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INTERNATIONAL CANNABIS POLICY STUDY

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INTRODUCTION

The primary objective of the International Cannabis Policy Study (ICPS) is to examine the impact of cannabis legalization. On October 17, Canada became the second country to legalize non-medical cannabis at the national level. An increasing number of US states have also legalized non-medical cannabis. The ICPS study seeks to evaluate the overall impact of legalization to examine the effectiveness of specific policy measures.

The study examined five primary research questions, including the extent to which legalization is associated with changes in:

- prevalence, consumption, and patterns of cannabis use;
- commercial retail environment, price and purchasing;
- risk behaviours, including driving after cannabis use and use in 'high risk' occupational settings;
- perceptions of risk and social norms; and
- effectiveness of specific regulatory policies, including advertising restrictions, product labelling and warnings, public education campaigns, and the use of cannabis in public spaces.

The ICPS study is a prospective cohort survey that will be conducted annually with participants aged 16–65 years living in Canada (n=10,057) and the USA (n=17,126). The survey will be repeated annually at 12-, 24- and 36-months follow-up to monitor changes over time, as well as key mediators and moderators of use, in each of three jurisdictions: Canada (all provinces); US states that have legalized non-medical cannabis (US 'legal' states) and those that have not (US 'illegal' states). Analyses will also examine changes between Canadian provinces over time to examine differences in policy implementation, particularly with respect to the retail market.

This technical report describes the methods for the first wave of the ICPS study conducted from August–October 2018.

STUDY PROTOCOL

OVERVIEW

Data were collected via a web-based survey between August 27, 2018 and October 7, 2018. Respondents completed an online survey in English or French. Median survey time was 19.9 minutes, including 22.8 minutes among 'ever' cannabis users and 16.6 minutes among 'never' cannabis users.

QUESTIONNAIRE DEVELOPMENT

Survey measures were drawn or adapted from national surveys or selected based on previous research. Development included focus groups and cognitive interviewing with youth and young adults, as well as an extensive pilot study conducted in October 2017 with 1,045 Canadians aged 16–30. Cognitive interviewing was also conducted with 10 cannabis users in January–February 2018 to evaluate and improve items tested in the pilot survey (Cannabis Purchasing and Consumption Tool, October 2017), available at: http://davidhammond.ca/wp-content/uploads/2018/07/2017-Cannabis-Purchasing-Consumption-Tool-Survey-Document.pdf.

LANGUAGE

The survey was written in English and translated to French by *Parisella, Etc. Inc.* By default, panel participants were shown the survey in their preferred language and were able to switch to French or English if desired. Overall, 2.8% of participants completed the survey in French (n=761).

SURVEY CONTENT

The survey document is available at: http://cannabisproject.ca/methods/. The survey includes models on the following content areas:

- prevalence and patterns of cannabis use
- cannabis purchasing and price
- cannabis consumption and modes of use
- commercial retail environment
- risk behaviours
- cannabis knowledge, perceptions of risk and social norms
- exposure to health warnings and public educational campaigns
- exposure to cannabis marketing and branding
- substance use and other risk behaviours
- socio-demographics, postal code, and socio-economic status

SAMPLE RECRUITMENT

SAMPLE ELIGIBILITY

Individuals were eligible to participate if they resided in a Canadian province or US state, were 16–65 years of age at the time of recruitment, and had access to the internet.

RECRUITMENT AND CONSENT

Respondents from Canadian provinces and US states were recruited using the *Nielsen Consumer Insights Global Panel*, which maintains panels in Canada and the US (http://www.nielsen.com/ca/en/about-us.html). The Nielsen panels are recruited using both probability and nonprobability sampling methods in each country. For the current project, Nielsen drew stratified random samples from the online panels in each country, based on known proportions in each age group. To account for differential response rates, Nielsen modified these sampling proportions to place greater weight on sub-groups with lower response rates. Comparisons between the sample profile and national estimates from benchmark population-based surveys are provided herein.

RESPONSE RATES

In total, 1,428,857 respondents were sent an email invitation to the main survey. Table 1 shows outcomes for respondents sent the email invitation, in terms of completion of the survey. Overall, 44,364 respondents accessed the survey link, of whom 6,722 (15.2%) partially completed the survey and 28,471 (64.2%) completed the survey.

As shown in Table 1, 4,059 participants terminated the survey. Reasons included 'forced' termination due ineligibility, including residence in countries other than Canada or the US (n=133), age <16 or >65 (n=550), as well as self-termination at initial screens: smartphone warning (n=423) and consent page (n=1,679);

mandatory survey questions: sex at birth (n=13), province or state (n=3), 'Have you ever tried marijuana?' (n=67), 'When was the last time you used marijuana?' (n=50), and 'How often do you use marijuana?' (n=12); because of data quality issues flagged by Nielsen (n=963); or because the respondent opted out of the commercial panel after the invitation was sent (n=166).

Participants were discouraged from attempting to complete the main survey via a mobile device, but were not restricted from doing so. The smaller screen size of smartphones can alter the way online surveys are rendered in ways that require greater 'scrolling' and smaller rendering of images in ways that may degrade data quality. Two participants who were suspected to have used a smartphone were removed from the main analytic sample due to concerns about screen size (see Table 1). It was estimated that an additional 12.7% (n=3,615) of respondents completed the survey using a tablet.

PARTICIPANT COMPENSATION

Monetary incentives have been shown to increase response rates and to decrease response bias among sub-groups commonly under-represented in surveys, including disadvantaged subgroups. Respondents from Canadian provinces and US states were provided with incentives according to Nielsen's regular remuneration structure.

DATA INTEGRITY CHECK

Due to the sensitive nature of the subject matter (cannabis was classified as an illegal substance federally in Canada and the USA at the time of the survey), at the end of the survey, respondents were asked whether they felt they were able to answer the questions honestly. The 208 respondents who selected 'no' were excluded from the analytic sample. Towards the end of the main survey, respondents were also asked to select the current month from a list. The month selected by the respondent was compared to the month the respondent completed the survey. Respondents with discrepant responses were excluded from the analytic sample, unless the selected month was within 2 days of the date the survey was submitted (e.g., survey completed on September 30 but respondent selected October). A total of 1,071 respondents were excluded from the analytic sample due to discrepancies with the month selected. The final analytic sample included 27,183 respondents.

DATA CLEANING

The survey asked respondents about their current frequency of use in two ways: as a categorical variable (less than once per month, 1+ times per month, 1+ times per week, every day/almost every day) and also as an open-ended variable where the respondent entered the number of days they use cannabis per week/month/in the past 12 months. Where large discrepancies between responses to these two variables existed (e.g., respondent selected "less than once per month" but indicated that they used cannabis on 365 days in the past 12 months), the current frequency of cannabis use was reclassified. This affected 2.9% (n=203) of past 12-month cannabis users (n=6,978). We took similar steps to rectify inconsistencies in reporting for dried herb; the total (gram and joint) amounts of 319 dried herb users (5.7% of past 12-month users) were marked as missing due to inconsistent reporting.

ETHICS CLEARANCE

The project has been reviewed by and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE#22392).

Table 1: Dispositions of potential respondents, by country, in the International Cannabis Policy Study (ICPS) 2018

Disposition	Total		Canada		USA	
	n	%	n	%	n	%
Total invitations	1,428,857	--	821,414	--	607,443	--
Accessed survey [a]	44,364	3.1%	17,157	1.2%	24,503	1.7%
Survey terminated [a]	4,059	0.3%	1,186	0.1%	2,574	0.2%
Over quota [b]	5,112	0.4%	3,688	0.4%	1,424	0.2%
Survey partially completed	6,722	0.5%	1,637	0.2%	2,680	0.4%
Qualified completes	**28,471**	**2.0%**	**10,646**	**1.3%**	**17,825**	**2.9%**
Excluded - ineligible location [c]	5	<0.1%	5	<0.1%	0	0%
Excluded - dishonesty [d]	208	0.7%	77	0.7%	131	0.7%
Excluded - smartphone use	2	<0.1%	0	0%	2	<0.1%
Excluded - data quality [e]	1,073	3.8%	507	4.8%	566	3.2%
Final analytic sample	**27,183**	**1.9%**	**10,057**	**1.2%**	**17,126**	**2.8%**

[a] Because 2,571 individuals who accessed the survey did not indicate their country and 133 respondents who indicated they resided in 'other' countries were terminated, frequencies for Canada and the US do not sum to 'totals' who accessed and terminated the survey.

[b] Respondents screened ineligible for exceeding the designated quota for their sub-population (i.e., age group, sex, province, or state).

[c] Respondents screened ineligible due to residence outside the 10 Canadian provinces or 51 US states. The 5 respondents excluded from the main sample lived in the Canadian Territories.

[d] Respondents answered 'no' to the question, "Were you able to provide 'honest' answers about your marijuana use during the survey?"

[e] A total of 1,071 respondents incorrectly answered the data quality check question, "What is the current month?" Note that respondents who indicated a month ≤2 days of the correct month (i.e., respondents who completed the survey on September 30 but selected October) were retained. Two respondents from Canada who correctly answered the data quality question were also excluded: one who completed the survey twice, and one with poor-quality responses.

SAMPLE PROFILE

SURVEY WEIGHTS

Post-stratification sample weights were constructed based on the 2017 Canadian and US Census estimates. Sample probabilities were created for demographic groups (age by sex by province or US Census Division) based on weighted proportions. Weights were calculated as (1/sample probability) for each group, and applied to the full dataset of 27,183 participants.

SAMPLE CHARACTERISTICS

The demographic characteristics of the sample are shown in Tables 2 and 3; indicators of cannabis use are displayed in Table 4.

Table 2: International Cannabis Policy Study (ICPS) 2018 sample characteristics by study condition[a] n=27,183

	Canada n=10,057		US 'illegal' states n=9,714		US 'legal' states n=7,412	
Characteristic	Unweighted % (n)	Weighted [b] % (n)	Unweighted	Weighted [b]	Unweighted	Weighted [b]
Sex						
Female	58.1% (5,845)	49.8% (5,011)	61.4% (5,968)	50.3% (6,369)	66.0% (4,894)	50.5% (2,257)
Male	41.9% (4,212)	50.2% (5,046)	38.6% (3,746)	49.7% (6,284)	34.0% (2,518)	49.5% (2,216)
Age (years)						
mean (SD)	45.9 (14.8)	40.7 (14.8)	41.9 (16.6)	39.8 (15.4)	45.9 (14.3)	40.4 (14.6)
Age group						
16-25	13.2% (1,325)	18.9% (1,901)	22.7% (2,209)	21.1% (2674)	10.3% (764)	18.5% (827)
26-35	14.2% (1,424)	20.8% (2,087)	13.6% (1,317)	20.4% (2583)	17.2% (1,274)	22.7% (1016)
36-45	15.3% (1,538)	19.6% (1,969)	15.3% (1,484)	18.8% (2377)	17.2% (1,272)	19.8% (885)
46-55	21.7% (2,185)	20.8% (2,088)	19.4% (1,883)	20.2% (2552)	21.2% (1,573)	19.9% (891)
56-65	35.6% (3,585)	20.0% (2,012)	29.0% (2,821)	19.5% (2468)	34.1% (2,529)	19.1% (854)
Visible minority						
Yes	10.3% (1,035)	14.3% (1,439)	8.5% (828)	8.9% (1,127)	7.9% (588)	9.3% (417)
No	88.1% (8,864)	83.5% (8,402)	88.6% (8,604)	88.2% (11,165)	89.3% (6,618)	87.3% (3,907)
Unstated	1.6% (158)	2.1% (216)	2.9% (282)	2.8% (362)	2.8% (206)	3.7% (149)

SD, standard deviation. [a]The 9 'legal' states + District of Colombia (DC) were considered 'legal' states. Note that DC was not oversampled during recruitment; [b]weighted to Canadian and US national populations.

Table 3: Proportion of International Cannabis Policy Study (ICPS) 2018 respondents by province or state of residence[a]

Jurisdiction	Unweighted % (n)	Weighted % (n)
Canada (n=10,057)		
British Columbia	9.4% (947)	13.2% (1,329)
Alberta	9.3% (931)	12.0% (1208)
Saskatchewan	8.5% (858)	3.1% (312)
Manitoba	9.2% (923)	3.6% (360)
Ontario	27.0% (2,713)	39.0% (3,927)
Quebec	9.8% (984)	22.6% (2,272)
New Brunswick	8.7% (871)	2.0% (204)
Nova Scotia	9.1% (913)	2.6% (260)
Prince Edward Island	2.1% (212)	0.4% (41)
Newfoundland & Labrador	7.0% (705)	1.4% (144)
USA (n=17,126)		
Alaska	0.9% (155)	0.7% (123)
California	6.9% (1,180)	6.2% (1,070)
Colorado	6.8% (1,165)	3.2% (546)
Maine	2.8% (486)	1.0% (174)
Massachusetts	6.7% (1,143)	2.5% (435)
Nevada	5.0% (850)	2.3% (399)
Oregon	6.1% (1,041)	4.4% (751)
Vermont	1.3% (221)	0.5% (88)
Washington State	6.8% (1,157)	5.0% (863)
District of Colombia	0.1% (14)	0.1% (25)
'Illegal' states	56.7% (9,714)	73.9% (12,653)

[a] US states (51) were classified as 'legal' (9 states + District of Colombia (DC)) or 'illegal' (41), based on the legal status of recreational cannabis at the time of the study (August 2018). The 9 US 'legal' states were oversampled compared to US 'illegal' states to ensure sufficient representation; Ontario was also oversampled. Note that DC was not oversampled.

Table 4: Indicators of cannabis use among International Cannabis Policy Study (ICPS) 2018 respondents by condition, weighted [a] (n=27,183)

Indicator	Total sample (n=27,183)			Past 12-month cannabis users (n=6,979)		
% (n)	Canada (n=10,057)	US 'illegal' state (n=9,714)	US 'legal' state (n=7,412)	Canada (n=2,645)	US 'illegal' state (n=2,810)	US 'legal' state (n=1,524)
Ever tried cannabis						
Yes	55.6% (5,589)	52.5% (6,645)	62.8% (2,807)	100% (2,645)	100% (2,810)	100% (1,524)
No	44.4% (4,468)	47.5% (6,009)	37.2% (1,666)	--	--	--
Cannabis use status						
Never user	44.4% (4,468)	47.5% (6,008)	37.2% (1,666)	--	--	--
Used >12 months ago	29.3% (2,944)	30.3% (3,835)	28.7% (1,283)	--	--	--
Past 12-month user	8.8% (888)	7.0% (886)	10.2% (455)	33.4% (882)	31.5% (886)	29.9% (455)
At least monthly user	4.9% (489)	5.1% (640)	6.7% (301)	18.5% (489)	22.8% (640)	19.8% (301)
At least weekly user	4.9% (488)	3.8% (481)	6.3% (281)	18.5% (488)	17.1% (481)	18.4% (281)
Daily/almost daily user	7.8% (786)	6.3% (803)	10.9% (487)	29.7% (786)	28.6% (803)	31.9% (487)
Mean # of days[b] used in…						
past 12-months (SD)	--	--	--	138.7 (142.8)	138.4 (138.1)	150.7 (144.8)
past 30-days (SD)	--	--	--	17.1 (11.0)	16.5 (10.7)	17.6 (11.0)

SD, standard deviation. [a] Weighted to Canada and US national populations; [b]asked to past 12-month users only

SAMPLE COMPARISON

The International Cannabis Policy Study sample was compared with national Canadian and US estimates (see Tables 5–11).

The sample was more highly educated than the national populations in both Canada and the US, and the US sample had a higher percentage of individuals identifying as 'White' (84%) compared to the population estimate (76%). In both countries, the ICPS sample had poorer self-reported general health compared to the national population, which is a feature of many non-probability samples,[1] and may be partly due to the use of web surveys, which provide greater perceived anonymity than in-person or telephone-assisted interviews often used in national surveys.[2]

In terms of cannabis use in Canada, although the proportion of 'ever' cannabis users (56%) was within the range reported in national surveys (47%-60%), the prevalence rates of past 12-month and past 3-month use in the ICPS (26% and 21%, respectively) were higher than those reported in national surveys (15%-22% and 15%, respectively). This is likely due to the fact that the ICPS sampled individuals aged 16–65 years whereas the national surveys had no upper age limit, and thus included older adults who may have lower rates of cannabis use. Estimates of prevalence for modes of cannabis use that were directly comparable to those measured in national surveys (e.g., hash, edibles, concentrates) generally aligned with national estimates.

In the USA, estimates of ever, past 12-month and past 30-day cannabis use were higher in the ICPS than in national surveys. When examining study conditions, ICPS (2018) estimates for 'illegal' states aligned more closely with national estimates from 2017 than did those from 'legal' states. This may reflect a change in cannabis use trends from 2017 to 2018 in states that have recently legalized cannabis.

Measures of alcohol use aligned fairly well with national estimates in both countries. In both countries, ICPS estimates were slightly higher than national estimates, which again may be due to the younger age of the ICPS sample (16–65 years); national estimates of alcohol use were based on samples with no upper age limit.

[1] Fahimi M, Barlas FM, Thomas RK. American Association for Public Opinion Research (AAPOR). A Practical Guide for Surveys Based on Nonprobability Samples. Webinar; 13 February 2018.

[2] Hays RD, Liu H, Kapteyn A. Use of Internet panels to conduct surveys. Behav Res, 2015; 47: 685–690. DOI 10.3758/s13428-015-0617-9

SAMPLE COMPARISON TABLES: CANADA

Table 5: Education and ethnicity among respondents from Canada from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	Census 2016[a], age ≥15	ICPS 2018, Canada, age 16-65 (n=10,057)	
	%	Unweighted %	Weighted %
Education (age 15+)			
Less than high school	18.3%	8.7% (873)	11.3% (1,128)
High school diploma or equivalent	26.5%	15.5% (1,548)	14.6% (1,461)
Some college or technical/vocational training or certificate/diploma, or apprenticeship, or some university	32.0%	42.7% (4,268)	38.9% (3,883)
Bachelor's degree or higher	23.3%	33.1% (3,309)	35.1% (3,505)
	CCHS 2015[b], age ≥12 (n=20,176)	**ICPS 2018, Canada, age 16-65** (n=10,057)	
	%	Unweighted % (n)	Weighted % (n)
Ethnicity			
White only	77.0%	81.5% (8,195)	75.7% (7,616)
Chinese only	3.3%	4.5% (453)	7.0% (700)
South Asian only	3.4%	2.2% (224)	3.3% (336)
Black only	2.0%	1.2% (118)	1.7% (174)
Indigenous inclusive	4.7%	4.1% (411)	3.3% (332)
Mixed/other/unstated/missing	9.6%	6.5% (656)	8.9% (899)
	CCHS 2017[c], age ≥12 (n=65,000) (reporting ages 18-64 only)	**ICPS 2018, Canada, age 16-65** (n=10,057)	
	% (n)	Unweighted % (n)	Weighted % (n)
Perceived health			
Excellent or Very good			
18-34	70.9% (5,794,800)	50.5% (1,003)	50.2% (1,388)
35-49	64.1% (4,555,900)	48.2% (1,174)	48.6% (1,410)
50-64	54.2% (4,089,700)	43.5% (2,045)	41.5% (1,344)
Fair or Poor			
18-34	6.1% (496,600)	14.4% (286)	13.8% (381)
35-49	8.0% (568.200)	15.1% (368)	14.8% (432)
50-64	14.9% (1,128,500)	20.1% (946)	20.9% (679)

[a]Data obtained from the Canada Census 2016; [b]data obtained from the 2015 Canadian Community Health Survey (CCHS); [c]data obtained from the 2017 Canadian Community Health Survey (CCHS). Sources: Education: Statistics Canada. Census 2016 – Education Highlight Tables: Highest level of educational attainment (general), age groups 15 years and over, both sexes, 2016. Available at: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/edu-sco/Table.cfm?Lang=E&T=11&Geo=00&SP=1&view=2&age=1&sex=1. Ethnicity: Statistics Canada. 2015 Canadian Community Health Survey (CCHS): Ethnic origin, 2015. http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226. Perceived health: Statistics Canada. Canadian Community Health Survey (CCHS) 2017 Annual Component. Table 13-10-0096-02 Perceived health, by age group. Available at: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009602

Table 6: Cannabis and alcohol use among respondents from Canada from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	CCS 2018[a], age ≥16	CTADS 2017[b], age ≥15	NCS 2018[c], age ≥15	ICPS 2018, Canada, age 16-65	
	(n=12,958)	(n=16,349)	(n=5,798)	(n=10,057)	
	% (n, where provided)	% (95% CI)	% (95% CI)	Unweighted % (n)	Weighted % (n)
Cannabis use (full sample)					
Lifetime (ever) use	59.8% (7,743)	46.6% (44.3-48.8)	--	58.2% (5,852)	55.6% (5,589)
Past 12-month use	22.4% (2,900)	14.8% (13.2-16.4)	--	24.0% (2,413)	26.3% (2,645)
Age 16-19 (15-19 in CTADS)	36%	19.4% (17.4-21.4)	--	27.1% (209)	26.8% (331)
Age 20-24	44%	33.2% (30.3-36.2)	--	40.1% (174)	40.1% (212)
Age ≥25	19%	12.7% (10.9-14.6)	--	22.9% (2,030)	25.3% (2,103)
Past 30-day use	15.4% (1,990)	--	--	15.9% (1,597)	17.5% (1,757)
Past 3-month use	--	--	15.2% (13.8-16.6)	18.8% (1,891)	20.6% (2,069)
Cannabis use (past 12-month users)					
Past 3-month use	--	75%	--	78.4% (1,891)	78.2% (2,069)
Frequency of cannabis use (past 3-month users)					
Monthly use	--	--	13.8%	19.2% (398)	17.9% (339)
Weekly use	--	--	17.1%	23.7% (491)	21.90% (415)
Daily/almost daily use	--	32%	38.8%	36.5% (755)	38.0% (718)
Initiation to cannabis use					
Mean age (years)	18.9	18.6 (18.1-19.1)	--	19.8 (SD=8.6)	19.5 (SD=7.9)
Mode of cannabis used in past 12 months (past 12-month users)					
Dried flower/leaf	82%	--	--	78.5% (1,894)	80.1% (2,119)
Hash/kief	26%	--	--	22.3% (537)	23.8% (630)
Liquid concentrate	17%	--	--	--	--
Cannabis oils/liquids	--	--	--	42.9% (1,035)[e]	43.9% (1,161)[e]

Solid concentrates	19%	--	--	14.8% (357)	15.8% (417)
Edibles	41%	38%[d]		42.0% (1,014)	38.8% (1,027)
Liquids/beverages	4%	--	--	7.0% (169)	8.3% (220)
Alcohol use					
Past 12-month use	--	78.2% (76.5-79.9)	--	82.5% (8,101)	79.2% (7,964)

[a]data obtained from the 2018 Canadian Cannabis Survey (CCS) in which cannabis users may have been more likely to complete the study compared to other surveys such as CSTADS; [b]data obtained from the 2017 Canadian Tobacco, Alcohol and Drugs Survey (CTADS); [c]data obtained from the National Cannabis Survey (NCS), third quarter 2018; [d]because CTADS categorized methods of cannabis use in a different manner (smoking, vaporizing, chasing, mixing with tobacco, consuming edibles), only edibles (which correspond directly) have been reported here; [e]Unlike CCS, ICPS 2018 did not examine use of 'liquid concentrate'; instead, it examined 'cannabis oils or liquids taken orally (e.g., drops)' (weighted 21.9%, n=580) and 'cannabis oil or liquids for vaping' (weighted 21.7%, n=573); these two categories have been aggregated here. Sources: Cannabis use and Mode of use: Canadian Cannabis Survey, 2018 Summary. Available at: https://www.canada.ca/en/services/health/publications/drugs-health-products/canadian-cannabis-survey-2018-summary.html. Cannabis use: Government of Canada. Canadian Tobacco, Alcohol and Drugs Survey (CTADS): summary of results for 2017. Available at: https://www.canada.ca/en/health-canada/services/canadian-tobacco-alcohol-drugs-survey/2017-summary.html. Cannabis use, age of initiation, and alcohol use: CTADS 2017. Available at: https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey/2016-2017-supplementary-tables.html and https://www.canada.ca/en/health-canada/services/canadian-tobacco-alcohol-drugs-survey/2017-summary/2017-detailed-tables.html#t17. Frequency of cannabis use: Statistics Canada. National Cannabis Survey, third quarter 2018. *The Daily,* 11 October 2018. Available at: https://www150.statcan.gc.ca/n1/daily-quotidien/181011/dq181011b-eng.htm

SAMPLE COMPARISON TABLES: UNITED STATES

Table 7: Education among US respondents from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	CPS[a] 2017, age 18-64	ICPS 2018 US total age 18-64, weighted (n=14,253)	ICPS 2018 'illegal' states age 18-64 (n=7,704)		ICPS 2018 'legal states' age 18-64 (n=6,786)	
Education	%	% (n)	Unweighted % (n)	Weighted % (n)	Unweighted % (n)	Weighted % (n)
9th grade or lower	4.3%	0.3% (50)	0.4% (27)	0.3% (34)	0.4% (24)	0.4% (15)
10th grade	1.6%	0.4% (55)	0.5% (39)	0.5% (47)	0.3% (18)	0.2% (8)
11th grade or 12th grade, no diploma	4.4%	1.4% (202)	1.5% (115)	1.5% (153)	0.9% (63)	1.2% (49)
High school graduate	28.1%	15.8% (2,262)	18.1% (1,398)	16.8% (1,725)	13.9% (943)	13.6% (538)
Associate's degree or some college, no degree	29.7%	33.4% (4,771)	35.6% (2,739)	32.9% (3,384)	36.0% (2,442)	34.9% (1,386)
Bachelor's degree or more	31.9%	48.4% (6,912)	44.0% (3,386)	48.1% (4,944)	48.6% (3,296)	49.7% (1,969)

[a]Data obtained from the 2017 Current Population Survey (CPS). Source: US Census Bureau. Current Population Survey (CPS): Annual Social and Economic Supplement, 2017. Available at: https://www2.census.gov/programs-surveys/demo/tables/educational-attainment/2017/cps-detailed-tables/table-1-1.xlsx.

Table 8: Perceived health among US respondents from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	NHIS 2017[a], age ≥18, age-adjusted (n= ~33,000,000)	ICPS 2018 US total age 18-64, weighted (n=17,087)	ICPS 2018 'illegal' states age 18-64 (n=9,692)		ICPS 2018 'legal states' age 18-64 (n=7,395)	
	% (SE)	% (n)	Unweighted % (n)	Weighted % (n)	Unweighted % (n)	Weighted % (n)
Perceived health						
Excellent/Very good	61.9% (0.42)	53.3% (9,100)	51.2% (4,960)	53.1% (6,699)	50.9% (3,761)	53.8% (2,401)
Good	26.2% (0.36)	30.9% (5,280)	31.7% (3,073)	30.8% (3,890)	32.7% (2,417)	31.2% (1,390)
Fair/Poor	11.9% (0.26)	15.8% (2,694)	17.2% (1,659)	16.1% (2,028)	16.4% (1,217)	15.0% (666)

[a]Data obtained from the National Health Interview Survey, 2017. Source: Blackwell DL,Villarroel MA. Tables of Summary Health Statistics for U.S. Adults: 2017 National Health Interview Survey. National Center for Health Statistics. Table A-11a. Age-adjusted percent distribution (with standard errors) of respondent-assessed health status among adults aged 18 and over, by selected characteristics: United States, 2017. https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2017_SHS_Table_A-11.pdf

Table 9: Ethnicity among US respondents from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	CPS 2018[a] age 18-64	CPS 2016[b] Age 15-64	ICPS 2018 US total age 18-64, weighted (n=17,126)	ICPS 2018 'illegal' states age 18-64 (n=9,714)		ICPS 2018 'legal states' age 18-64 (n=7,412)	
Ethnicity	**%**	**%**	**% (n)**	**Unweighted % (n)**	**Weighted % (n)**	**Unweighted % (n)**	**Weighted % (n)**
American Indian or Alaskan Native	1.2%	--	0.7% (124)	0.5% (50)	0.6% (72)	1.0% (73)	1.2% (52)
Asian	6.6%	--	3.4% (589)	2.2% (216)	2.3% (292)	5.2% (386)	6.6% (297)
Black or African American	13.5%	--	6.7% (1,146)	7.4% (717)	7.8% (990)	3.0% (220)	3.5% (156)
Native Hawaiian or Pacific Islander	0.4%	--	0.2% (30)	0.1% (12)	0.1% (17)	0.3% (19)	0.3% (13)
White	76.3%		84.3% (14,431)	85.5% (8,301)	84.9% (10,744)	85.2% (6,312)	82.4% (3,687)
Other/≥2 races/unstated	2.0%	--	4.7% (806)	4.3% (418)	4.3% (539)	5.4% (402)	6.0% (267)
Hispanic origin	--	17.9%	7.1% (1,015)	5.8% (447)	6.7% (685)	6.4% (432)	8.4% (330)

[a]Data obtained from the 2018 Current Population Survey (CPS); [b]data obtained from the 2016 CPS. Sources: Ethnicity: US Census Bureau. Current Population Survey (CPS): Annual Social and Economic Supplement, 2018. Available at: https://www.census.gov/cps/data/cpstablecreator.html?#. Hispanic origin: US Census Bureau. US Current Population Survey: Annual Social and Economic Supplement, 2016. Table 1. Population by Sex, Age, Hispanic Origin, and Race: 2016. Available at: https://www2.census.gov/programs-surveys/demo/tables/hispanic-origin/2016/2016-cps/cps-2016-hispanic-tab1.xlsx

Table 10: Cannabis use among US respondents from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	NSDUH 2017[a] age 18-64 (n=197,535)	BRFSS 2017[b] age ≥18, weighted (n=450,642)	ICPS 2018 US total age 18-65, weighted (n=14,685)	ICPS 2018 'illegal' states age 18-65 (n=8,053)		ICPS 2018 'legal states' age 18-65 (n=7,119)	
Cannabis use	**%**	**%**	**% (n)**	**Unweighted % (n)**	**Weighted % (n)**	**Unweighted % (n)**	**Weighted % (n)**
Ever (lifetime) use	53.3%	--	59.2% (8,694)	57.9% (4,660)	56.9% (6,033)	67.3% (4,788)	65.1% (2,661)
Past 12-month use	18.2%	--	25.3% (3,715)	19.9% (1,602)	21.8% (2,314)	31.8% (2,258)	34.2% (1,400)
Age 18-25	34.9%	--	50.3% (533)	33.7% (185)	33.4% (207)	42.0% (198)	41.2% (181)
Age 26-64	14.7%	--	24.4% (3,326)	18.9% (1,417)	21.1% (2,107)	31.0% (2,060)	33.4% (1,220)
Past 30-day use	11.8%	9.3%	16.0% (2,346)	12.3% (992)	13.3% (1,411)	21.4% (1,521)	22.9% (934)
Age 18-25	22.1%	--	21.3% (225)	19.0% (104)	18.7% (116)	25.9% (122)	24.9% (109)

Age 26-64	9.6%	--	15.6% (2,120)	11.8% (888)	13.0% (1,295)	21.0% (1,399)	22.6% (825)

[a]Data obtained from the 2017 National Survey on Drug Use and Health (NSDUH); [b]data obtained from the 2017 Behavioral Risk Factor Surveillance System (BRFSS). Source: Cannabis use: Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH), 2017. Available at: https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab1-16A. Past 30-day cannabis use: 2017 Behavioral Risk Factor Surveillance System (BRFSS). Available at: https://www.cdc.gov/brfss/annual_data/2017/pdf/codebook17_llcp-508.pdf

Table 11: Alcohol use among US respondents from the International Cannabis Policy Study (ICPS) 2018 and national surveys

	NSDUH 2017[a] age ≥18 (n=247,161)	2012-2013 NESARC-III[b], age ≥18, weighted (n=36,309)	ICPS 2018 US total age 18-65, weighted (n=14,200)	ICPS 2018 'illegal' states age 18-65 (n=7,827)		ICPS 2018 'legal states' age 18-65 (n=6,963)	
Alcohol use	**%**	**%**	**% (n)**	**Unweighted % (n)**	**Weighted % (n)**	**Unweighted % (n)**	**Weighted % (n)**
Past 12-month use	70.1%	72.7%	75.3% (10,699)	72.4% (5,665)	74.3% (7,600)	78.3% (5,451)	78.1% (3,099)

[a]Data obtained from the 2017 National Survey on Drug Use and Health (NSDUH); [b]data obtained from the 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)-III. Sources: Alcohol use: Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH), 2017. Available at: https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab1-16A. Alcohol use: Grant BF, Chou SP, Saha TD, Pickering RP, Kerridge BT, et al. Prevalence of 12-Month Alcohol Use, High-Risk Drinking, and DSM-IV Alcohol Use Disorder in the United States, 2001-2002 to 2012-2013: Results From the National Epidemiologic Survey on Alcohol and Related Conditions. JAMA Psychiatry, 2017;74(9): 911-923. doi:10.1001/jamapsychiatry.2017.2161