

Table 1.

Association between initiation of substance use and use of energy drinks in relation to sensation seeking

	Any Tobacco		Cigarettes		E-cigarettes		Hookah		Alcohol	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Energy drink use (never use=ref)										
- Lifetime use	3.53 (2.61-4.79)	<.001*	3.13 (2.07-4.74)	<.001*	4.42 (2.94-6.65)	<.001*	3.16 (2.07-4.82)	<.001*	2.24 (1.73-2.89)	<.001*
- Past 30-day use	5.93 (3.53-9.95)	<.001*	5.24 (2.88-9.55)	<.001*	8.37 (4.63-15.14)	<.001*	3.74 (1.99-7.02)	<.001*	2.61 (1.65-4.14)	<.001*
Gender (female=ref)	1.15 (0.88-1.52)	.31	0.75 (0.53-1.07)	.11	1.15 (0.82-1.62)	.41	1.25 (0.87-1.79)	.22	0.76 (0.6-0.96)	.02*
School type (other=ref)	0.65 (0.5-0.84)	.001*	0.54 (0.38-0.76)	<.001*	0.71 (0.51-0.99)	.04*	0.64 (0.45-0.92)	.02*	1.06 (0.81-1.39)	.66
Age ^b	1.18 (1.01-1.38)	.04*	1.2 (0.98-1.47)	.08	1.21 (1.02-1.43)	.03*	1.09 (0.89-1.32)	.41	2.08 (1.8-2.4)	<.001*
Self-report SES ^b	1.1 (0.96-1.27)	.17	1.2 (1.01-1.43)	.04*	1.13 (0.97-1.32)	.12	1.11 (0.93-1.33)	.24	1.09 (0.97-1.23)	.16
School performance ^b	0.77 (0.67-0.89)	<.001*	0.72 (0.6-0.85)	<.001*	0.82 (0.7-0.97)	.02*	0.82 (0.69-0.97)	.02*	0.98 (0.87-1.1)	.68
Sensation seeking	1.53 (1.22-1.93)	<.001*	1.36 (0.95-1.93)	.09	1.96 (1.44-2.67)	<.001*	1.61 (1.18-2.19)	.003*	1.44 (1.17-1.76)	<.001*
School stress ^b	1.15 (1-1.33)	.06	1.16 (0.95-1.41)	.15	1.15 (0.96-1.36)	.12	1.12 (0.93-1.36)	.24	1.14 (1.01-1.3)	.04*
Peer use (none=ref)	1.17 (0.99-1.39)	.06	1.08 (0.72-1.64)	.71	1.76 (1.18-2.63)	.005*	2.24 (1.49-3.37)	<.001*	1.9 (1.46-2.48)	<.001*
Susceptibility to substances (none=ref)	1.61 (1.38-1.88)	<.001*	2.64 (1.82-3.83)	<.001*	1.9 (1.29-2.81)	.001*	1.57 (1.07-2.3)	.02*	2.2 (1.13-4.27)	.02*
Interactions										
Energy drink use vs. sensation seeking										
- Lifetime use	0.82 (0.61-1.1)	0.18	0.94 (0.61-1.43)	.76	0.64 (0.43-0.93)	.02*	0.86 (0.59-1.24)	.42	0.93 (0.71-1.22)	.60
- Past 30-day use	0.63 (0.39-1.03)	.06	0.89 (0.52-1.51)	.66	0.58 (0.35-0.97)	.04*	0.75 (0.44-1.27)	.28	0.86 (0.56-1.35)	.52

Abbreviations: SES, socio-economic status; OR, Odds Ratio; CI, Confidence Interval; ref, reference

* Statistically significant after Benjamini-Hochberg corrections for multiple testing to control false-discovery rate at .05 (based on 2-tailed corrected P value).

^a Two or more substance initiation vs. one or none^b Rescaled (mean = 0, SD = 1) such that the ORs indicate the change in odds in the outcome associated with an increase in 1 SD unit on the covariate continuous scale.

Table 2.

Baseline predictors of cigarette/e-cigarette/hookah and alcohol use frequency at 12-month follow-up (n=4346).

	Cigarette smoking		E-cigarette smoking		Hookah Use		Alcohol use	
	β (95% CI)	P-value	β (95% CI)	P-value	β (95% CI)	P-value	β (95% CI)	P-value
Unadjusted Models								
Energy drink use frequency ^a	0.23 (0.21, 0.26)	<.001*	0.19 (0.18, 0.21)	<.001*	0.19 (0.17, 0.20)	<.001*	0.35 (0.33, 0.38)	<.001*
Adjusted Models								
Energy drink use frequency ^a	0.05 (0.02, 0.07)	<.001*	0.07 (0.06, 0.09)	<.001*	0.06 (0.04, 0.07)	<.001*	0.10 (0.07, 0.13)	<.001*
Gender (female=ref)	-0.06 (-0.10, -0.02)	.001*	0.04 (0.01, 0.07)	.01*	-0.01 (-0.04, 0.02)	.61	-0.02 (-0.06, 0.03)	.50
School type (other=ref)	-0.07 (-0.13, -0.01)	.02*	-0.04 (-0.09, 0.01)	.13	-0.04 (-0.10, 0.01)	.10	0.09 (-0.01, 0.19)	.07
Age ^a	0.01 (-0.01, 0.03)	.32	-0.01 (-0.02, 0.01)	.59	0.01 (-0.01, 0.02)	.50	0.16 (0.13, 0.18)	<.001*
SES ^a	0.01 (-0.01, 0.02)	.53	0 (-0.01, 0.02)	.62	0.01 (-0.01, 0.02)	.30	0.03 (0.01, 0.05)	.01*
School performance ^a	-0.04 (-0.06, -0.03)	<.001*	-0.02 (-0.03, -0.01)	.05	-0.02 (-0.03, -0.01)	.02*	-0.01 (-0.03, 0.01)	.40
Sensation seeking ^a	0.05 (0.03, 0.07)	<.001*	0.05 (0.04, 0.07)	<.001*	0.04 (0.02, 0.06)	<.001*	0.06 (0.04, 0.09)	<.001*
School stress ^a	0 (-0.02, 0.02)	.93	0 (-0.01, 0.02)	.60	0 (-0.02, 0.01)	.66	0 (-0.02, 0.02)	.97
Peer substance use ^a	0.06 (0.04, 0.09)	<.001*	0.05 (0.03, 0.07)	<.001*	0.05 (0.04, 0.07)	<.001*	0.11 (0.08, 0.14)	<.001*
Baseline substance use frequency ^a								
- Cigarettes	0.31 (0.29, 0.33)	<.001*	0.04 (0.02, 0.06)	<.001*	0.02 (0.01, 0.04)	.005*	0.03 (0.01, 0.05)	.02*
- E – cigarettes	0.06 (0.04, 0.08)	<.001*	0.12 (0.10, 0.14)	<.001*	0.02 (0.01, 0.04)	.04	-0.01 (-0.04, 0.02)	.65
- Hookah	0.06 (0.03, 0.08)	<.001*	0.02 (0.01, 0.04)	.04	0.17 (0.15, 0.19)	<.001*	-0.02 (-0.04, 0.01)	.31
- Alcohol	0.02 (-0.01, 0.04)	.14	0.01 (-0.01, 0.03)	.12	0.03 (0.01, 0.05)	<.001*	0.33 (0.31, 0.36)	<.001*

Abbreviations: SES, socio-economic status; β , Betta; CI, Confidence Interval; ref, reference^a Rescaled (mean = 0, SD = 1) such that the ORs indicate the change in odds in the outcome associated with an increase in 1 SD unit on the covariate continuous scale

* Statistically significant after Benjamini-Hochberg corrections for multiple testing to control false-discovery rate at .05 (based on 2-tailed corrected P value).