

Introduction

- Novel Tobacco Products (NTP) such as snus, dissolvables, and e-cigarettes have been introduced as a very “attractive” and “less harmful” method of consuming tobacco and nicotine. ^{1,2,3}
- Legalization of marijuana has contributed to the development of Novel Marijuana Products (NMP) such as topicals (e.g., THC, CBD Oils or lotions), sublingual (e.g., THC or CBD capsules), and edibles (e.g., THC or CBD gummies).
- The legalization of medical and recreational marijuana has raised many public health concerns of DWI, especially when alcohol and marijuana are consumed concurrently. ⁴

Purpose

- The current study investigated several factors:
 - Current use, perceptions of harm and addictiveness of (NTTMPs)
 - Willingness to DUI-SAMA assessed under three levels of urgency (non-urgent, semi-urgent, urgent).
- Hypothesis Tested:
 - Participants will report an increased willingness to DUI-SAMA in urgent conditions than in semi-urgent or non-urgent conditions.
 - Participants will report increased willingness to DUI-SAMA in comparison to Driving While Intoxicated (DWI).

Methods

	Total Response
Participants	136
Female / Male	46.3% / 30.1%
Age	20.39 (SD = 2.10)
Ethnicity	Hispanic 89.7%

Table 1: Demographics (N=136)

- English speakers over the age of 18 were recruited from a large urban university along the U.S./Mexico Border and compensated with a \$10 Starbucks gift card.

Variable	Total Response	Frequency
Race		
White	114	83.8%
Black or African American	4	2.9%
American Indian or Alaska Native	2	1.5%
Asian	1	0.7%
Native Hawaiian or Other Pacific Islander	1	0.7%
Prefer not to answer	8	5.9%
Missing	6	4.2%
Education		
< High School	1	0.7%
High School Diploma	19	14.0%
Some College	74	54.4%
College Graduate	6	4.4%
Graduate Coursework	1	0.7%
Graduate/Professional	16	0.7%
Missing	4	2.9%

Note: Data were collected from a large urban university along the U.S./Mexico border in February 4th through March 13th, 2020.

Measures

- Sociodemographic and Background Questionnaire.** A 7-item demographic questionnaire assessed basic characteristics such as gender, age, and ethnicity.
- Experience and Frequency Using NTPs, NMPs.** A 28-item questionnaire adapted from Porath-Waller (2008) assessed prior use. Sample item: “During your lifetime, have you ever used marijuana?” Response options included: (1) “Yes”, (0) “No”. Frequency was assessed using the following item for each substance: “Please select all marijuana products you have used or currently use.” Response options were coded as: (1) “Never used” to (7) “I use it multiple times a day.”
- Perceived Addictiveness, Benefit and Harm to Health.** A 22-item questionnaire adapted from Berg et al. (2015) assessed perceptions of addictiveness, benefit and harm associated with using NTPs and NMPs. Participants were asked the following: “How beneficial to your health (e.g., medicinal/therapeutic benefits) do you feel the following marijuana products may be:” in reference to nine marijuana products. Response options ranged from: (1) “Not at all beneficial,” to (5) “Very beneficial.” Similarly, perceptions of addictiveness, benefit and harm for the ten novel tobacco products were assessed using the latter question and response options. Composite scores were created by averaging up the respective items for tobacco products ($\alpha = .94; .81; .81$) and novel marijuana products ($\alpha = .97; .97; .97$). The reliability coefficients demonstrated acceptable internal consistency.
- Perceived Willingness and Dangerousness to DUI-SAMA and DUI.** Three items adapted from Porath-Waller (2008) assessed willingness to DUI-SAMA, and DUI over the legal limit of 0.08 BAC under three levels of urgency: 1) non-urgent, such as driving a friend to a fast-food restaurant, 2) semi-urgent, such as driving a mildly sick friend home, and 3) urgent reason, such as driving a severely injured friend to the hospital. Sample item: “Imagine that you want to drive to a severely injured friend to a hospital. How willing would you be to drive your friend to the hospital within one hour of using a small amount of marijuana in combination with a small amount of alcohol (e.g., one and a half beers) to drive a severely injured friend to the hospital?” Response options ranged from: (1) “Not at all willing,” to (7) “very much willing,”.

Results

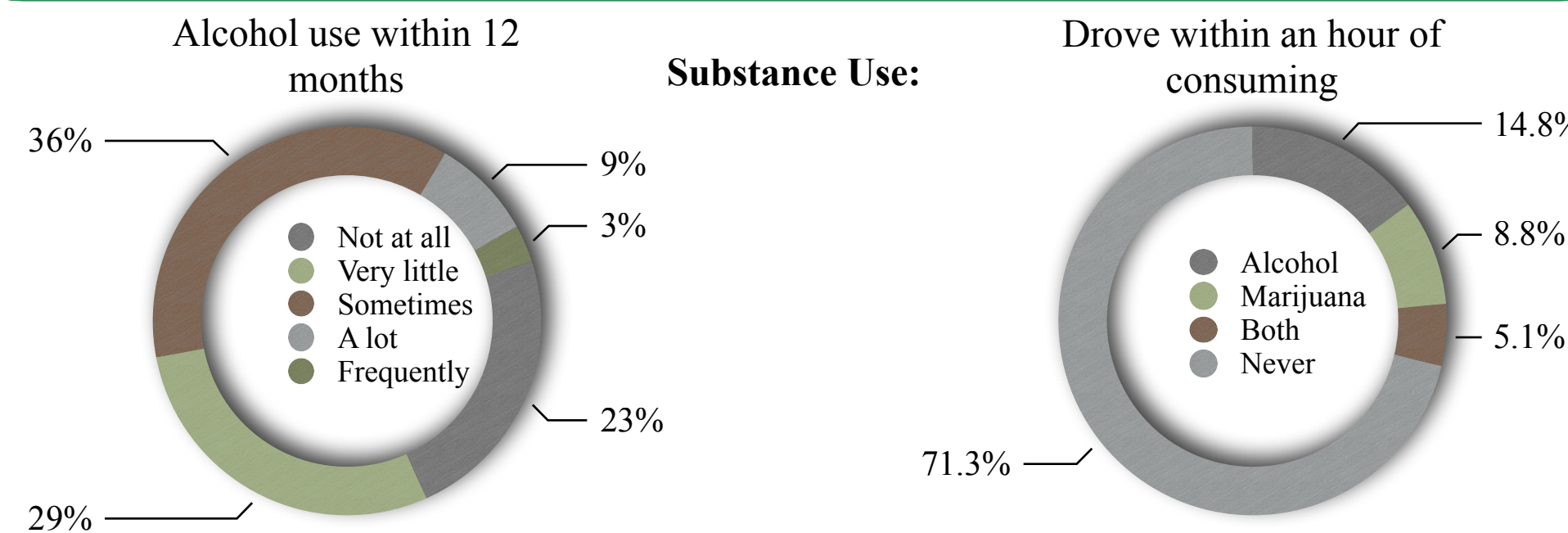


Table 1: Frequency of using NTPs

(n =49; 36.0%)	Never Used	I have tried using 1-3 times	I use it yearly	I use it monthly	I use it weekly	I use it daily	I use it multiple times a day
Cigarettes	17 (34.7%)	18 (36.7%)	5 (10.2%)	8 (16.3%)	1 (2.0%)	0 (0.0%)	0 (0.0%)
Cigars	36 (73.5%)	10 (20.4%)	1 (2.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	1 (2.0%)
Dip	45 (91.8%)	3 (6.1%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Chew	43 (87.8%)	3 (6.1%)	1 (2.0%)	1 (2.0%)	0 (0.0%)	1 (2.0%)	0 (0.0%)
Hookah	27 (57.4%)	12 (25.5%)	6 (12.8%)	2 (4.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
E-cigarettes (e.g., JUULs, vape pens, etc.)	13 (26.5%)	16 (32.7%)	10 (20.4%)	6 (12.2%)	4 (8.2%)	0 (0.0%)	0 (0.0%)
Snus	48 (98.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Dissolvables (e.g., sticks, strips, and orbs)	47 (95.9%)	1 (2.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Snuff	48 (98.0%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nicotine Patch	48 (98.0%)	0 (0.0%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

Figure 3: Level of Urgency (DUI-SAMA and DUI)

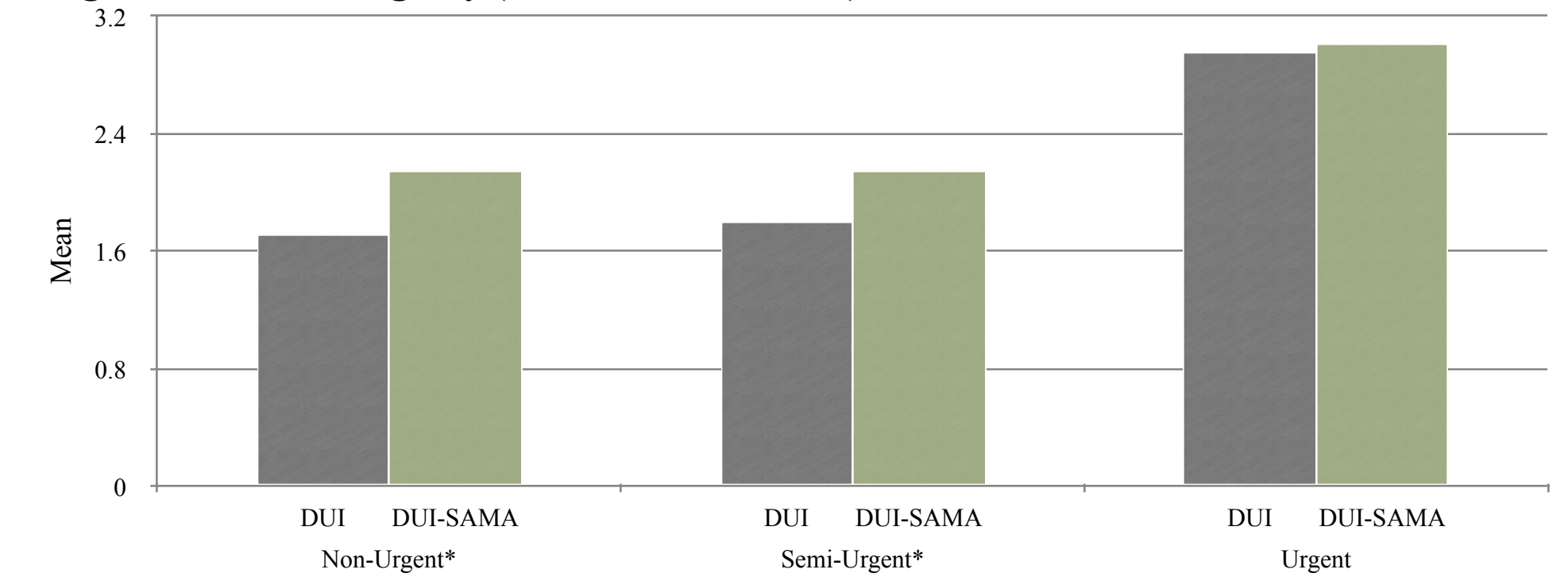


Table 2: Associations Between Frequency of Traditional Marijuana and NMP Use.

(n =43; 31.7%)	1	2	3	4	5	6	7	8	9
1. Smoking Marijuana	--	--	--	--	--	--	--	--	--
2. THC Oil for Vaporizing	.747**	--	--	--	--	--	--	--	--
3. CBD Oil for Vaporizing	.510**	.580**	--	--	--	--	--	--	--
4. THC Oil for Topical	0.145	0.022	-0.113	--	--	--	--	--	--
5. CBD Oil for Topical	0.090	0.312	0.228	0.118	--	--	--	--	--
6. THC Oil for Sublingual	0.182	0.243	-0.111	0.561	0.082	--	--	--	--
7. CBD Oil for Sublingual	.441**	.559**	.434**	0.287	.542**	0.049	--	--	--
8. Marijuana Edibles	0.258	.379*	0.241	0.017	0.259	0.112	0.140	--	--
9. Marijuana Capsules	0.120	0.205	0.062	.382*	0.041	.752**	-0.037	0.220	--
Mean	3.19	2.54	1.78	1.08	1.47	1.03	1.57	2.27	1.14
(SD)	(1.68)	(1.70)	(1.19)	(.27)	(1.22)	(.164)	(1.5)	(1.09)	(.41)
N	37	37	36	37	30	37	37	37	37

Note: Correlations are reported using Spearman's Correlation Coefficient. Data were collected from a large urban university along the U.S./Mexico border in February 4th, through March 13th, 2020. *p<.05; **p<.01

Discussion

- Electronic cigarettes were the most used tobacco product in our sample. Participants may be attracted to these “less harmful” means of consumption which have contributed to the increase of novel products for both tobacco and marijuana. ^{1,5}
- Findings are consistent with current research as 14.7% of our sample has driven a motor vehicle within an hour of consuming alcohol while 8.8% of our sample reported driving a motor vehicle within an hour of using marijuana. ⁶
- Participants were more willing to DUI-SAMA in both semi-urgent and non-urgent conditions when compared to DWI (BAC at or above 0.08). Findings suggest that college students may not understand risks associated with DUI-SAMA.

Future Directions:

- Future studies would benefit from recruiting a larger sample to provide a better understanding of the perceptions of risk, benefits and harms, and willingness to DUI-SAMA.



Acknowledgements

Research reported in this poster was supported by the National Institute Of General Medical Sciences of the National Institutes of Health under linked Award Numbers RL5GM118969, TL4GM118971, and UL1GM118970. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. Funded under the Paso del Norte Health Foundation's Smoke Free Initiative (Award/Project ID: OR20150041/226811488A).

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