.30	<.001
Time - quadratic	0.96 (0.96, 0.97)	-17.74	< .001

Note. Non-Hispanic white is the reference category for race/ethnicity.

Odds ratios and 95% confidence intervals for mixed-effect growth curve models predicting past 30-day cigarette use, 2015-2025

Observed prevalence of past 30-day cigarette use, 2015-2025



	Odds Ratio (95%CI)	z	p
Age group (18-20 vs. 21-25 years)	1.94 (1.80, 2.10)	15.73	< .001
Male sex	2.00 (1.85, 2.16)	-17.20	< .001
Sexual gender minority	1.70 (1.55, 1.87)	11.03	< .001
Hispanic	0.86 (0.77, 0.95)	-2.91	< .01
Black	0.35 (0.27, 0.45)	-7.78	< .001
Asian	0.88 (0.77, 1.02)	-1.72	.086
Another race or ethnicity	1.23 (1.03, 1.48)	2.24	.025
Past 30-day e-cigarette	11.60 (10.71, 12.57)	59.86	< .001
Time - linear	0.84 (0.83, 0.85)	-22.49	< .001

Note. Non-Hispanic white is the reference category for race/ethnicity.

- These findings provide new information on trends in tobacco use among young adult college students in Texas.
- Changes in the tobacco marketplace, policies, and a global pandemic possibly impacted the prevalence of tobacco use among young adult Texas college students.
- Despite the declining trends in cigarette and e-cigarette use, the prevalence appears to be rising and stabilizing as of 2022-2025.
- Continued research is needed to determine who is most at risk for tobacco use in young adulthood and why to better tailor prevention and intervention efforts.

Social Media and Vaping among Mexican American College Students

Findings from a 14-Day EMA Study

(VAMoS Project)

NIH (R01MD017280)

PIs : Anna Wilkinson and Alexandra Loukas

Bara Bataineh | December 9th, 2025



Background

Rising vaping rates among college-aged young adults.

Hispanic youth/young adult are among the largest social media user groups.

Social media is a major channel for e-cigarette promotion, most of which is indirect.

Hispanic youth are particularly targeted by tobacco marketing.

Excessive and compulsive use of social media lead to social media addiction.



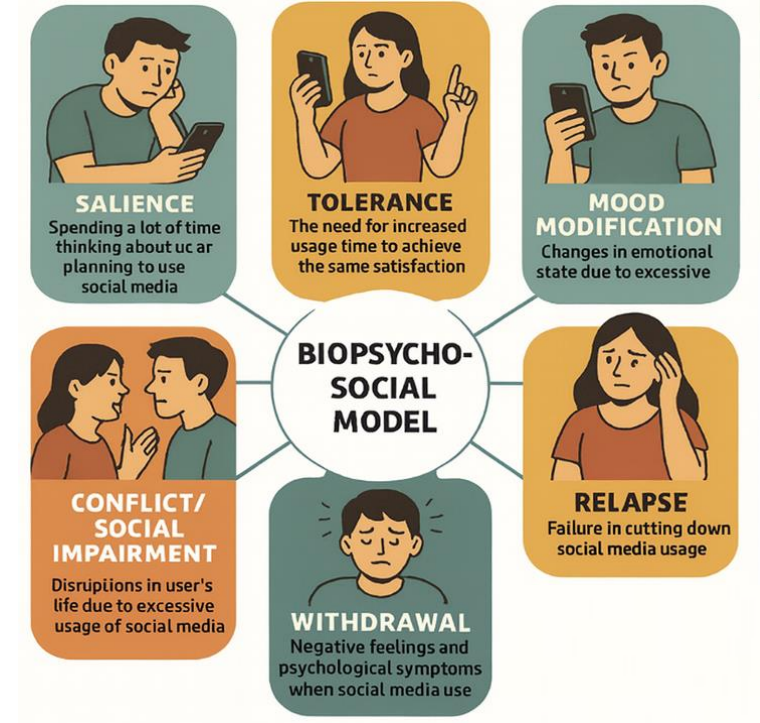
Social Media Use

It's critical to investigate further and address the risks associated with compulsive, heavy social media use.



Conceptual Framework

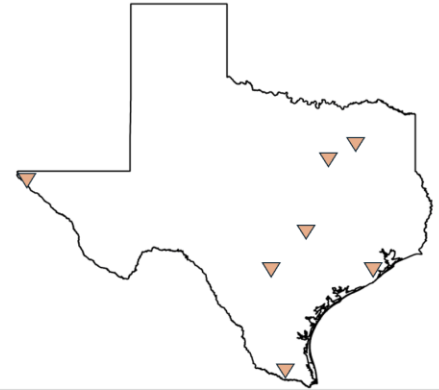
- Excessive and compulsive use → Addiction use.
- Biopsychosocial model of behavioral addiction.
- May activate the brain's reward system and cause brain changes similar to other addictive behaviors.



Methods

VAMoS Project Overview

- Ongoing mixed-methods study among Mexican American college students.
- Conducted across six universities in Texas.
- Focuses on the role of acculturation and social media in vaping behaviors.
- Study Phases include:
 - Phase 1: EMA and Qualitative interviews.
 - Phase 2: Cognitive interviews, Multi-wave, web-based survey.



Project
VAMoS

Methods

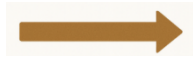
EMA Study Design

- Ecological Momentary Assessment (EMA) over 14 days.
- 2 types of EMA data: Daily diary and event-based assessment.
- EMA reduces recall bias and captures real-time behavior.
- Generalized linear regression models.

Participants



51 Mexican-American college students



Aged 18–25 years



73% female



75% middle SES



Current users

Measures

Addiction Component	Corresponding Bergen Social Media Addiction Scale Item
Salience	<i>"You spend a lot of time thinking about social media or planning how to use it."</i>
Tolerance	<i>"You feel an urge to use social media more and more."</i>
Mood Modification	<i>"You use social media in order to forget about personal problems."</i>
Withdrawal	<i>"You become restless or troubled if you are prohibited from using social media."</i>
Relapse	<i>"You have tried to cut down on the use of social media without success."</i>
Conflict / Social Impairment	<i>"You use social media so much that it has had a negative impact on your job/studies."</i>

Daily Vaping Behavior	Corresponding EMA Question
Days of use	<i>"Yesterday, did you use an e-cigarette?"</i>
Frequency per day	<i>"Yesterday, how many times did you use an e-cigarette?"</i>
Nicotine concentration	<i>"Yesterday, what concentration of nicotine did you use most often?"</i>

Key Findings

Daily Vaping Patterns



~5.7 days vaped
on average



40% vaped
on 7+ days



Most common
nicotine concentration



Most common
device type



Most popular
brand



Daily Social Media Use



~9.7 days
used



4.6 hours/
day



50% saw
vape content

Office

Key Findings

The associations between social media addiction and daily vaping behaviors' ($N = 51$).

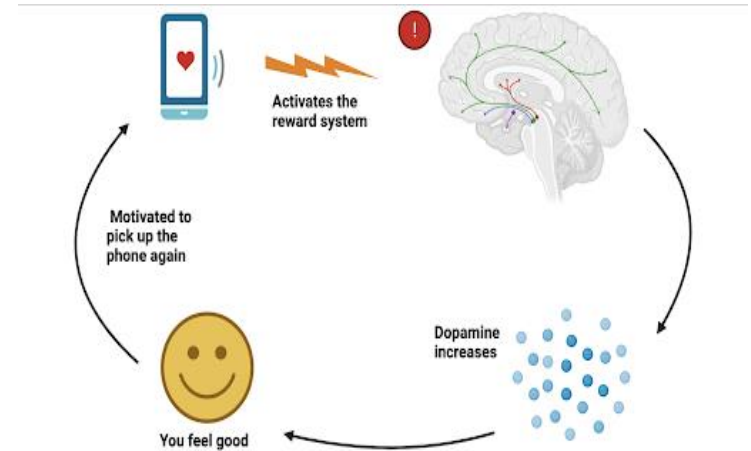
Vaping Use Behaviors	Unadjusted Models		Adjusted Models	
	β [95% CI]	P value.	β^* [95% CI]	P value
Number of days vaped per 14 days	0.16 [0.10-0.22]	0.000	0.14 [0.07-0.20]	0.000
Frequency of vaping use per day	0.04 [0.03-0.06]	0.000	0.03 [0.02-0.05]	0.000
Nicotine concentration	0.12 [0.06-0.17]	0.000	0.08 [0.03-0.14]	0.004

β^ Models adjusted for age, sex, and SES.*

Interpretations

Possible mechanisms:

- Shared reward-system pathways.
- Dopamine-driven feedback loops.
- Co-occurring risk behaviors.
- Mental health mediators (anxiety, depression).
- Social learning via peer/influencer modeling.
- Exposure to vaping content.



Cue → Behavior → Dopamine Reward → Reinforcement → Habit

Implications

Strengthen digital resilience (**healthy online habits**).

Increase **social media literacy** (recognizing subtle advertising and manipulative design).

Provide **support and resources** for students with social media addiction, similar to other addictions.

Offer **counseling and awareness campaigns** on the signs and risks of unhealthy social media use.

Final Thoughts

Social media addiction is NOT recognized in DSM-5 or ICD.

- Lack of criteria makes diagnosis and treatment challenging.
- Symptoms resemble other recognized behavioral addictions.
- High prevalence and risks suggest it needs formal recognition.
- Past experiences (gambling disorder) show that classification takes time.
- More neurobiological and behavioral research is needed.



Questions?

**Please post your
questions in the Q&A box**

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