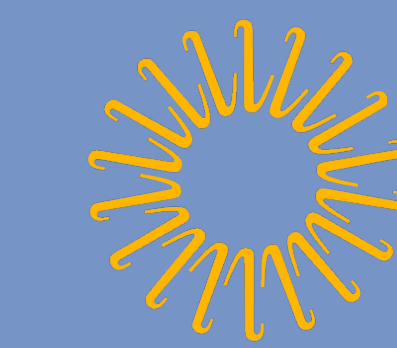


High rates of hookah use in pregnancy and preconception: Prevalence and correlates of an oft-overlooked tobacco product

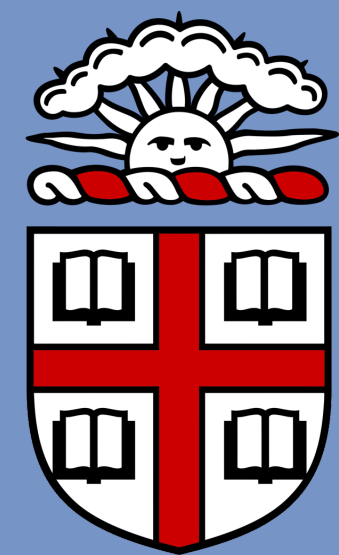
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Background

- Hookah use is prevalent among people of reproductive age (6.5%)¹ and commonly (mis)perceived as less harmful than other forms of tobacco.²
- Prenatal tobacco use is associated with maternal and infant mortality.^{3,4}
- Aims:**
 - Investigate the prevalence of hookah use during pregnancy and the three months prior (3mp; preconception).
 - Compare sociodemographic characteristics, rates of mental health conditions, and rates of substance use in a large sample of pregnant people.

Methods

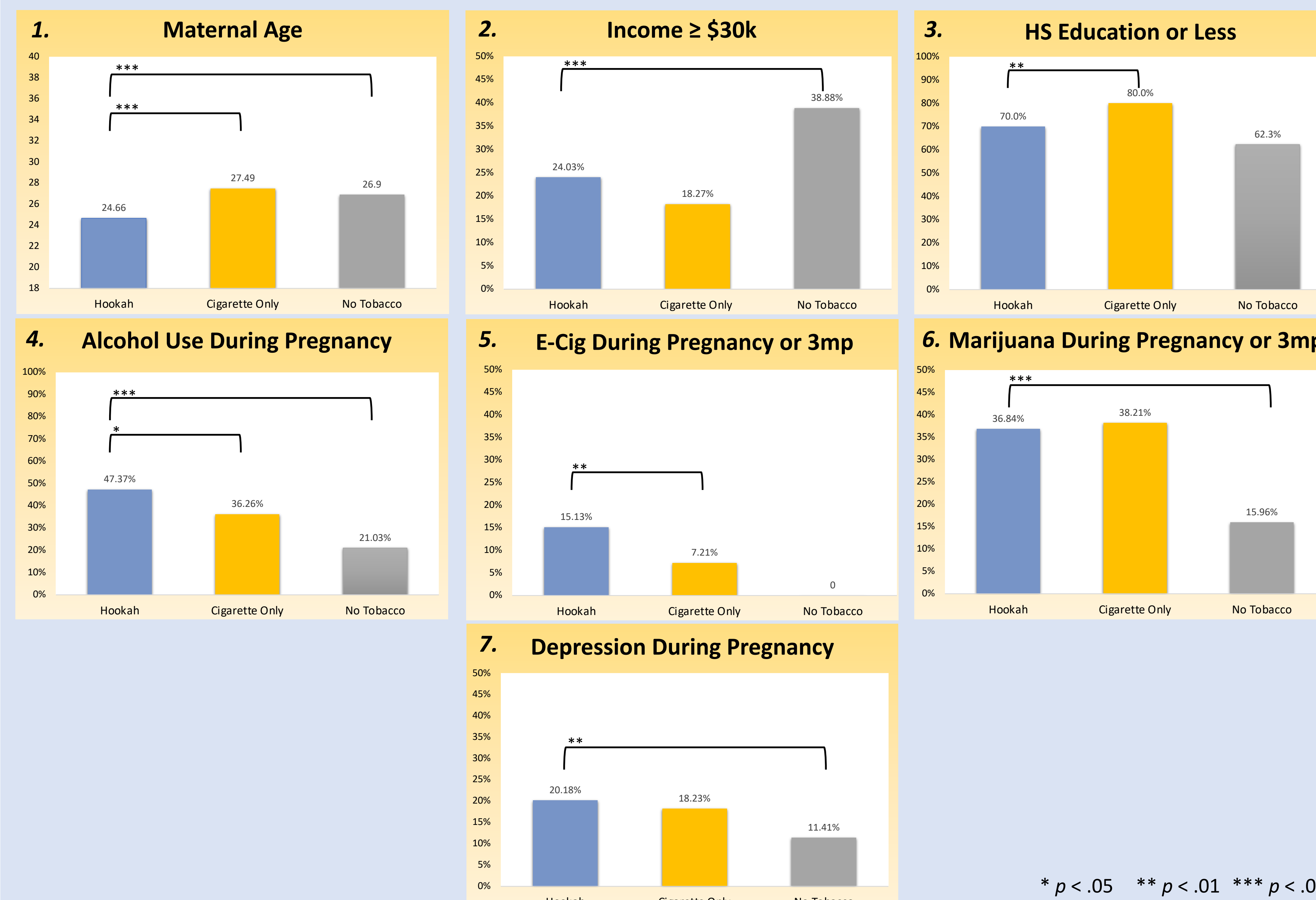
- 1,839 pregnant people completed a telephone survey between 2011 and 2018.
- Observations that have missing values on one or more variables were included.
- Respondents categorized into three groups:
 - Hookah use
 - Cigarette use only (no hookah)
 - No tobacco use

Aim 1: Prevalence of hookah use during pregnancy and preconception was high (9.4%).

Aim 2: Sociodemographic characteristics, rates of mental health conditions, and rates of substance use by group

Race/Ethnicity	Hookah (n = 172)		Cigarette Only (n = 458)			No Tobacco (n = 1209)		
	n	(%)	n	(%)	p	n	(%)	p
Hispanic/Latinx	92	(60.93)	113	(24.89)	*	468	(38.90)	***
White, non-Hispanic	31	(21.68)	231	(52.98)	***	408	(35.29)	***
Black, non-Hispanic	18	(12.24)	93	(20.58)	***	226	(19.17)	***
Another race, non-Hispanic	6	(5.66)	25	(6.11)	***	86	(8.72)	***
Native American/Alaska Native, non-Hispanic	4	(2.65)	22	(4.82)	***	36	(3.00)	***
Multiracial	3	(1.99)	30	(6.61)	***	58	(4.83)	***
Asian American, non-Hispanic	3	(1.97)	5	(1.10)		43	(3.56)	***
Native Hawaiian/Pacific Islander, non-Hispanic	0	(0.00)	0	(0.00)	---	3	(0.25)	---

Note: Percentages do not add to 100% because some groups are overlapping. In the hookah group, n = 20 are missing race. P-values reflect comparison between proportion of individuals of each race/ethnicity in the whole sample that use hookah vs. cigarette only or no tobacco; * p < .05; ** p < .01; *** p < .001



Results

- Pregnant people in the hookah use group...
- were *younger* than those in the other two groups ($p < .001$)
 - reported *lower* income levels than those in the no tobacco group ($p < .001$)
 - reported a *higher* level of education than those in the cigarette only group ($p < .01$)
 - were *more* likely to report alcohol use during pregnancy than those in the other two groups ($ps < .05$)
 - were *more* likely to report e-cigarette use during pregnancy or 3mp than those in the cigarette only group ($p < .01$)
 - 6/7) were also *more* likely to report marijuana use during pregnancy or 3mp and depressive symptoms during pregnancy than those in the no tobacco group ($ps < .01$)

Conclusions

- Pregnant people who used hookah showed distinct psychosocial, mental health, and substance co-use profiles.
- Hookah appears to be (mis)perceived as less harmful than other tobacco products despite higher levels of education.
- Pregnant people who use hookah are more likely to report prenatal e-cigarette and alcohol use than pregnant people who smoke cigarettes, which may be explained by their younger age.
- Tobacco screening and intervention efforts in pregnancy should include hookah.

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* p < .05 ** p < .01 *** p < .001