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Public Health Concerns of Cannabis in Canada: Trends in Public Opinion Before and After Legalization

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Legalization

Major Research Paper

by

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Abstract

With the legalization and regulation of recreational cannabis in Canada coming into effect on October 17th, 2018, Canada became just the second country in the world to legalize the longstanding prohibited substance after first being outlawed in 1923. While public opinion throughout the country had favoured the adoption of drug-law reformation for some time, limited data existed on the health-related implications and public perceptions of cannabis use before the legislation was introduced. With little to no well-documented evidence available to base their own public policy decisions on, the federal government under newly elected Prime Minister Justin Trudeau and the Liberal Party of Canada outlined several principal objectives when committing to legalizing, regulating and restricting access to cannabis in Canada. The federal government recognised the best tactic as being a public health approach which prioritized decision making for the new regulatory system based on features that should uphold and promote the health and safety of Canadians. This research paper seeks to reflect on the effectiveness of the outlined policy objectives through public opinion by analyzing changes in annual trends pertaining to cannabis associated risks and harms. Three key areas are discussed using data from the *Canadian Cannabis Survey* (2017-2020) including perceptions of cannabis as being habit forming; cannabis associated risks among other substances; and opinions of cannabis specific harms. This paper ultimately argues that increased exposure to mandatory health warnings and realized effects of cannabis use increased the negative perception of cannabis smoke as being harmful, young adults as being most at risk, and cannabis as being a habit-forming substance while reducing the negative perception of cannabis compared to other substances and its effects on mental health.

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Introduction:

The election of Justin Trudeau and the Liberal Party of Canada in October of 2015 marked a fundamental milestone for the legalization of recreational cannabis in Canada. Campaigning on a promise of 'real change' for Canadians across the country, Trudeau presented a range of campaign commitments from economic assurances to better assistance for refugees.[1] Though the most notable policy commitment was the promise for the federal legalization and regulation of non-medical cannabis use in Canada.[2] Initially, Canadians and experts alike assumed the promise would be a straightforward one to deliver on; simply introduce legislation which would see cannabis go from illegal to legal.[3] However as the process of legalization began to gain more significant momentum following the 2015 federal election, the process of doing so proved to be both more difficult and complex than originally anticipated. With goals of protecting children and young adults, weakening criminal enterprises and bettering the health and safety of Canadians across the country, Trudeau and the Liberal Party worked on the foundations set forth by both his father Pierre Trudeau and former Liberal Prime Minister's Jean Chrétien and Paul Martin to reform outdated and ineffective policies which failed to adequately achieve these same goals through the longstanding prohibitionist method of restriction and control.

This research essay seeks to evaluate public perceptions of harms and benefits associated with legalizing cannabis federally in Canada before and after Bill C-45 (the *Cannabis Act*) was

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[1] Puzic, Sonja. "Campaign promises: Trudeau's pledges for a Liberal government." CTV News, October 20, 2015. Academic OneFile.
[2] Puzic, "Campaign Promises."
[3] Potter, Andrew., and Weinstock, Andrew. *High Time: The Legalization and Regulation of Cannabis in Canada*. McGill-Queen's University Press. 2019. MyLibrary e-book, 3.

introduced – specifically through the lens of physical health, mental health, and habit-forming tendencies perceived by Canadians. Utilizing Health Canada's *Canadian Cannabis Survey* first deployed in March of 2017, this research essay will evaluate changes in trends to these opinions over a four-year period (2017-2020) and seek to provide explanation to these key public opinions. The essay will allow for a systematic examination of how perceptions of cannabis harms and risks among Canadians have or have not changed after experiencing legalization over the four-year period with the expectation that increased exposure to greater and more accurate information will generally reduce health-related concerns overall. To prelude the following sections, the *Cannabis Act* had three overarching public health goals: "to keep cannabis out of the hands of youth; to keep profits out of the pockets of criminals; and to protect the public health and safety by allowing adults controlled access to legal and regulated cannabis products."[4] An evaluation of these three goals through the public perception of Canadians provides an awareness to how successful the legalization of cannabis has been in the country from a public opinion standpoint in comparison to the prohibitionist method previously employed.

Section one outlines the path of reformation efforts leading to Justin Trudeau's eventual legislation and regulation policy introduction from a Liberal Party assessment, focussing on the initial efforts of Pierre Trudeau, Jean Chrétien and Paul Martin during their respective tenures as Prime Minister. Here, I examine the literature of Andrew Potter in the *High Time: The Legalization and Regulation of Cannabis in Canada* – an original depiction of the processes and procedures required for national cannabis reform in Canada. The Conservative Party under Stephen Harper is similarly discussed in the party's efforts to dismantle leniency efforts made by

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[4] Government of Canada. "*A Framework for the Legalization and Regulation of Cannabis in Canada. The Final Report of the Taskforce on Cannabis Legalization and Regulation.*" by Wilson-Raybould, Judy., Philpott, Jane., and Goodale, Ralph. (2016): 1-112.

the Liberal Party in the early 2000's. This primes Justin Trudeau's rise as Liberal Party leader

and includes the appointment and development of key members to the Task Force on Cannabis

Legislation and Regulation for effectively developing policies and legislation which would

deliver an efficient rollout that kept Canadian's health and wellbeing at the forefront of priority.

Section two further outlines the multi-level governance structure the Canadian

government operates in and the importance of understanding the complex relationship shared

amongst the federal, provincial/territorial, and municipal levels of government. This incorporates

a comprehensive analysis of the hierarchy of responsibilities for the successful rollout and

operation of retail cannabis stores across the country and regulatory laws among the respective

jurisdictions. Followed is an outline of the cannabis market with a focus on the transformations

in where Canadians sourced their cannabis products before and after legalization, specifically

outlining differences in illegal and legal sourcing by amount spent. Finally, central health

concerns and considerations are examined with a focus on the addictive/habit forming potential

of cannabis and the protection of physical and mental health for children and young adults.

Section three outlines the methodological aspects of the research essay including the data

source utilized to evaluate key trends, the relevant question wording used in the surveys,

proposed research questions and hypothesis expectations, and overall research design. Sections

four and five include the results of the compiled trends and a discussion of the potential

explanations to the observed developments.

Politics of Cannabis Legalization

1.1 Initial Positions and Party Agenda:

Stephen Harper and the Conservative Party had spent nearly a decade (2006-2015)

occupying the Prime Minister's office in Canada, generally acting on conventional and moderate

issues of economic development and crime reduction consistent with the party's historical support of prohibitionary sanctions.[5] The suggestion of legalizing a longstanding prohibited substance by Justin Trudeau and the Liberal Party was conflicting with the Conservative's platform, with Stephen Harper making these concerns public in a statement naming marijuana as being "infinitely worse (than tobacco) and is something we do not want to encourage."[6] The statement was steady with Harper's early position on the subject when announcing that cannabis-law reform was not going to be included in the Conservative Party agenda when the party took initial power of government in 2006.[7] However, the Liberal Party had previously made plans to reform cannabis policies; with key actors including Pierre Trudeau, Jean Chrétien, and Paul Martin providing introductory novel attempts to either decriminalize or outright legalize the prohibited substance.

This section outlines the political dynamics leading to the eventual legalization of cannabis in 2018, beginning with the groundwork laid by the Liberal Party and considerations formed by Pierre Trudeau in the 1970's in combination with later Liberal Prime Minister's Jean Chrétien and Paul Martin in the 1990's and early 2000's respectively to reform Canada's national drug policy. Following is the introduction of Stephen Harper as leader of the Conservative Party who instead of building on these same foundations, dismantled their progress to keep with the party's restrained position on drug reform and strong position on crime

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[5] Nixon, Stephanie A, Kelley Lee, Zulfiqar A Bhutta, James Blanchard, Slim Haddad, Steven J Hoffman, and Peter Tugwell. "Canada's Global Health Role: Supporting Equity and Global Citizenship as a Middle Power." (*The Lancet (British Edition)* 391-10131 2018): 1736–48. https://doi.org/10.1016/S0140-6736(18)30322-2.

[6] Watters, Hayden. "Stephen Harper calls marijuana 'infinitely worse' than tobacco." (*Canadian Broadcasting Corporation*, October 3, 2015). Academic OneFile.

[7] Potter, Andrew. "In Praise of Political Opportunism, or, How to Change a Policy in only Fifty Years." In High Time: The Legalization and Regulation of Cannabis in Canada, edited by Andrew Potter and Andrew Weinstock. (*McGill-Queen's University Press*. 2019). 17.

reduction through prohibition. This leads to the selection of Justin Trudeau as newly elected leader of the Liberal Party in 2013 and the necessary use of his predecessors' preliminary initiatives to develop and implement a policy in Bill C-45 to effectively legalize and regulate cannabis while prioritizing the mitigation of public-health related concerns of cannabis through effective legislation.

1.2 Liberal Party of Canada:

The Liberal Party had started discussions of drug reform long before Justin Trudeau was elected Prime Minister in 2015. Initial considerations began with Justin Trudeau's father Pierre Trudeau during his time in office (1968 – 1984) where a number of recommendations were considered in 1972 to reform "grossly excessive" policies related to cannabis and other drugs.[8] However, Pierre Trudeau had to understate the priority of reforming the national drug laws after the Liberal Party dropped to a weakened minority government in the 1972 fall election where other more immediate issues of "Quebec separatism, rising inflation, and increasing oil prices required the more immediate attention of the federal government."[9] After a successful 1974 election which saw Pierre Trudeau and the Liberal Party regain their majority government over Robert Stanfield and the Progressive Conservative Party, Trudeau again realigned his vision of relaxing aspects of marijuana prohibition – though the policies failed to materialize into any substantial changes.[10]

After a lack of any considerable amendment in the years preceding, Liberal leader Jean Chrétien was forced into introducing a bill to decriminalize marijuana with public opinion

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[8] Potter, "In Praise of Political Opportunism." 13.
[9] Ibid, 13.
[10] Ibid, 13.

markedly rising in support as past regimes probationary platforms were seen as a complete

failure. The Liberal Party under both Jean Chrétien (1993 – 2003) and Paul Martin (2003 – 2006)

had aligned several principal actions for successful cannabis policy reform to occur.[11] "The two

predominant components being the Canadian Senate and House of Commons construction of two

committee reports calling for cannabis reform through either decriminalization or legalization

respectively."[12] The Senate report was chaired by Pierre Claude Nolin who released *Cannabis:*

Report of the Senate Special Committee on Illegal Drugs which called for the outright

legalization of cannabis and not simply its decriminalization; this would go on to be known

informally as the Nolin Report.[13] Not only were key public officials within government

supportive of reformation efforts, but Canadians were also generally aligned to the idea. In

Health Canada's 1995 *Alcohol and Other Drugs Survey*, "69% of respondents indicated that they

were supportive of either non-criminal fines for simple possession (>15 dry grams of cannabis)

or no legal repercussions at all."[14]

      The introduction of Bill C-38 in 2003 was slated to implement an easing of penalties

more appropriate for the seriousness of the crime committed through a range of thresholds

including, "weight of marijuana, reduction of criminal processes for minor offences, ticketing

and fines, and consistency across provincial and territorial jurisdictions."[15] The six key

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[11] Hyshka, Elaine. "The Saga Continues: Canadian Legislative Attempts to Reform Cannabis Law in the Twenty-First Century." (*Canadian Journal of Criminology and Criminal Justice* 51 no. 1 2009): 75. https://doi.org/10.3138/cjccj.51.1.73.

[12] Hyshka, "The Saga Continues:" 75.

[13] Potter, "In Praise of Political Opportunism." 16.

[14] Riley, Diane. "Drugs and Drug Policy in Canada: A Brief Review and Commentary." (*Canadian Foundation for Drug Policy and International Harm Reduction Association*. 1998): 4. https://sencanada.ca/content/sen/committee/362/ille/rep/rep-nov98-e.htm

[15] Library of Parliament Canada. *Bill C-38: An Act to Amend the Contraventions Act and the Controlled Drugs and Substances Act*, by Gérald Lafrenière. (*Parliamentary Research Branch*. Ottawa, Ontario. 2003): 35.

objectives of the proposed bill included, "decreasing the prevalence of harmful drug use; decreasing the number of young Canadians who experiment with drugs; decreasing the incidence of communicable diseases related to substance abuse; increasing the use of alternative justice measures such as drug treatment courts; decreasing the illicit drug supply and address new and emerging drug trends; and decreasing avoidable health, social, and economic costs."[16] The intent of the proposed legalization was to "reform cannabis laws in Canada by way of decriminalization and through designating possession as an infringement of the *Contraventions Act* while also reforming punishments related to cannabis in the criminal justice system across the country."[17] Paul Martin would go on to reintroduce the bill twice while in office, though the ambitions ultimately flattened as his government suffered a vote of no confidence which would see the Liberal Party's lengthy tenure and aspirations of national drug reform ultimately end with the election of a new Conservative government in 2006.

1.3 Conservative Party of Canada:

Shortly after the establishment of drug reform was slated by the Liberals under Trudeau, Chrétien, and Martin, Stephen Harper won the 2006 federal election at the expense of Paul Martin's government ousted by the vote of no confidence.[18] Instead of building on the foundation formed by his predecessors, "Harper and the Conservative Party further introduced policies with harsher criminal penalties and mandatory minimum sentences for users, growers and traffickers under a new national anti-drug strategy."[19] Harper would go on to serve three

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[16] Library of Parliament Canada, *Bill C-38*. 35.
[17] Library of Parliament Canada, *Bill C-38*. 1.
[18] Potter, "In Praise of Political Opportunism," 17.
[19] Ibid, 17.

terms as Prime Minister of Canada until the 2015 federal election which saw Justin Trudeau take the role of Prime Minister.

1.4 The Liberal Party under Justin Trudeau:

After nearly a decade of failing to oust the Conservative Party under Stephen Harper from government, a leadership race was called for the Liberal Party in 2013 which saw Justin Trudeau become the successor of then leader Michael Ignatieff.[20] It was shortly after this leadership victory where Trudeau announced his favoritism of legalizing, taxing and regulating cannabis on a national level in Canada. Trudeau's initial comments declaring his stance on reform coincided with that of his father, Jean Chrétien, and Paul Martin; the current and past models were viewed as unable to legitimately achieve the goals of protection for children and young adults, ability to dismantle criminal enterprises, and ability to better the general health and safety for all Canadians.[21] His campaign embodied several aspects of the previous Nolin Report with commentary on the current prohibitionist system "aiding organized crime, increasing criminal records for minor offences and failing to restrict use from anyone wanting to use cannabis."[22] Soon after winning the 2015 election, Trudeau appointed members to the Task Force on Cannabis Legalization and Regulation led by Anne McLellan who "headed both health and justice portfolios in Canada in collaboration with members of the Trudeau cabinet including: Health Minister Jane Philpott, Justice Minister Jody Wilson-Raybould, and former Toronto chief of police Bill Blair."[23] This collective group of individuals allowed a formation of experts who

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[20] Potter, "In Praise of Political Opportunism," 18.
[21] Ibid, 18.
[22] Ibid, 18.
[23] Ibid, 19.

covered each key area of legalization goals from health protection, criminal justice, and judicial reform. The overarching issue for the Liberal Party was the government had no case comparison to base their own policy actions on, where only one other country - Uruguay - had introduced similar legislation, albeit with vastly different political and structural dynamics concerning restrictions and regulations.[24] Utilizing both the Task Force on Cannabis Legalization and Regulation in collaboration with facets of the Nolin Report, the federal government passed the Cannabis Act on October 17th, 2018 – ninety-five years after the substance was initially criminalized.[25]

Health Concerns and Considerations:

Public health remained a key consideration for the government to deliberate on when cogitating the legalization process and was the foremost prioritized concern for the federal government. The concern from a public-health standpoint was multi-faceted, ranging from the uncertainties of potentially harmful and unknown substances contaminating black market products to the mental-health risks associated primarily in adolescent use.[26] As presented in Figure 1, a spectrum of policies and regulations ranging from a completely unregulated criminal market to an outright unregulated legal market present varying levels of societal and health related implications.

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[24] Potter and Weinstock, "High Time," 3.
[25] Potter, "In Praise of Political Opportunism." 19.
[26] Weinstock, Peter. "Will Legalization Protect Our Kids?" In *High Time: The Legalization and Regulation of Cannabis in Canada*, edited by Andrew Potter and Andrew Weinstock. (*McGill-Queen's University Press*. 2019), 67.

Figure 1: Centre for Addiction and Mental Health – Cannabis Policy Framework
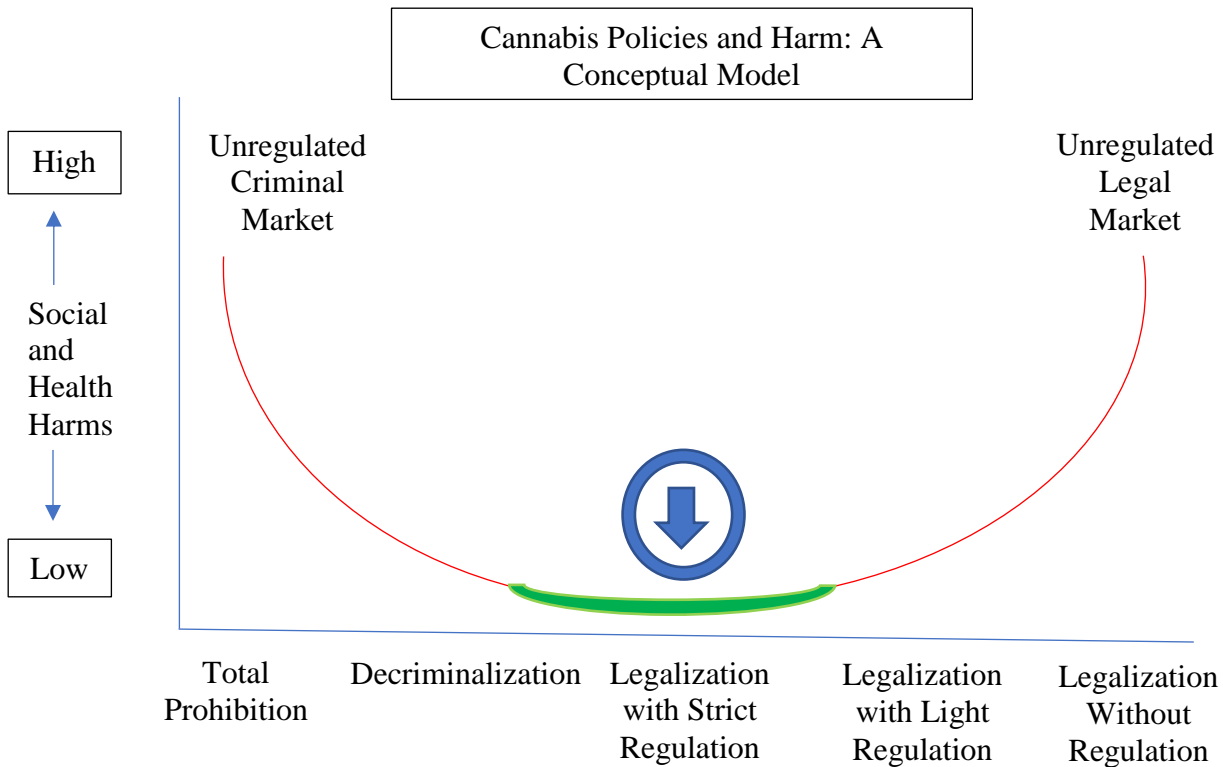
The model presents a simple conceptualization of different health and social related outcomes based on the extent or subsequent lack of regulations relating to cannabis control. The conceptual model provides a spectrum of available policy options and the likely outcomes.[27] In the years prior to 2018, Canada was positioned primarily on the left side of the figure where cannabis remained illegal and largely controlled by the criminal market (excluding the small regulated medical market).[28]

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[27] Crépault, Jean-Francois. "Cannabis Legalization in Canada: Reflections on Public Health and the Governance of Legal Psychoactive Substances." (*Frontiers in Public Health* 6, August 2018): 1. https://doi.org/10.3389/fpubh.2018.00220.

[28] Crépault, "Cannabis Legalization in Canada," 1.

Regulations on quality control, THC thresholds, and age did not exist under the past operation of criminal enterprises and posed significant public health concerns for users, specifically those users under the majority age. Recent clinical studies have revealed frequent contaminants in black market marijuana. These include various microbes, pesticides, mildew, and heavy metals known to contain carcinogens which negatively impact both the reproductive and developmental health of users.[29]

The opposite end of the spectrum presented similar undesirable outcomes in an unregulated legal market, with the most significant difference being the commercialization of cannabis at a mass scale and the principal objective of maximizing monetary returns.[30] Jean-François Crépault from the Center for Addiction and Mental Health in Toronto, ON, Canada explains why health considerations must take precedence over commercialization in this respect.[31] Crépault clarifies this rationale from a basic economics standpoint where businesses are first and foremost profit-maximizing entities irrespective of the industry they occupy.[32] The combination of a substance susceptible to significant risk through frequent/heavy use in a business model of maximizing revenue similarly brings a greater risk of worsening social and health related harms.[33] The absence of regulations creates ideal conditions for maximizing these returns, leading to a subsequent increase in more heavy/frequent use which produce environments supporting adverse societal and health related outcomes.

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[29] Dryburgh, Laura M, Nanthi S Bolan, Christopher P.L Grof, Peter Galettis, Jennifer Schneider, Catherine J Lucas, and Jennifer H Martin. "Cannabis Contaminants: Sources, Distribution, Human Toxicity and Pharmacologic Effects." (*British Journal of Clinical Pharmacology* 84 no.11 February 2018): 2469. https://doi.org/10.1111/bcp.13695.
[30] Crépault, "Cannabis Legalization in Canada," 1.
[31] Ibid, 1.
[32] Ibid, 1.
[33] Ibid, 1.

2.1 Protecting Health of Children and Young Adults:

There are several theories to explain why members of the public either support or oppose cannabis legalization. Much of the current research extends to the United States and takes into consideration several variables including partisan identification, gender, and perspective on cannabis benefits and harms. However, the most accurate predictor of support for cannabis legalization is age. "Millennials (18-34 years old) are at the forefront of legalization support with 68% favouring its regulation – the highest of any age cohort in the United States."[34] Millennial's support is even greater among Canadians, "where in 2017, 73% supported the legalization and regulation of cannabis."[35] Unsurprisingly, current and past use also provide insight into support where, "96% of current users support the idea, 67% of past users, and only 38% who have never consumed cannabis support its legalization."[36]

The widespread use of illicit and unregulated cannabis among children and young adults presented a public-health dilemma for the government to address through legalization. The combination of having the largest cohort of users being between the ages of 18 to 24 and the continued development of the brain until roughly the age of 25 exponentially increased the risk of mental health related issues, "that means that people who consume marijuana in the highest proportion are those who are also most at risk from it."[37] Without the implementation of regulations set in place to deter young Canadians from attaining cannabis prior to legalization, accessing the substance was fairly easy. The ease of access was compounded with potentially

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[34] Pew Research Centre. *In Debate Over Legalizing Marijuana, Disagreement Over Drug's Dangers*, by Carroll Doherty, Alec Tyson and Rachel Weisel. (2015): 1. Academic OneFile.
[35] Bricker, Darrell. "Majority (61%) of Canadians Support Legalization of Recreational Marijuana Use, But Only Half (49%) Support Ability to Grow Pot Plants at Home." (*Ipsos Group*. 2017): 1. MyLibrary e-book.
[36] Bricker, "Majority (61%)," 2.
[37] Weinstock, "Will Legalization Protect," 67

tainted products and unknown THC concentrations, posing a risk to both their physical and mental wellbeing.

Andrew Weinstock proposed two measures to mitigate these risks in the legal market. The first involves setting a threshold or 'cap' on THC concentration for products in the legal market; this was implemented with the introduction of cannabis edibles (eating or drinking), cannabis extracts (ingesting), cannabis extracts (inhaling), and cannabis topics (applying to skin, hair, nails) in October of 2019.[38] The second involved broad testing for product purity and transparency within the production process. "This mitigates risk by holding producers accountable for the cannabis they produce and the product they provide to consumers."[39] In a controlled legal market products are extensively regulated through quality control measures designed to eliminate or greatly reduce these potential issues, therefore mitigating the negative and often unintended consequences of consuming cannabis with high levels of THC potency and additives not native to cannabis. The improvements from the regulated market extend beyond the product itself, with informative communication and trained staff at retail outlets being better able to guide customers with differing cannabis experience to products which best suits their needs while also reducing unintended negative mental and physical side-effects. Trained employees and regulated online distribution networks also provide safeguards that the sale to those below the majority age is monitored and enforced, similar to the current system for both tobacco and alcohol. With young Canadians at the forefront of cannabis use, implementing regulations and

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[38] Government of Canada. Health Canada. *Final Regulations: Edible cannabis, cannabis extracts, cannabis topicals.* (2019): 1. https://www.canada.ca/content/dam/hc-sc/documents/services/drugs-medication/cannabis/resources/final-regulations-edible-cannabis-extracts-topical-eng.pdf

[39] Government of Canada, Health Canada, *Final Regulations*, 1.

restrictions to reduce the risks associated with use are essential in ensuring the betterment of their mental and physical wellbeing though the introduction of a legalized system.

2.2 Multi-Level Governance Features:

It is important to note that the Canadian governance system operates in a complex, multi-leveled structure functioning through different levels of government. Cooperation across these levels can be complicated for several reasons including varying partisan ideals by governing political parties, constitutional responsibilities outlined in the *Constitution Act, 1867*, as well as different regional specific priorities primarily relevant to the provinces and territories. An example of these often-complex relationships is economic development policy which is constitutionally granted to the provinces, "though the responsibility is generally shared between the federal government in Ottawa and its constituent units across the provinces."[40] A second more relevant example is the Canadian health care system which also shares responsibilities at the respective governance levels. "Federally, the *Canada Health Act* establishes criteria for the provinces and territories to follow when developing insurance plans which must be met in order for the provinces and territories to receive the necessary federal funding."[41] The provincial and territorial governments are responsible for administering and delivering the majority of Canada's health care services physically, though as mentioned must follow the guidelines set within the

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[40] Conteh, Charles. "Policy Governance in Multi-Level Systems [electronic Resource]: Economic Development and Policy Implementation in Canada Montreal," (*McGill-Queen's University Press*. 2013): 19.

[41] Government of Canada. *Canada's Health Care System, Reports and Publications – Health Care System* (Health Canada, 2019). https://www.canada.ca/en/health-canada/services/health-care-system/reports-publications/health-care-system/canada.html#a5

federal jurisdiction.[42] The collaboration between the levels of government ensures an effective and efficient method of delivering quality health care services to Canadians across the country.

The multi-level governance structure between federal, provincial/territorial, and municipal governments operates in a similar manner for cannabis regulations and rollout to the examples mentioned on economic development and health care. Though, cannabis laws would prove to cause significant jurisdictional confusion during the early legislative process and development for regulations surrounding cannabis legalization given its novel nature. Despite a federal framework to initiate the legalization of cannabis, deviating approaches unfolded across lower levels of government for "public consultation, plans for online distribution and retail stores, regulatory features, endorsement of public health approaches, and general alignment with alcohol regulation."[43] For cannabis legalization, each level of government played their own distinct role. The federal government provided the broad framework through *Bill C-45: An Act respecting cannabis and to amend the Controlled Drugs and Substances Act, the Criminal Code and other Acts* or better known as the Cannabis Act in June 2018.[44] The provincial governance level controlled aspects of retail distribution similar to the current alcohol system, meaning the framework across Canadian jurisdictions would similarly look and operate much differently. The municipal governments controlled aspect of by-laws and zoning regulations which was evident in the municipalities of Mississauga, Oakville, Markham, Whitby and Vaughn whose local representatives denied the operation of legal cannabis stores in their communities.[45]

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[42] Government of Canada, *Canada's Health Care System.*

[43] Tara Marie Watson et al. "Early-Stage Cannabis Regulatory Policy Planning Across Canada's Four Largest Provinces: A Descriptive Overview." (*Substance Use & Misuse* 54, no.10, 2019): 1691–1704. https://doi.org/10.1080/10826084.2019.1608249.

[44] Watson et al., "Early-Stage Cannabis," 1692.

[45] Berkow, Jameson. "Mississauga, Markham become latest Ontario municipalities to opt out of cannabis retail stores." (*The Globe and Mail*. December 18, 2018.) Academic OneFile.

Figure 2: Multi-Level Governance Hierarchy

Multi-Level Governance Hierarchy

Federal	Bill C-45 "The Cannabis Act"		
Provincial/Territorial	Home Cultivation & Consumption	Distribution - Online & Physical	Retail Deployment & Opperation
Municipal	Public Consumption Regulations	Zoning	By-Laws
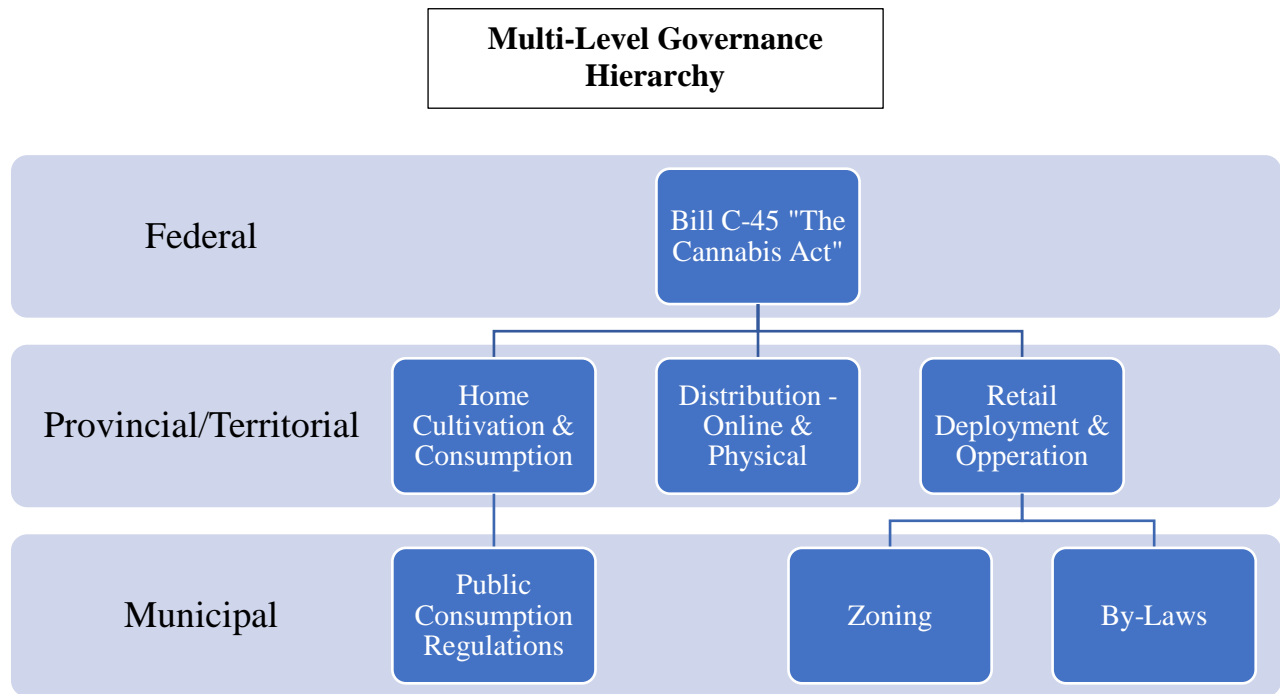
2.3 Market Share Pre-Legalization:

The elimination or significant reduction of cannabis purchases sourced from illegal suppliers

was a critical element in justifying the need for cannabis to be legalized and regulated in

Canada.[46] This goal was taken from a multifaceted understanding that providing government-

regulated cannabis would "both significantly disrupt the flow of money between criminals in the

black market and also provide Canadians with a safer product to use."[47]

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[46] Statistics Canada. *Health Reports – What has changed since cannabis was legalized?* by Michelle Rotermann. (Statistics Canada, 2020), https://www.doi.org/10.25318/82-003-x202000200002-eng

[47] Statistics Canada, *Health Reports.*

According to market research performed by Statistics Canada, the differences in where Canadians purchased their cannabis before and after legalization were significant. 77.1% of users who spent $0 on their attainment of cannabis before legalization were sourcing their product from family and friends – this figure remained similarly high after legalization with 69.9% of respondents reporting family and friends as their main source of cannabis attainment.[48] The greatest difference in cannabis source came in the $1 to $50 expenditure category, where 60.4% of respondents sourced their cannabis illegally and only 19% legally pre-legalization, illegal sourcing dropped by 25.7% to 37.7% while legal sourcing rose by 45% to 64% after legalization.[49] The $51 to $250 category saw similar decreasing trends in illegal sourcing, dropping from 64.7% pre-legalization to 41.6% after legalization while legal sourcing jumped from 28.8% pre-legalization to 67.8% afterwards.[50] The one category of expenditure where illegal sourcing continued to operate above legal means post-legalization was in the category of $251 or more.[51] This finding may be linked to regulations on the maximum amount of cannabis an individual may possess which sits at 30 dried grams (about an ounce) in public at any given time.[52] This limit may prevent individuals from being able to purchase cannabis in bulk (over 30 dry grams) and potentially forces consumers to look towards illegal sources to satisfy the market demand for large quantity cannabis purchases over the set threshold.

The transition from Canadians illegal sourcing of cannabis to legal is significant given the size of the black market pre legalization, "where in 2017 about 4.9 million Canadians aged 15-64

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[48] Statistics Canada, *Health Reports*, Table 4.
[49] Ibid, Table 4.
[50] Ibid, Table 4.
[51] Ibid, Table 4.
[52] Government of Ontario. *Cannabis Laws*. (Toronto, Ontario, 2021). https://www.ontario.ca/page/cannabis-laws

spent an estimated $5.7 billion on cannabis – about $1,200 per cannabis user."[53] In comparison

to similar substances of alcohol and tobacco, Canadians spent an estimated $22.3 billion and

$16.0 billion respectively.[54] Although cannabis expenditures were lower than both alcohol and

tobacco, the spending for cannabis backed the funding and perpetuation of criminal enterprises

and not the financial contribution into federal and provincial or territorial tax revenues. From the

Liberal Party's perspective, the legalization of cannabis was fundamentally taken from the

standpoint of public health and safety, which included carryon implications when Canadians

purchased cannabis through illegal sources.[55] Similar instances of criminals capitalizing on

prohibitionary terms have been apparent in the past, including alcohol prohibition in the United

States, "which ultimately expanded organized crime in North America as opposed to reducing

it."[56] Operating within the illicit market, cannabis prices were kept high and criminal

organizations were able to exploit the market for monetary gains. Ultimately the best solution to

combat the persistent criminal market problem was to transfer the control from criminal

enterprises into the regulatory hands of the federal, provincial/territorial and municipal

governments. The key difference between alcohol and cannabis are its users, where young adults

aged 18 to 24 represent the single largest cohort of consumers in the market pre-legalization

while use tends to decrease when age increases.[57]

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[53] Statistics Canada. *Cannabis Economic Account*, 1961 to 2017. (2018): 2.
https://www150.statcan.gc.ca/n1/en/daily-quotidien/180125/dq180125c-eng.pdf?st=iL_AkWmX
[54] Statistics Canada, *Cannabis Economic Account*, 2.
[55] Government of Canada, A Framework, 24.
[56] Easton, Stephen. "Marijuana Growth in British Columbia." (*The Fraser Institute - Public Policy Sources*, no. 29 2004). https://www.publicsafety.gc.ca/lbrr/archives/cnmcs-plcng/cn32229-eng.pdf
[57] Weinstock, "Will Legalization Protect," 68.

Figure 3: Cannabis expenditure by source before and after legalization

	Percentage of Canadians before legalization (%)	95% confidence interval (from → to)	% of Canadians after legalization (%)	95% confidence interval (from → to)	Percentage change pre/post legalization (+/- %)
Cannabis expenditures in the past 3 months					
Category 1: $0					
Illegal	**23.7%**	19.6 – 28.3	**25.8%**	21.0 – 31.3	**+2.1%**
Legal	**7.5%**	4.8 – 11.5	**11.8%**	9.1 – 15.2	**+4.3%**
Friends and family	**77.1%**	72.6 – 81.0	**69.8%**	64.8 – 74.4	**-7.3%**
Category 2: $1-$50					
Illegal	**60.4%**	52.8 – 67.4	**37.4%**	29.3 – 40.5	**-23%**
Legal	**19.0%**	13.6 – 26.0	**64%**	58.3 – 69.3	**+45%**
Friends and family	**46.9%**	38.8 – 55.1	**32%**	26.7 – 37.8	**-14.9%**
Category 3: $51 to $250					
Illegal	**67.4%**	59.1 – 69.6	**41.6%**	37.3 – 46.0	**-25.8%**
Legal	**28.8%**	24.1 – 34.0	**67.8%**	63.6 – 71.7	**+39%**
Friends and family	**32.3%**	27.0 – 38.1	**24.7%**	20.8 – 29.2	**-7.6%**
Category 3: $251 or more					
Illegal	**70.1%**	64.2 – 75.4	**62%**	56.4 – 67.3	**-8.1%**
Legal	**39.3%**	33.1 – 45.9	**59.4%**	53.6 – 64.8	**+20.1%**
Friends and family	**28.4%**	22.5 – 35.3	**29.0%**	24.1 – 34.5	**+0.6**

Data retrieved from Statistics Canada, *Health Reports*, Table 3.

2.4 Public Opinion Regarding Cannabis-Associated Harms:

Prior to cannabis legalization, two sides of the public health considerations were being measured – potential benefits and potential harms. On the benefits side, providing legal cannabis as a prospective substitute to opioids and other harmful substances was considered by experts to benefit struggling addicts.[58] While the danger of unknown ingredients was seen as a potential harm for users of illicit cannabis, potentially harmful materials posed health risks beyond those strictly associated with the substance itself. Beyond this, ranges in potency caused a related concern, where the THC percentage (main psychoactive compound in cannabis) was often unknown and undisclosed in the illicit market, causing unspecified and potentially harmful reactions when used. In December of 2016, Health Canada released their final report prior to legalization titled *A Framework for the Legalization and Regulation of Cannabis in Canada*. The report provided a consolidated set of recommendations and key considerations for the federal Cabinet to confer over as the government moved forward with the legalization and regulation of cannabis in Canada.[59] Recommendations were based on a reflection of a public health approach to, "reduce harm and promote health by minimizing negative harms associated with the substance."[60]

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[58] Lake, Stephanie, and Thomas Kerr. "The Challenges of Projecting the Public Health Impacts of Marijuana Legalization in Canada Comment on 'Legalizing and Regulating Marijuana in Canada: Review of Potential Economic, Social, and Health Impacts.'" (*International Journal of Health Policy and Management* 6 no.5, 2016): 285, https://doi.org/10.15171/ijhpm.2016.124.
[59] Government of Canada, *A Framework for Legalization*.
[60] Ibid, 2.

Methodology:

3.1 Data Sources:

To understand changing perceptions of public health concerns related to cannabis made legal through the Cannabis Act on October 17th, 2018, Health Canada developed and implemented the Canadian Cannabis Survey (CCS).[61] With an annual survey cycle, four data sets have been produced to date providing a range of perspectives included in the 2017 CCS, 2018 CCS, 2019 CCS and 2020 CCS.

The survey includes four thematic areas. For the purpose of this research paper, the main category of interest is *knowledge, attitudes and behaviors* which addresses Canadian's opinions on the effects of cannabis use and the public's perceptions of various benefits and harms related to cannabis use and possible abuse. The four subcategories are "Knowledge, attitudes and behaviors; Cannabis use and products used; Driving and cannabis; and Cannabis for medical purposes."[62] Given the novelty of cannabis as being newly legalized in Canada, additional questions were added to the survey on an annual basis including both the comparison of cannabis harms compared to other related substances (added in 2018) and changes in opinion for cannabis specific harms (added in 2019).

3.2 Research Questions:

Some aspects of the Canadian Cannabis Survey provide insight to differences in perceptions from non-users of cannabis to those who have used cannabis in the past 12-months. This provides important distinctions to the opinions of those with and without recent experience

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[61] Government of Canada. *Canadian Cannabis Survey 2017 – Summary*. (Ottawa, Ont: Health Canada, 2017.) https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/canadian-cannabis-survey-2017-summary.html
[62] Government of Canada, *Canadian Cannabis Survey 2017*.

in use. The three topics of interest for understanding trends of public opinion relating to cannabis use before and after legalization are cannabis as being habit forming; cannabis associated harms among other substances; and the opinion of cannabis specific harms through different methods of consumption. The overarching research question asks whether the Canadian public's perception and opinion of cannabis related health concerns has improved or worsened as a direct result of cannabis legalization in the country. I first hypothesise that the perception of cannabis as being habit forming will increase on an annual basis, with those who have used cannabis at least once in the past 12-months experiencing the greatest increase (H1). This conjecture is based on the work of Amna Zehra et al (2018) findings which proposes that "the repeated substance use of cannabis drives neurological changes which in turn increase rates of cannabis use disorder (CUD)."[63] My second hypothesis is that the perception of cannabis-related harms will continue to stay below both smoking tobacco and drinking alcohol, but that the relative unknowns of vaping products will see Canadian's opinion worsen in this area justified by the relatively recent emergence of vaping products and the newly uncovered medical implications they may pose (H2).[64] The third and final hypothesis is that the perception of cannabis specific harms will experience an increasing trend based on greater exposure to health-related warnings when purchasing and using cannabis products which were not as prominent or accessible prior to legalization (H3).

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[63] Zehra, Amna, Jamie Burns, Christopher Kure Liu, Peter Manza, Corinde E Wiers, Nora D Volkow, and Gene-Jack Wang. "Cannabis Addiction and the Brain: A Review." (*Journal of Neuroimmune Pharmacology* 13, no.4 2018): 438–52. https://doi.org/10.1007/s11481-018-9782-9.

[64] Rehan, Harmeet Singh, Jahnavi Maini, and Armit Pal Singh Hungin. "Vaping versus Smoking: A Quest for Efficacy and Safety of E-cigarette." (*National Library of Medicine* 13, no. 2, 2018): 92-101, doi:10.2174/1574886313666180227110556

3.3 Research Design:

This research essay evaluates trends across time and in variables included in the Canadian Cannabis Survey from 2017 to 2020. The use of public opinion and perspective data from the respective Canadian Cannabis Surveys allows for an understanding and evaluation of how Canadians perceived the relevant health and social effects of cannabis use before and after legalization. Given the relatively new implementation of the study, aspects of the Canadian Cannabis Survey may remain consistent or change on an annual basis. "The Canadian Cannabis Survey uses a two-step recruitment process where potential respondents are randomly selected by a phone list and then screened through a series of questions."[65] The discussion considers possible explanations for the trends observed and offers critical suggestions for Canadian Cannabis Surveys in the future based off of such observations.

3.4 Question Wording and Evaluation:

'Cannabis use' refers to "using cannabis in both dry form or when mixed with other products such as edibles, concentrates, hashish, a liquid or other product."[66] Respondents were asked if they believed cannabis could be a habit-forming substance. This question was consistent across all four years of the Canadian Cannabis Survey questionnaire and provides insight for both respondents who had used cannabis at least once in the past 12 months as well as non-users.[67] First introduced in the 2018 Canadian Cannabis Study, respondents were asked "how much they thought a person risked harming themselves by using various products once in a while and on a

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[65] Government of Canada. *Canadian Cannabis Survey 2020 – Summary*. (Ottawa, Ont: Health Canada, 2020). https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2020-summary.html
[66] Government of Canada, *Canadian Cannabis Survey 2020*.
[67] Ibid.

regular basis."[68] "The perceived risk was evaluated using a 4-point Likert scale with the categories of: no risk, slight risk, moderate risk, great risk and don't know. The substances being compared were smoking tobacco, e-cigarette with nicotine, drinking alcohol, smoking cannabis, vaping cannabis, and eating cannabis."[69] New to the 2019 Canadian Cannabis Study, respondents were asked about if "they know or believe cannabis smoke can be harmful, whether cannabis use during pregnancy or breastfeeding can be harmful, if frequent cannabis use can increase the risk of mental health problems, and whether teenagers are at a greater risk of harm from cannabis use than adults."[70]
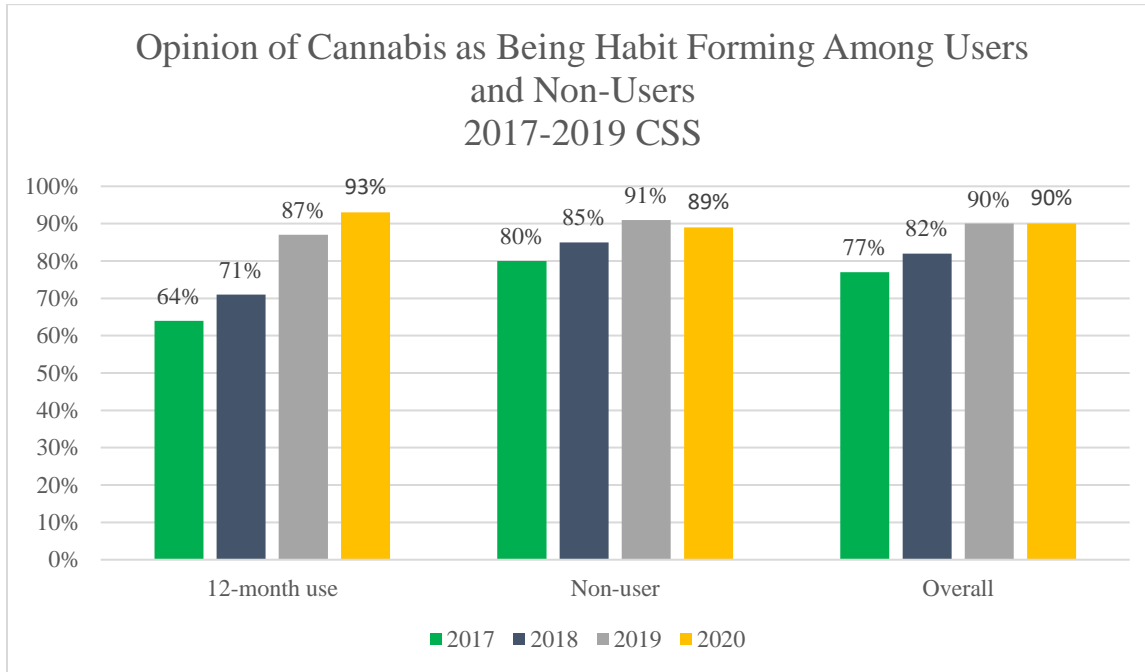
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[68] Government of Canada. *Canadian Cannabis Survey 2019 – Summary*. (Ottawa, Ont: Health Canada, 2019). https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/canadian-cannabis-survey-2019-summary.html
[69] Government of Canada, *Canadian Cannabis Survey 2019*.
[70] Ibid.

Results:

4.1 Opinion of Cannabis as Being Habit Forming: (2017-2020)

Data retrieved from Canadian Cannabis Survey 2017-2020: Opinions on whether cannabis can be habit forming

The expectation in opinion for cannabis as being a habit-forming substance was an upward trend based on repeated substance use driving neurological changes in the brain and an increase prevalence of cannabis use disorder.[71] Both respondents who had used cannabis in the past 12 months and non-users experienced a marked increase in their opinion of cannabis as being habit forming on an annual basis. The sole outlier to this trend was the non-user cohort between 2019 and 2020 when the perception plateaued near 90% agreement and remained consistent with the overall average.[72] Over the four-year period, non-users' perceptions consistently trended upward with an increased difference of 9% in the timeframe. Those who had used cannabis at least once in the past 12-months saw the most dramatic rise in perception,

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[71] Zehra et al., "Cannabis Addiction and the Brain," 438.

[72] Government of Canada, *Canadian Cannabis Survey 2020*.

where the proportion of respondents believing cannabis to be habit forming increasing by 29%.[73] Overall, a steady uptrend in habit-forming opinion is noticed with an increase of 13% averaged among both cohorts since the initial legalization in 2017. Although the Canadian Cannabis Study did not provide an explicit explanation to the rise in past 12-month users perception of cannabis as being a habit-forming substance, credited academic studies on marijuana dependence find cannabis to be similar to other substance dependence disorders, particularly tobacco whose users experience side effects of "irritability, depression, loss of appetite, and difficulty sleeping after attempting to reduce or stop use."[74] A possible explanation to this rise of users continued use of cannabis despite experiencing negative social, psychological and physical impairments is the avoidance of experiencing these withdrawal symptoms when attempting to reduce or completely stop cannabis use.[75] Future Canadian Cannabis Studies would benefit from determining users with more frequent use over a sustained period to determine the viability of this theory.

[73] Government of Canada, *Canadian Cannabis Survey 2020*.

[74] Budney, Alan J, Roger Roffman, Robert S Stephens, and Denise Walker. "Marijuana Dependence and Its Treatment." (*Addiction Science & Clinical Practice* 4, no. 1, 2007): 4–16. https://doi.org/10.1151/ASCP07414.

[75] Ibid, 5.

4.2 Comparison of Opinion Cannabis Associated Harms Among Other Substances:

(2018-2020):

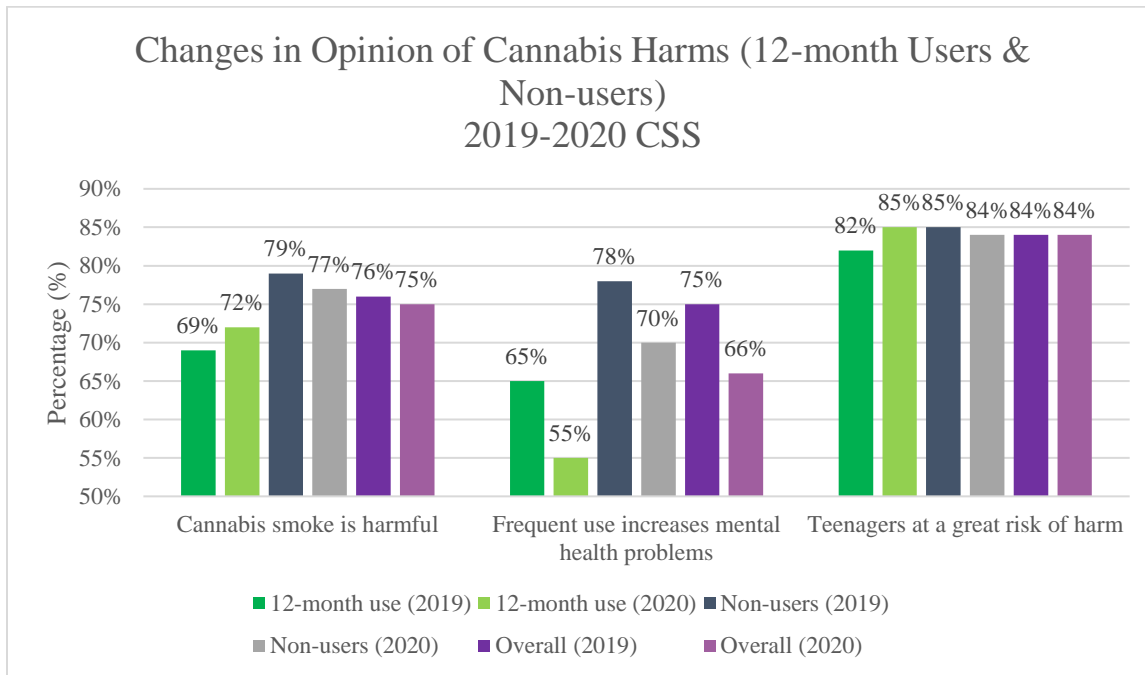Changes in Percieved Harm of Cannabis Among Other Legal Substances (2018-2020 CSS)
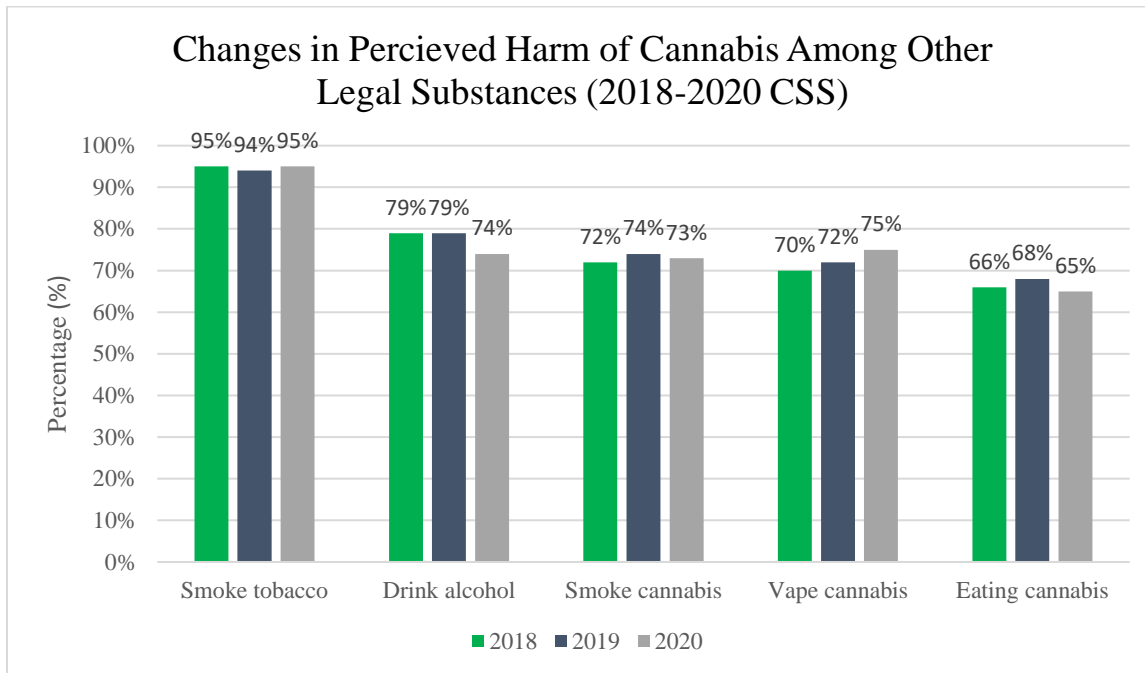
Data retrieved from Canadian Cannabis Survey 2018-2020: Perceived risk of various behaviors on a regular basis

Over the three years of study, smoking tobacco and drinking alcohol remained consistent as the substances which posed the greatest risk of perceived harm. Trend changes in the perceived harms of cannabis consumption remained fairly stable for both smoking cannabis and eating cannabis, each only fluctuating by one percentage point over the three years. However, vaping cannabis experienced a steady rise in risk perception, increasing by 5% from 2018 to 2020.[76] This trend is potentially tied to the greater discussion of e-cigarette concerns in general, where both the federal Canadian government and various clinical assessments have cautioned the unknowns of long-term e-cigarette use.[77]

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[76] Government of Canada, *Canadian Cannabis Survey 2020.*

[77] Jessica L Braymiller et al. "Assessment of Nicotine and Cannabis Vaping and Respiratory Symptoms in Young Adults." (*JAMA Network Open* 3, no.12, 2020): e2030189–e2030189. https://doi.org/10.1001/jamanetworkopen.2020.30189.

4.3 Opinion on Cannabis Specific Harms:

Changes in Opinion of Cannabis Harms (12-month Users & Non-users) 2019-2020 CSS

Among the past twelve-month use cohort of respondents, the perception of cannabis

smoke as being harmful increased slightly by 3% compared to a decrease of 2% in non-users of

cannabis – each staying fairly stable from the previous year found in the 1% variation in overall

opinion across the two groups.[78] Teenagers at a greater risk of harm from cannabis remained

high and stable across both respondent groups, with a constant 84% of respondents indicating

strong agreement with the statement for both 2019 and 2020.[79] The question of frequent cannabis

use increasing mental health problem had the greatest change among both respondent group and

year. Those who had used cannabis in the past 12-months showed a 10% reduction in their

agreement while the non-user group saw a similar 8% reduction in their agreement.[80] Overall, a

9% overall reduction was significant over a single year of observation.

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[78] Government of Canada, *Canadian Cannabis Study 2020*.
[79] Ibid.
[80] Ibid.

Discussion:

5.1 Opinion of Cannabis as Being Habit Forming: (2017-2020)

The first hypothesis proposed that the perception of cannabis as being habit forming would increase on an annual basis, with those who have used cannabis at least once in the past 12-months experiencing the greatest increase. The trend in *4.1* confirmed this theory and may come from the realized effects of cannabis use over a short to medium-term with repeated substance abuse perpetuating into a potential cycle of addiction and habit-forming indicators. This hypothesis stems from the findings of Zehra, et al. (2018) who study the effects of cannabis on the brain pertaining to the substance's addictive potential driving neurobiological changes in the brain.[81] To this, the study identifies a similar addiction framework to other substances of abuse which can be identified through three distinct stages: "binge/intoxication, withdrawal/negative effect, and preoccupation/anticipation."[82] However, a recent study on the assessment of habitual use of marijuana compared to alcohol and tobacco use saw cannabis as having the lowest mean score across the Self-Report Habit Index (SRHI) categories.[83] "The 6-item, single factor latent structure included responses for each substance including automatic use of the substance, use without thinking, starting use without realizing, and finding it hard not to use."[84] Across each item, cannabis posed the least significant perception of habit-forming risk among users in comparison to both alcohol and cigarettes, with a mean of 63% of respondents

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[81] Zehra et al., "Cannabis Addiction and the Brain," 438.

[82] Ibid, 438.

[83] Meghan E Morean et al. "The Self-Report Habit Index: Assessing Habitual Marijuana, Alcohol, e-Cigarette, and Cigarette Use." (*Drug and Alcohol Dependence* 186 2018): 207. https://doi.org/10.1016/j.drugalcdep.2018.01.014.

[84] Morean et al., "The Self-Report Cannabis Index," 211.

indicating they start without realizing they are doing it and 74% reporting that they use cannabis automatically.[85]

5.2 Comparison of Opinion Cannabis Associated Harms Among Other Substances: (2018-2020)

Both smoking tobacco and drinking alcohol represent the greatest perceived risk among Canadian respondents across various substances in comparison to any of the consumption methods of cannabis.[86] However, of the three methods of cannabis consumption, respondents identified smoking cannabis as posing the great risk. This response coincides with time-relevant trends moving towards new non-combustible methods of consumption such as e-cigarettes for both tobacco and cannabis which heat the substance into an aerosol for inhalation rather than ignition.[87] However, the medium to long-term effects of vaping either cannabis or tobacco were largely unknown in 2017, where the glorification of electronic cigarettes (ECIGs) harm reduction promises were largely unproven and lacking in evidence.[88] The varying methods of cannabis consumption all noticed a modest increase in perceived risk, albeit the majority of respondents felt that the occasional use of cannabis presented little to no risk. Considering the already accessible availability of cannabis under the illicit market pre-legalization, the legal system presented greater transparency of the potential harms to cannabis use which possibly triggered the modest increase in perceived harms across methods of consumption.[89] Similar health-related warnings have proven effective at increasing knowledge and awareness as well as reducing

[85] Morean et al., "The Self-Report Cannabis Index," 211.
[86] Government of Canada, *Canadian Cannabis Survey 2018*.
[87] Rehan, Maini, and Hungin. "Vaping versus Smoking," 92.
[88] Ibid, 92.
[89] Lake and Kerr, "The Challenges of Projecting," 286.

overall consumption for tobacco products in Canada.[90] Given the greater exposure to more

accurate negative health repercussions for cannabis use, the perception of risk among

respondents is logically greater through more robust access to accurate information and

transparency.

5.3 Opinion on Cannabis Specific Harms:

The consensus was that respondents reported the risks of cannabis use as being true,

particularly relating to use among adolescents as posing a significantly increased risk compared

to adults.[91] Cannabis use among adolescents (aged 11 to 15 years old) has been an enduring

concern for the years preceding legalization. For instance, a 2006 United Nations Children's

Fund study citied Canada as having "the highest rate of use among the 29 advanced world

economies with 28% of the age-group reporting at least a single use in the calendar year."[92] In

2011, the Canadian Drug Use and Monitoring Survey reported similar findings with a slightly

older cohort of Canadian youth, finding that 21% had used cannabis in the past year.[93]

The large propensity of regular or chronic use among teenagers and young adults presented

additional concern, "where complications of addiction, social dysfunction, psychosis, and

anxiety presented long-term mental health challenges for this cohort of users."[94] Interestingly,

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[90] Leos-Toro, Cesar, Geoffrey T Fong, Samantha B Meyer, and David Hammond. "Perceptions of Effectiveness and Believability of Pictorial and Text-Only Health Warning Labels for Cannabis Products Among Canadian Youth." (*The International Journal of Drug Policy* 73, 2019): 26. https://doi.org/10.1016/j.drugpo.2019.07.001.
[91] Government of Canada, *Canadian Cannabis Study 2019*.
[92] Hall, Wayne D. "Cannabis Use and the Mental Health of Young People." (*Australian and New Zealand Journal of Psychiatry* 40, no.2, 2006): 105. https://doi.org/10.1111/j.1440-1614.2006.01756.x.
[93] Spithoff, Sheryl, and Meldon Kahan. "Cannabis and Canadian Youth: Evidence, Not Ideology." (*Canadian Family Physician* 60, no.9, 2014): 786.
[94] Spithoff and Kahan, "Cannabis and Canadian Youth," 786.

chronic use of other substances did not follow the trend, with tobacco and alcohol use among Canadian teens falling well below the global average.[95] "The explanation for the international variation in usage rates for these licit and illicit substances is complex. Factors include social and cultural norms, drug availability, and national drug policy (prevention, treatment, and enforcement)."[96] The discrepancy actually indicates that legalization and regulation may reduce cannabis use among young Canadians by better restricting their access to cannabis in a similar manner to both the current models for tobacco and alcohol.

Conclusion/Recommendations:

While cannabis has been used illicitly for close to a century in Canada, the relatively new emergence as a legal and federally regulated substance has resulted in some data pertaining to health concerns and considerations from both the government and the public as being incomplete. This research essay found that while the majority of Canadians supported national cannabis reform both before and after legalization, the public are conscious to the fact that cannabis use does pose risks to the health and safety of Canadians, particularly among teenagers and young adults.

The most apparent trend was in the public opinion of cannabis as being a habit-forming substance. The vast majority of non-users indicated that their perception of cannabis as being habit forming rose after legalization. Though, it was the cohort of respondents who had used cannabis at least once in the past twelve months experiencing the greatest increase with 93% ultimately in agreement with the statement in 2020. Possible explanations exist for this increasing trend including increased use and subsequent abuse resulting in cannabis use disorder.

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[95] Spithoff and Kahan, "Cannabis and Canadian Youth," 787.
[96] Ibid, 787.

The Canadian Cannabis Survey across all four years of deployment failed to provide any meaningful distinguishment between those who had used cannabis just once in the past twelve months and those who had used the substance more frequently. Including additional elements to respondent's usage frequency and applying them to other variables would allow for a better understanding of why users perceptions of cannabis as posing habit forming potential are increasing in frequency.

While this research essay found that vaping cannabis noticed the most significant upward trend in belief of perceived risk compared to both eating or smoking cannabis, there is no distinguishment made as to whether these concerns are more so related to concerns of vaping cannabis products or greater concerns of vaping products in general which would include e-cigarettes. The most plausible explanation being the relatively new emergence of vaping products and the unknown health-related effects surrounding the delivery method of usage. A comparison between respondents' perceptions of risk between vaping nicotine products and vaping cannabis products would allow for a clearer understanding of where the perceived risk truly lies.

Though health-warning on products do provide greater knowledge to the effects of cannabis use, they also bring greater transparency to the negative health-related implications of using cannabis. Similar to tobacco products, both pictorial and text-only warnings are effective and believable in their inclusion on cannabis products.[97] Including warnings of cannabis posing an increased risk for cannabis dependence may influence users' perceptions of cannabis as posing habit forming risk depicted in the results of *4.1 Opinion of Cannabis as Being Habit Forming.* While Canadians continue to support the legalization of cannabis, their awareness of

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[97] Leos-Toro et al., "Perceptions of Effectiveness," 26.

negative health-related implications enables the public to be more adept and conscious to

consumption, methods of consumption, and risks associated with cannabis use.

Bibliography:

Berkow, Jameson. "Mississauga, Markham become latest Ontario municipalities to opt out of

    cannabis retail stores." *The Globe and Mail*. December 18, 2018. Academic OneFile.

Braymiller, Jessica L, Jessica L Barrington-Trimis, Adam M Leventhal, Talat Islam, Afton

    Kechter, Evan A Krueger, Junhan Cho, Isabella Lanza, Jennifer B Unger, and Rob

    McConnell. 2020. "Assessment of Nicotine and Cannabis Vaping and Respiratory

    Symptoms in Young Adults." *JAMA Network Open* 3, no.12, (2020): e2030189–

    e2030189. https://doi.org/10.1001/jamanetworkopen.2020.30189.

Bricker, Darrell. "Majority (61%) of Canadians Support Legalization of Recreational Marijuana

    Use, But Only Half (49%) Support Ability to Grow Pot Plants at Home." *Ipsos Group*.

    (2017): 1-3. MyLibrary e-book.

Budney, Alan J, Roger Roffman, Robert S Stephens, and Denise Walker. "Marijuana

    Dependence and Its Treatment." *Addiction Science & Clinical Practice* 4, no. 1, (2007):

    4–16. https://doi.org/10.1151/ASCP07414.

Conteh, Charles. *Policy Governance in Multi-Level Systems [electronic Resource]: Economic

    Development and Policy Implementation in Canada* Montreal: *McGill-Queen's

    University Press*. (2013).

Crépault, Jean-Francois. "Cannabis Legalization in Canada: Reflections on Public Health and the

    Governance of Legal Psychoactive Substances." *Frontiers in Public Health* 6: 220

    (2018): 1–7. https://doi.org/10.3389/fpubh.2018.00220.

Dryburgh, Laura M, Nanthi S Bolan, Christopher P.L Grof, Peter Galettis, Jennifer Schneider,

    Catherine J Lucas, and Jennifer H Martin. "Cannabis Contaminants: Sources,

Distribution, Human Toxicity and Pharmacologic Effects." *British Journal of Clinical Pharmacology* 84, no.11 (2018): 2468–76. https://doi.org/10.1111/bcp.13695.

Easton, Stephen. "Marijuana Growth in British Columbia." *The Fraser Institute - Public Policy Sources*, no. 29 (2004). https://www.publicsafety.gc.ca/lbrr/archives/cnmcs-plcng/cn32229-eng.pdf

Government of Canada. "A Framework for the Legalization and Regulation of Cannabis in Canada. The Final Report of the Taskforce on Cannabis Legalization and Regulation." by Wilson-Raybould, Judy., Philpott, Jane., and Goodale, Ralph. (2016): 1-112. https://www.canada.ca/content/dam/hc-sc/healthy-canadians/migration/task-force-marijuana-groupe-etude/framework-cadre/alt/framework-cadre-eng.pdf

Government of Canada. *Canada's Health Care System, Reports and Publications – Health Care System* (2019). https://www.canada.ca/en/health-canada/services/health-care-system/reports-publications/health-care-system/canada.html#a5

Government of Canada. *Canadian Cannabis Survey 2017 – Summary*. Ottawa, Ont: Health Canada, 2017. https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/canadian-cannabis-survey-2017-summary.html

Government of Canada. *Canadian Cannabis Survey 2018 – Summary*. Ottawa, Ont: Health Canada, 2018. https://www.canada.ca/en/services/health/publications/drugs-health-products/canadian-cannabis-survey-2018-summary.html

Government of Canada. *Canadian Cannabis Survey 2019 – Summary*. Ottawa, Ont: Health Canada, 2019. https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/canadian-cannabis-survey-2019-summary.html

Government of Canada. *Canadian Cannabis Survey 2020 – Summary*. Ottawa, Ont: Health

    Canada, 2020. https://www.canada.ca/en/health-canada/services/drugs-

    medication/cannabis/research-data/canadian-cannabis-survey-2020-summary.html

Government of Canada. *Final Regulations: Edible cannabis, cannabis extracts, cannabis

    topicals.* Health Canada (2019): 1. https://www.canada.ca/content/dam/hc-

    sc/documents/services/drugs-medication/cannabis/resources/final-regulations-edible-

    cannabis-extracts-topical-eng.pdf

Government of Ontario. *Cannabis Laws*. Toronto, Ontario, 2021.

    https://www.ontario.ca/page/cannabis-laws

Hall, Wayne D. "Cannabis Use and the Mental Health of Young People." *Australian and New

    Zealand Journal of Psychiatry* 40, no.2, (2006): 105–13. https://doi.org/10.1111/j.1440-

    1614.2006.01756.x.

Hyshka, Elaine. "The Saga Continues: Canadian Legislative Attempts to Reform Cannabis Law

    in the Twenty-First Century." *Canadian Journal of Criminology and Criminal Justice* 51

    no. 1 (2009): 73–91. https://doi.org/10.3138/cjccj.51.1.73.

Lake, Stephanie, and Thomas Kerr. "The Challenges of Projecting the Public Health Impacts of

    Marijuana Legalization in Canada Comment on 'Legalizing and Regulating Marijuana in

    Canada: Review of Potential Economic, Social, and Health Impacts.'" *International

    Journal of Health Policy and Management* 6 no.5, (2016): 285–87.

    https://doi.org/10.15171/ijhpm.2016.124.

Leos-Toro, Cesar, Geoffrey T Fong, Samantha B Meyer, and David Hammond. "Perceptions of

    Effectiveness and Believability of Pictorial and Text-Only Health Warning Labels for

Cannabis Products Among Canadian Youth." *The International Journal of Drug Policy* 73, (2019): 24–31. https://doi.org/10.1016/j.drugpo.2019.07.001.

Library of Parliament Canada. *Bill C-38: An Act to Amend the Contraventions Act and the Controlled Drugs and Substances Act*, by Gérald Lafrenière. Parliamentary Research Branch. Ottawa, Ontario. (2003): 1-44. https://lop.parl.ca/staticfiles/PublicWebsite/Home/ResearchPublications/LegislativeSummaries/PDF/37-2/c38-e.pdf

Morean, Meghan E, Kelly S DeMartini, Dawn Foster, Julie Patock-Peckham, Kathleen A Garrison, Philip R Corlett, John H Krystal, Suchitra Krishan-Sarin, and Stephanie S O'Malley. "The Self-Report Habit Index: Assessing Habitual Marijuana, Alcohol, e-Cigarette, and Cigarette Use." *Drug and Alcohol Dependence* 186 (2018): 207–14. https://doi.org/10.1016/j.drugalcdep.2018.01.014.

Nixon, Stephanie A, Kelley Lee, Zulfiqar A Bhutta, James Blanchard, Slim Haddad, Steven J Hoffman, and Peter Tugwell. "Canada's Global Health Role: Supporting Equity and Global Citizenship as a Middle Power." *The Lancet (British Edition)* 391-10131 (2018): 1736–48. https://doi.org/10.1016/S0140-6736(18)30322-2.

Pew Research Centre. *In Debate Over Legalizing Marijuana, Disagreement Over Drug's Dangers*, by Carroll Doherty, Alec Tyson and Rachel Weisel. (2015): 1-18. Academic OneFile.

Potter, Andrew. "In Praise of Political Opportunism, or, How to Change a Policy in only Fifty Years." In *High Time: The Legalization and Regulation of Cannabis in Canada*, edited by Andrew Potter and Andrew Weinstock. *McGill-Queen's University Press*. (2019): 9-21. MyLibrary e-book.

Potter, Andrew., and Weinstock, Andrew. *High Time: The Legalization and Regulation of*

    Cannabis in Canada. McGill-Queen's University Press. (2019): MyLibrary e-book.

Puzic, Sonja. "Campaign promises: Trudeau's pledges for a Liberal government." Canadian

    Television Network News, October 20, 2015. Academic OneFile.

Rehan, Harmeet Singh, Jahnavi Maini, and Armit Pal Singh Hungin. "Vaping versus Smoking:

    A Quest for Efficacy and Safety of E-cigarette." *National Library of Medicine* 13, no. 2

    (2018): 92-101, doi:10.2174/1574886313666180227110556

Riley, Diane. "Drugs and Drug Policy in Canada: A Brief Review and Commentary." *Canadian*

    Foundation for Drug Policy and International Harm Reduction Association. (1998): 1-

    11. https://sencanada.ca/content/sen/committee/362/ille/rep/rep-nov98-e.htm

Spithoff, Sheryl, and Meldon Kahan. "Cannabis and Canadian Youth: Evidence, Not

    Ideology." *Canadian Family Physician* 60, no.9, (2014): 785–87.

Statistics Canada. Cannabis Economic Account, 1961 to 2017. (2019).

    https://www150.statcan.gc.ca/n1/en/daily-quotidien/180125/dq180125c-

    eng.pdf?st=iL_AkWmX

Statistics Canada. *Health Reports – What has changed since cannabis was legalized?* by

    Michelle Rotermann. Statistics Canada, (2020). https://www.doi.org/10.25318/82-003-

    x202000200002-eng

Watson, Tara Marie, Elaine Hyshka, Sarah Bonato, and Sergio Rueda. "Early-Stage Cannabis

    Regulatory Policy Planning Across Canada's Four Largest Provinces: A Descriptive

    Overview." *Substance Use & Misuse* 54, no.10, (2019): 1691–1704.

    https://doi.org/10.1080/10826084.2019.1608249.

Watters, Hayden. "Stephen Harper calls marijuana 'infinitely worse' than tobacco." Canadian

    Broadcasting Corporation, October 3, 2015. Academic OneFile.

Weinstock, Peter. "Will Legalization Protect Our Kids?" In *High Time: The Legalization and*

    Regulation of Cannabis in Canada, edited by Andrew Potter and Andrew Weinstock.

    McGill-Queen's University Press. (2019): 67-78. MyLibrary e-book.

Zehra, Amna, Jamie Burns, Christopher Kure Liu, Peter Manza, Corinde E Wiers, Nora D

    Volkow, and Gene-Jack Wang. "Cannabis Addiction and the Brain: A Review." *Journal*

    of Neuroimmune Pharmacology 13, no.4 (2018): 438–52. https://doi.org/10.1007/s11481-

    018-9782-9.