The 2020 Youth and Young Adult Vaping Project

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EXECUTIVE SUMMARY

Background: E-cigarette use ("vaping") has been on the rise. The *2020 Youth and Young Adult Vaping Project*, conducted by The Lung Association of Nova Scotia and Smoke-Free Nova Scotia with funding from Heart & Stroke, aimed to examine the vaping behaviours, experiences, and product preferences of youth and young adult e-cigarette users in Canada.
Methods: Using an online survey, 1871 regular e-cigarette users (used an e-cigarette at least once a week for the past three months) between the ages of 16 and 24 and residing in one of six Canadian provinces (Alberta, British Columbia, Manitoba, Ontario, Nova Scotia, and Saskatchewan) were asked about their vaping behaviours (e.g., days vaped per week, number of episodes per vaped day, and number of puffs per vaping episode), experiences (e.g., co-use of other substances), and product preferences (e.g., nicotine concentration). This report details average responses across all regions and further segments findings by age, gender, and region.
Results: The sample analyzed consisted of 1846 respondents. On average, respondents began vaping at the age of 15.73 years. More than half (52.2%) of respondents reported having tried to quit vaping, with many making several attempts. The average e-cigarette user engaged in vaping behaviour six days per week and almost 30 vaping episodes per day, with approximately 6 puffs per episode. Since learning about the COVID-19 pandemic, respondents reported vaping less days per week (5 days) and a marked decrease to 19 vaping episodes per day, but puffs per episode were nearly unchanged. On average, respondents spent between $12 and $18 per week on e-cigarettes. The overwhelming majority of respondents indicated that they have both used someone else's e-cigarette (98.6%) and shared their e-cigarette with others (93.3%). For those that have shared their e-cigarette, the average number of people the e-cigarette was shared with was 23. Around half (50.4%) of all respondents had experienced a negative side-effect related to vaping. The majority of respondents reported exposure to vaping-related advertisements on social media platforms (73.9%). Users of pod-based devices constituted the largest proportion of respondents (62.3%). Almost all users used a flavoured vape juice at initiation (91.9%) and presently (90.5%). In most provinces, berry, mango, and mint/menthol were the most commonly reported flavours used at initiation and at present. Most users used vape juice containing the highest possible concentration of nicotine (50-60 mg/mL)[1] (66.3%). With respect to tobacco use, 64.4% of respondents were former users and 12.3% were current users. Current smokers used 14 cigarettes per week on average. A notable proportion of respondents (35.3%) indicated that they knew someone who started smoking after vaping. In the past 30 days, cannabis use (12 days of use) was more common than alcohol use (6 days of use).
Conclusions: Analysis of the total sample reveals concerning vaping behaviours among youth and young adults. Regular e-cigarette users report similar vaping behaviour and experiences across regions, though a number of notable differences at the individual- and regional-level emerged from our findings. In this report, we discuss our findings in the context of viable policy options to restrict the appeal and use of e-cigarettes among youth and young adults across Canada. These include a comprehensive flavour ban, limiting permitted nicotine concentrations to 20 mg/mL, increasing taxation on vaping products, and increasing the minimum age of purchase to 21.

[1]For those specifying the exact range of nicotine concentration used in their device.

BACKGROUND

E-cigarette use ("vaping") among youth and young adults is an epidemic. Between 2017 and 2018, vaping among Canadians aged 16 to 19 increased by 74% (1). This trajectory signifies a red alert state. 20% of Canadian students in grades 7 to 12 are current e-cigarette users, and 40% of those are daily/almost daily users (2). In response to these findings, the *2019 Youth and Young Adult Vaping Survey* was conducted by Smoke-Free Nova Scotia to better understand vaping behaviour among regular e-cigarette users between the ages of 16 and 24 in Nova Scotia. From these findings came the recommendation of five policy actions including a flavour ban, taxation, stronger enforcement of sales regulations, increasing the minimum legal age, and increasing awareness of the potential for vaping to translate into cigarette smoking.

Aim and Objectives

The aim of the *2020 Youth and Young Adult Vaping Project* is to better understand vaping behaviour, experiences, and product preferences among regular e-cigarette users between the ages of 16 and 24 across Canada. This project is meant to act as an extension of the *2019 Youth and Young Adult Vaping Survey* at a national level. This project was made possible through funding by Heart & Stroke. Other funders include the Canadian Cancer Society, Manitoba Tobacco Reduction Alliance (MANTRA), and the Manitoba Lung Association.

METHODS

The vaping survey was pilot tested with 5 participants, revised, and then tested again with 5 volunteers to confirm that the questions were clear and that the length of the survey did not lead to participant fatigue. Further, the answers to the pilot surveys were examined to determine whether they contained meaningful and coherent responses.

A single, comprehensive, cross-sectional survey, in English, was used to generate a report to better understand the issue of vaping in Canada. Participants had to be between the ages of 16 and 24, to have vaped at least once a week over the past three months, and to reside in one of the regions of interest. The total sample consisted of 1871 respondents [1328 with complete surveys from Ontario, Manitoba, Saskatchewan and Alberta combined (Prairies region), and British Columbia, plus 543 respondents with complete surveys from the 2019 Nova Scotia survey].

Participants were recruited online using paid Facebook and Instagram ads targeted to their age and location. If they responded to the ad, they were directed to the survey landing page on Qualtrics (an online survey platform). Participants viewed an online informed consent document and were asked to provide their consent by responding "yes" or "no" to participate in the study. If they clicked "yes", they were directed to complete the survey.

The survey included demographic questions, questions about the participants' vaping behaviour, product preferences, experiences, a personality questionnaire, and a substance use motives questionnaire. On average, the survey took approximately 20 minutes to complete. Participants who completed the survey in its entirety were offered a $10 electronic gift card to Starbucks as renumeration. Further, all participants were invited to share their email address to be entered to

win one of five $100 gift cards from a prize draw, regardless as to whether they completed the survey.

Regional analyses were planned for British Columbia, Ontario, Manitoba, and the Prairies region (Saskatchewan and Alberta). Further, a total sample analysis of all participants was performed. The results of the data analyses will be synthesized and translated into various deliverables.

RESULTS

Demographic information

1871 participants completed to the end of the survey. Table 1 depicts the demographic information for the sample segmented by region. 25 participants indicated their gender as "other" and were required to specify (e.g., trans male). Since the proportion of these participants was too low (1.3%) to permit meaningful subgroup analysis, we were not able to include them in estimates where subgroup estimates were presented (Tables 2-19). The remaining sample consists of 1846 participants. The mean age of this sample was 18.44 years. The sample was evenly distributed in terms of both age and gender [youth (54.4%) and males (51.7%)]. Employed respondents were overrepresented in the sample as a whole (65.2%). Further, the majority of respondents identified as living in urban areas (86.7%). This was especially prevalent in British Columbia (92.9%).

Vaping behaviour

Table 2 reports vaping behaviour for all respondents. The average age of vaping onset among all respondents was 15.73 years. Of the 52.2% of respondents that reported a vaping quit attempt, the average number of serious quit attempts (those lasting for at least 24 hours) was 4.80. Respondents reported that they engaged in vaping behaviour an average of six days per week and almost 30 times per day, with approximately 6 puffs per episode. Vaping behaviour since learning about COVID-19 was measured and showed a difference in vaping frequency across the entire sample (averaging 5 days vaped per week, 19 vaping episodes per day, and less than 6 puffs per episode) compared to the period preceding the pandemic. Spending per week on vaping products varied by province, with the average across all regions being $14.55. The strongest influence to start vaping for the whole sample was friends (n = 1261), followed by vaping as a smoking cessation method (n = 300) and social media exposure (n = 95). The overwhelming majority of the sample disclosed sharing behaviours in that they both had been offered to use someone else's e-cigarette (98.6%) as well as shared their own with others (93.3%). For those that have offered to share their e-cigarette, the average estimate for the number of people it was shared with was 23.06. Of the 62.3% of respondents that reported using pod-based devices, an average of 2.63 pods were used per week. Around half (50.4%) of all respondents reported experiencing negative side-effects related to vaping and 31.1% of respondents have been pressured by others to vape. 53% of youth reported that their parents were aware of their vaping behaviour. Social media advertisement exposure was prominent across the sample (73.9%). Instagram (n = 509), Snapchat (n = 369), and YouTube (n = 294) were the top three platforms of exposure, respectively.

Age/gender differences in vaping behaviour for the total sample

Table 2 reveals important differences in vaping behaviour for the total sample by age and gender. Male and female youth reported greater average numbers of quit attempts than male and female young adults, with male youth having the most (6.13). Female youth had the least number of days vaped per week (5.55) and male young adults had the highest (6.22). Female young adults had the lowest number of vaping episodes per day (25.97), while male young adults had the highest (32.63). Female young adults also had the lowest number of puffs per episode (5.91), whereas female youth had the highest (6.81). Since learning about COVID-19, days vaped per week decreased most notably for male young adults (5.03), and vaping episodes per day decreased the most for this same group (18.56), while number of puffs per episode decreased the most for male youth (4.90) and, in fact, increased slightly for female young adults (6.37).
Male youth ($14.41) and young adults ($17.73) spend more per week on vaping products on average than female youth and young adults, with male young adults spending the most. Female youth (n = 397) and young adults (n = 249) more frequently reported friends as the strongest influence to start vaping than male youth and young adults, whereas male young adults (n = 131) more frequently reported vaping as a smoking cessation method as being the strongest influence. Male and female youth reported sharing their vape with someone else (92.9% and 96.9%, respectively) and using someone else's vape (99.2% and 99.8%, respectively) slightly more often than male and female young adults. Male and female youth more often reported both social media (76.0% and 87.6%, respectively) and general advertisement (n = 312; n = 410) exposure than male and female young adults. Female youth most commonly reported negative side effects compared to the other groups (55.1%).

Regional differences in vaping behaviour for the total sample

Tables 3-7 depict the vaping behaviour of the sample for each province separately and segmented by age and gender. The days vaped per week was highest in the Prairies (6.32; Table 7), while the vaping episodes per day were highest in the Prairies as well (36.83; Table 7), and the number of puffs per episodes were highest in Nova Scotia (7.11; Table 5). After the onset of COVID-19, Ontario saw the largest decreases in days vaped per week (4.68; Table 6), whereas vaping episodes per day decreased the most for the Prairies (24.26; Table 7), and the number of puffs per episode decreased the most for British Columbia (5.16; Table 3).
The average spending per week on vaping products was lowest in British Columbia ($13.03; Table 3) and highest in Ontario ($15.33; Table 6), with weekly averages being comparable in Manitoba ($13.64), Nova Scotia ($14.79), and the Prairies ($13.79) (Tables 4, 5, & 7, respectively).

Product information

Table 8 reports product information for all respondents. Regarding the type of device, pod-based devices that contain disposable cartridges of vape juice (e.g., JUUL) were the most common among all respondents (62.3%). Almost all users reported the use of flavoured vape juice at initiation (91.9%), as well as a preference for flavoured vape juice at present (90.5%). In most provinces, berry, mango, and mint/menthol were the most commonly reported flavours used at initiation and at present. In general, more than half (57.0%) of users claimed they would continue

to vape if flavours were to be removed from vape juice. Of note is that 20.7% of respondents reported adding content as unintended by the product manufacturer (e.g., water) to their vape juice. Most respondents reported that they vape juice containing nicotine (91.7%), and, among those using nicotine, almost all knew the concentration of nicotine they used (97.5%). In terms of nicotine concentration, the majority of respondents reported using between 50-60 mg/mL of nicotine (66.3%)[2]. The primary mode of access to vaping products was through specialty vape shops in all regions except Ontario.

Age/gender differences in product information for the total sample

Table 8 shows the product information responses by age and gender for the total sample. The preference for flavours, although common in all groups, was most prevalent for female youth respondents (94.7%). Similarly, female youth (94.9%) and young adults (92.7%) more commonly reported the use of flavours at initiation than male youth and young adults. Female young adults most commonly responded that they would not continue to vape if flavours were to be removed from vape juice (52.6%), whereas male youth less commonly reported this (32.8%). Across all regions, male and female youth more commonly reported using nicotine concentrations between 50-60 mg/mL in their vape juice[2] (75.6% and 70.9%, respectively) than male and female young adults. Male (70.3%) and female (73.0%) young adults most commonly reported using nicotine at onset, whereas male (35.7%) and female (35.7%) youth more commonly reported the use of vape juice without nicotine. In general, female young adults more often used nicotine at onset, whereas female young adults less often used nicotine at onset. Social sourcing of vaping products was more prevalent among youth than young adults in all regions (Tables 9-10, 12-13).

Regional differences in product information for the total sample

Tables 9-13 depict product information for the sample separated by province and segmented by age and gender. Regarding regional differences, respondents in Nova Scotia more commonly reported that they would not continue to vape if flavours were removed from vape juice (49.0%; Table 11). Nova Scotia, Ontario, and the Prairies were the regions with the most respondents who reported using nicotine concentrations of 50-60 mg/mL[2] (70.3%, 69.5%, and 68.4%, respectively; Tables 11-13). Purchasing vaping products at retail outlets (e.g., convenience stores) was the most common mode of access in Ontario (Table 12).

Other substance use behaviour in total sample

Table 14 reports substance use behaviour besides vaping for all respondents. 64.4% of respondents were former tobacco users and 12.3% current users. The number of cigarettes smoked per week for current tobacco users ranged between 6-18 among all regions with an average of around 14. Most respondents (52.0%) with a history of tobacco use reported smoking before the onset of vaping, but a notable number of them reported tobacco initiation following vaping (28.0%). While many (64.7%) reported that they did not know anyone who began smoking after vaping, a notable proportion (35.3%) acknowledged having peers that first vaped

[2]For those specifying the exact range of nicotine concentration used in their device.

and then began smoking. In the last 30 days, the number of days on which cannabis was used exceeded that of alcohol across all regions, with cannabis use averaging 12 days compared to 6 days of alcohol use. Regarding alcohol consumption, occasional drinkers made up most of the sample (n = 533), followed by light (n = 309) and moderate (n = 197) drinkers.

Age/gender differences in other substance use behaviour for the total sample

Table 14 reveals notable age and gender differences in other substance use behaviour for the total sample. On average, male youth (13.09 cigarettes/week) and young adults (20.90 cigarettes/week) reported greater cigarette smoking rates compared to female youth and young adults. Female youth most commonly reported no history of tobacco use (35.8%), whereas male young adults most commonly reported being former tobacco users (76.3%). Male youth made up the majority of the current tobacco user category (13.6%). Male (36.8%) and female (31.0%) youth most commonly reported tobacco use as beginning after the onset of vaping, whereas male (60.5%) and female (63.3) young adults most commonly reported tobacco use as preceding vaping. Cannabis use and alcohol use in the last 30 days were also higher on average amongst male (14.91 days and 8.22 days, respectively) and female (13.96 days and 7.25 days, respectively) young adults.

Regional differences in other substance use behaviour for the total sample

Tables 15-19 depict other substance use behaviour for the sample separated by province and segmented by age and gender. Nova Scotia had the highest levels of tobacco use overall (18.17 cigarettes/week; Table 17), whereas British Columbia reported the lowest (6.94 cigarettes/week; Table 15). British Columbia reported the highest levels of cannabis use (14.23 days; Table 15), whereas the Prairies reported the lowest levels (10.93 days; Table 19). In terms of alcohol consumption, Ontario reported the largest proportion of occasional drinkers (n = 178), British Columbia light drinkers (n = 90), and the Prairies moderate drinkers (n = 63) (Tables 18, 15, & 19, respectively).

DISCUSSION

The findings of this survey have generated evidence for numerous actions, policy and otherwise, that could reduce the prevalence of vaping among youth and young adults. Our findings identified notable regional differences in vaping behaviour, including differences in days vaped, vaping episodes per day, and puffs per episode. These differences call for varying levels of cessation strategies at a regional level, dependent on the frequency of vaping in that region. It is important to note that many respondents indicated a lower vaping frequency after learning about the COVID-19 pandemic, most notably in British Columbia and Ontario. This may be related to their higher socioeconomic status/level of education, which may in turn facilitate their receptivity to warnings related to potential complications from COVID-19 for e-cigarette users compared to non-users. Alternatively, it may reflect the active initiatives of the British Columbia Centre for Disease Control and the Ontario Tobacco Research Unit to warn consumers about vaping and COVID-19 complications (3,4).

The product information section of the survey produced consistent results across the sample with respect to high nicotine concentration, a preference for non-tobacco flavours, and the low cost of vaping. These findings highlight the need for three universal policies: Nicotine concentration caps, flavour bans, and higher taxation in all jurisdictions. Our findings suggest that not only do youth and young adult e-cigarette users use mostly nicotine-based products, but they most often choose products with high nicotine concentrations (50-60 mg/mL). The importance of this issue cannot be overstated as our results show that youth males and females more commonly select vape juice with the highest available nicotine concentrations as compared to male and female young adults. This evidence culminates in the need for nicotine caps. The European Union precedent of 20 mg/mL, which will be introduced in Nova Scotia in 2020, can effectively address this issue (5).

Both the preference for and importance of non-tobacco flavours amongst youth and young adults is evident from their willingness to quit vaping if flavours were removed, especially among female young adults. These findings suggest that flavour bans are both important and likely to be very impactful in decreasing vaping behaviour within this demographic. This recommendation and set of findings are consistent with past literature that has demonstrated the importance of flavours, the reluctance to continue to vape in their absence, and the likely impact of a flavour ban on vaping behaviour in this demographic, underscoring the importance of flavour bans in reducing the appeal of vaping to young persons (6).

The average spending per week across the sample demonstrates the affordability of e-cigarettes in comparison to traditional cigarettes. On average, participants reported spending approximately $15 per week on vaping, which is less than a single pack of cigarettes in most Canadian regions. Thus, we would expect a regular smoker who uses a half-pack of cigarettes per day to spend at least three times more than that per week. This minimal weekly spending warrants greater taxation on vaping products in all jurisdictions to decrease the affordability amongst this population, especially youth. Evidence on the effectiveness of taxation has been demonstrated with tobacco and alcohol products (7).

The prevalence of smoking and cannabis use within the sample demonstrates a pattern of co-use that exists between e-cigarettes and other substances. In Nova Scotia, the proportion of dual e-cigarette users and smokers far exceeds those of the other regions that were surveyed. Smoking is also more common on average among young adults in Manitoba and male young adults in the Prairies. Further, cannabis use is higher among young adults than youth across all regions. These results are consistent with past literature that demonstrates a link between e-cigarette, tobacco, and cannabis use amongst adolescents (8). These regions would benefit from a multi-faceted smoking cessation approach that targets substance co-use, focusing on young adults in particular. Smoking cessation strategies must target both traditional cigarettes and cannabis to be maximally effective in limiting their co-use with e-cigarettes.

The role of specialty vape shops in permitting underage access to vaping products is of upmost concern. It is clear from our findings that youth are either themselves or through an adult source acquiring vaping products through these outlets. Our results demonstrate that specialty vape shops are the primary means of purchase for both e-cigarettes and vape juice in all provinces except Ontario. Further, a sizeable portion of youth respondents in our survey disclosed

purchasing their vaping products from these locations. Enforcement rights for peace officers and very high penalties for shops found in violation of minor sale compliance are needed. Also needed is a requirement for licensing to sell vaping products to easily track violators and implement an escalating penalty for each consecutive violation. The United States Surgeon General report on youth and young adult e-cigarette use provides support for giving individual jurisdictions the right to take action to regulate how sales to minors are policed (9).

A significant proportion of all respondents reported experiencing negative side-effects related to their e-cigarette use. The fact that our survey respondents reported negative-side effects is consistent with emerging literature on e-cigarette or vaping product use-associated lung injury (EVALI). Over 2800 hospitalizations have occurred in the United States due to EVALI as of February 2020. Of those experiencing EVALI, over half are under the age of 24. Vitamin E acetate has been identified as a key causal factor of EVALI and further efforts should be made to remove this substance from all vape juices. Further, the fact that our results demonstrate a similar proportion of respondents who reported both negative side-effects and the use of high levels of nicotine is consistent with the finding that over half of all EVALI patients are nicotine users (10). In all, this suggests that negative effects related to nicotine are possible, however this relationship requires further research.

The knowledge of someone who initiated smoking after using e-cigarettes was common among respondents, especially youth. This speaks to the existing literature that suggests regular e-cigarette users are five-times more likely that non-e-cigarette users to become regular smokers in the absence of any tobacco use history (11). This further strengthens the need for prevention efforts that are aimed at both youth and young adults to prevent the initiation of e-cigarette use and the subsequent use of traditional cigarettes.

A troublingly large percentage of parents of youth respondents are aware of their children's vaping behaviour. In general, around half of all youth surveyed reported that their parents were aware that they vape. Related to this point is access to vaping products through social sources. More youths than young adults in our sample reported purchasing their vaping supplies from a social source. This finding identifies friends as a notable access point and speaks to the need for increasing the legal age for purchasing vaping products to 21 years, effectively minimizing the opportunity for social sourcing amongst youth. This step has been taken in Prince Edward Island where the legal age has been raised to 21 years (12).

As it relates to advertisements, a notable percentage of all respondents in our sample reported being exposed to ads for vaping products on several mediums, most notably Instagram and Snapchat. This highlights the need to implement federal restrictions on social media content (both industry- and user-generated) that concerns vaping.

Pod-based devices such as JUUL were the most popular type of device used by our sample by a significant margin. This result is consistent with past literature that demonstrates how pod-based devices are appealing to adolescent e-cigarette users for reasons that include flavours, higher nicotine concentrations, and discreteness (14). The literature relating to pod-based devices further supports the need for flavour bans and nicotine caps as these elements have been identified as part of the appeal of these devices. The popularity of these devices calls for

regulatory measures that limit their accessibility to young e-cigarette users, or at minimum, social marketing campaigns that target their popularity.

CONCLUSION

The *2020 Youth and Young Adult Vaping Survey* was conducted to better understand the vaping behaviour, experiences, and product preferences of youth and young adult e-cigarette users across several Canadian regions. The survey identified key differences that exist between provinces and within age and gender groups. Importantly, the survey identified key areas for policy and regulatory action to target the vaping epidemic in youth and young adults. Our study highlights the need for flavour bans to reduce the prevalence of vaping within this population by reducing the desirability of vaping to those who prefer flavours. Nicotine caps are needed to limit the addictive potential of e-cigarettes. Taxation and further regulatory measures aimed at specialty vape shops are needed to both deter youth and reduce the likelihood of them acquiring vaping products through this outlet. Raising the minimum age of purchase to 21 years will allow underage youth fewer opportunities to access vaping products through social sources. As is the case with traditional tobacco products, both prevention and cessation strategies must be employed alongside federal regulations concerning social media content and advertising to reduce the social acceptability of vaping, encourage youth and young adults to abstain from vaping, and prevent the onset of tobacco and cannabis use. In sum, e-cigarette use amongst youth and young adults represents a red alert state. This evidence must be taken into account and mobilized through proper resources and policies to reduce the use of e-cigarettes within this population.

LIMITATIONS

The findings of this project are subject to some limitations. Firstly, participants were all regular e-cigarette users (once a week/over the last 3 months) and thus our conclusions cannot be extended to infrequent or experimental e-cigarette users. Secondly, the survey was cross-sectional and thus cause-effect relationships cannot be determined. Thirdly, our study did not include several provinces and territories. However, a French-language version of the survey is being planned for Quebec residents. Lastly, this study did not examine vaping among racial, ethnic, and gender diverse groups. While we recognize the importance of diversity and acknowledge that vapers may differ based on these variables, financial restraints restricted our ability to conduct such analyses.

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REVISION HISTORY

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- This version required changes to tables 1-19. We discovered that the designation for male youth (16-18) was incorrectly coded during analysis and, as a result, 25 cases that were not eligible for analysis were incorrectly assigned as male youth. The estimates for male youth, along with the total column, have been corrected and the in-text references to the above mentioned were also corrected in the results and discussion sections of the report. Once corrected, there were no changes to the in-text interpretation of the estimates in the results or discussion sections of the report. We performed a thorough check of all estimates to ensure no other errors were made.
- Added a limitation to the report concerning the generalizability of our findings to ethnic, racial, and gender diverse groups.
- A footnote in table 1 was revised to provide clarification concerning gender-based analysis and a more detailed description of it was added in the results section.
- Added recognition for additional project funders in the background and funding and acknowledgements sections.

Table 1. *Demographic information of youth and young adult e-cigarette users by region.*

Variables	Region					
	British Columbia, *M* (*SD*)	**Manitoba,** *M* (*SD*)	**Nova Scotia**, *M* (*SD*)	**Ontario**, *M* (*SD*)	**Prairies**, *M* (*SD*)	**Total**, *M* (*SD*)
Age	18.46 (1.93)	18.37 (2.03)	18.55 (2.22)	18.5 (1.91)	18.19 (1.79)	18.44 (2.00)

Variables	Region					
	British Columbia, *N* (%)	**Manitoba**, *N* (%)	**Nova Scotia**, *N* (%)	**Ontario**, *N* (%)	**Prairies**, *N* (%)	**Total**, *N* (%)
Age by category						
Youth (16-18)	159 (50.5)	146 (58.9)	302 (55.6)	198 (49.3)	212 (58.4)	1017 (54.4)
Young adult (19-24)	156 (49.5)	102 (41.1)	241 (44.4)	204 (50.7)	151 (41.6)	854 (45.6)
Gender						
Male	161 (51.1)	122 (49.2)	286 (52.7)	201 (50.0)	185 (51.0)	955 (51.0)
Female	149 (47.3)	120 (48.4)	252 (46.4)	196 (48.8)	174 (47.9)	891 (47.6)
Other[2]	5 (1.6)	6 (2.4)	5 (.90)	5 (1.2)	4 (1.1)	25 (1.3)
Currently employed						
Yes	183 (58.1)	164 (66.1)	418 (77.0)	236 (58.7)	213 (58.7)	1214 (64.9)
No	132 (41.9)	84 (33.9)	125 (23.0)	166 (41.3)	150 (41.3)	657 (35.1)
Geographical location*[1]						
Rural	22 (7.0)	53 (21.4)	---	52 (12.9)	48 (13.3)	175 (13.2)
Urban	293 (93.0)	195 (78.6)	---	350 (87.1)	314 (86.7)	1152 (86.8)

Note. Prairies: Alberta (N = 205) and Saskatchewan (N = 154). *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses. [1]Question was not answered by all participants. [2]Participants that entered gender as "other" were required to specify (e.g., trans male). Because the proportion of these participants was too low to produce meaningful subgroup estimates, they were not included in in tables 2-19.

Table 2. *Vaping behaviour for the total sample.*

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.55 (1.31)	16.86 (2.00)	14.70 (1.21)	17.29 (2.01)	15.73 (2.04)
Number of serious quit attempts (>24 hours)	6.13 (30.59)	4.27 (5.58)	5.06 (15.83)	3.06 (2.89)	4.80 (18.80)
Days vaped per week	5.94 (1.95)	6.22 (1.67)	5.55 (2.11)	5.85 (1.96)	5.89 (1.94)
Vaping episodes per day	30.20 (32.22)	32.63 (32.55)	26.20 (29.87)	25.97 (30.04)	28.84 (31.33)
Number of puffs per episode	6.29 (5.43)	6.44 (5.55)	6.81 (5.37)	5.91 (4.53)	6.40 (5.28)
Since the onset of COVID-19*					
Days vaped per week	5.12 (2.51)	5.03 (2.41)	4.57 (2.56)	5.11 (2.32)	4.94 (2.46)
Vaping episodes per day	20.21 (28.00)	18.56 (25.45)	18.98 (28.94)	16.71 (22.96)	18.69 (26.60)
Number of puffs per episode	4.90 (4.66)	5.39 (5.55)	6.09 (5.76)	6.37 (6.03)	5.69 (5.52)
Number of people who have used your e-cigarette	32.26 (146.57)	24.69 (36.79)	18.74 (21.58)	15.38 (22.01)	23.06 (78.75)
Average spending per week on vaping products	14.41 (13.99)	17.73 (14.37)	12.02 (11.66)	13.22 (10.36)	14.55 (13.03)
Pods used per week (pod-based devices)*	2.68 (2.21)	3.28 (2.85)	2.23 (2.23)	2.36 (1.97)	2.63 (2.36)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses.

Table 2. *Vaping behaviour for the total sample (continued).*

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Ever tried to quit vaping					
Yes	285 (58.5)	242 (51.7)	255 (49.3)	181 (48.4)	963 (52.2)
No	202 (41.5)	226 (48.3)	262 (50.7)	193 (51.6)	883 (47.8)
Strongest influence to start vaping[1]					
Friends	356	259	397	249	1261
Wanting to quit smoking	56	131	40	73	300
Social media exposure	19	16	39	21	95
Negative side-effects[2]					
Yes	197 (46.8)	202 (49.5)	238 (55.1)	155 (49.8)	792 (50.4)
No	224 (53.2)	206 (50.5)	194 (44.9)	156 (50.2)	780 (49.6)
Pressure from others to vape					
Yes	165 (33.9)	136 (29.1)	169 (32.7)	105 (28.1)	575 (31.1)
No	322 (66.1)	332 (70.9)	348 (67.3)	269 (71.9)	1271 (68.9)
Offered to share your e-cigarette[2]					
Yes	431 (92.9)	411 (89.9)	470 (96.9)	340 (93.2)	1652 (93.3)
No	33 (7.1)	46 (10.1)	15 (3.1)	25 (6.8)	119 (6.7)
Have been offered to use someone else's e-cigarette					
Yes	483 (99.2)	453 (96.8)	516 (99.8)	369 (98.7)	1821 (98.6)
No	4 (0.8)	15 (3.2)	1 (0.2)	5 (1.3)	25 (1.4)
Parental knowledge of vaping behaviour[2,3]					
Yes	240 (60.2)	---	207 (46.5)	---	447 (53.0)
No	159 (39.8)	---	238 (53.5)	---	397 (47.0)
Social media advertisement exposure					
Yes	370 (76.0)	272 (58.1)	453 (87.6)	270 (72.2)	1365 (73.9)
No	117 (24.0)	196 (41.9)	64 (12.4)	104 (27.8)	481 (26.1)
Top advertisement exposure platforms[1]					
Instagram	148	120	157	84	509
Snapchat	104	78	144	43	369
YouTube	85	61	109	39	294
No exposure	243	265	255	215	978

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 3. *Vaping behaviour for British Columbia respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.38 (1.36)	16.68 (1.97)	14.53 (1.20)	17.08 (2.11)	15.65 (2.09)
Number of serious quit attempts (> 24 hours)	13.01 (66.33)	5.43 (7.38)	3.22 (2.78)	2.69 (1.79)	6.52 (36.30)
Days vaped per week	5.91 (1.96)	5.89 (2.00)	5.84 (1.85)	6.11 (1.80)	5.94 (1.90)
Vaping episodes per day	27.15 (31.61)	27.41 (29.78)	28.44 (29.46)	27.73 (30.51)	27.67 (30.22)
Number of puffs per episode	5.69 (4.54)	5.58 (4.79)	5.92 (4.21)	6.70 (4.53)	5.96 (4.52)
Since the onset of COVID-19					
Days vaped per week	5.18 (2.39)	4.56 (2.74)	4.46 (2.40)	5.22 (2.32)	4.88 (2.44)
Vaping episodes per day	18.42 (26.61)	13.93 (20.24)	13.69 (23.02)	15.56 (19.43)	15.64 (22.77)
Number of puffs per episode	4.00 (2.52)	6.04 (6.96)	4.90 (2.93)	6.25 (4.08)	5.16 (4.20)
Number of people who have used your e-cigarette	27.40 (31.82)	29.56 (39.86)	23.75 (27.69)	16.82 (22.84)	24.43 (31.37)
Average spending per week on vaping products	12.39 (13.45)	15.24 (13.85)	8.75 (7.94)	14.68 (9.39)	13.03 (11.79)
Pods used per week (pod-based devices)	2.54 (2.65)	2.86 (1.83)	2.00 (1.51)	2.38 (1.86)	2.47 (2.03)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 3. *Vaping behaviour for British Columbia respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Ever tried to quit vaping					
Yes	57 (70.4)	46 (57.5)	45 (60.0)	45 (60.8)	193 (62.3)
No	24 (29.6)	34 (42.5)	30 (40.0)	29 (39.2)	117 (37.7)
Strongest influence to start vaping[1]					
Friends	53	49	54	56	212
Quitting smoking	11	18	7	13	49
Social media exposure	3	3	7	0	13
Negative side-effects[2]					
Yes	35 (47.3)	39 (57.4)	40 (64.5)	32 (58.2)	146 (56.4)
No	39 (52.7)	29 (42.6)	22 (35.5)	23 (41.8)	113 (43.6)
Pressure from others to vape					
Yes	21 (25.9)	24 (30.0)	24 (32.0)	23 (31.1)	92 (29.7)
No	60 (74.1)	56 (60.0)	51 (68.0)	51 (68.9)	218 (70.3)
Offered to share your e-cigarette[2]					
Yes	78 (100.0)	70 (89.7)	71 (97.3)	71 (95.9)	290 (95.7)
No	0 (0.0)	8 (10.3)	2 (2.7)	3 (4.1)	13 (4.3)
Have used someone else's e-cigarette					
Yes	81 (100.0)	76 (95.0)	75 (100.0)	74 (100.0)	306 (98.7)
No	0 (0.0)	4 (5.0)	0 (0.0)	0 (0.0)	4 (1.3)
Parental knowledge of vaping behaviour[2,3]					
Yes	33 (48.5)	---	30 (50.0)	---	63 (49.2)
No	35 (51.5)	---	30 (50.0)	---	65 (50.8)
Social media advertisement exposure					
Yes	62 (76.5)	49 (61.3)	65 (86.7)	54 (73.0)	230 (74.2)
No	19 (23.5)	31 (38.7)	10 (13.3)	20 (27.0)	80 (25.8)
Top advertisement exposure platforms[1]					
Instagram	26	28	15	16	85
Billboards	20	17	16	15	68
Snapchat	17	15	19	9	60
No exposure	36	34	37	36	143

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 4. *Vaping behaviour for Manitoba respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.65 (1.14)	16.79 (2.23)	14.66 (1.22)	16.73 (2.05)	15.52 (1.94)
Number of serious quit attempts (> 24 hours)	4.61 (5.76)	4.76 (8.83)	3.97 (10.98)	4.36 (6.00)	4.40 (8.35)
Days vaped per week	6.14 (1.71)	6.45 (1.35)	6.22 (1.67)	6.11 (1.74)	6.23 (1.62)
Vaping episodes per day	35.21 (34.24)	36.16 (32.53)	33.87 (33.96)	28.73 (30.94)	33.83 (33.07)
Number of puffs per episode	6.45 (4.82)	6.41 (5.56)	7.64 (4.80)	7.45 (5.93)	7.00 (5.21)
Since the onset of COVID-19					
Days vaped per week	5.26 (2.49)	4.53 (2.59)	5.08 (2.55)	5.50 (1.92)	5.10 (2.43)
Vaping episodes per day	20.27 (26.50)	19.84 (30.46)	27.95 (33.08)	14.61 (21.10)	21.94 (28.98)
Number of puffs per episode	5.55 (5.11)	4.68 (5.49)	7.11 (5.68)	10.94 (10.41)	6.87 (6.76)
Number of people who have used your e-cigarette	22.25 (32.10)	18.00 (20.50)	19.01 (23.05)	16.79 (22.92)	19.31 (25.36)
Average spending per week on vaping products	11.59 (11.24)	18.72 (14.01)	13.58 (14.58)	8.80 (6.41)	13.34 (12.71)
Pods used per week (pod-based devices)	2.89 (2.08)	4.35 (4.26)	2.50 (1.85)	1.63 (1.61)	2.90 (2.68)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 4. *Vaping behaviour for Manitoba respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Ever tried to quit vaping					
Yes	38 (57.6)	29 (51.8)	41 (53.9)	22 (50.0)	130 (53.7)
No	28 (42.4)	27 (48.2)	35 (46.1)	22 (50.0)	112 (46.3)
Strongest influence to start vaping[1]					
Friends	52	25	57	27	161
Quitting smoking	6	21	6	8	41
Social media exposure	1	3	5	3	12
Negative side-effects[2]					
Yes	31 (54.4)	21 (42.3)	38 (60.3)	19 (54.3)	109 (53.4)
No	26 (45.6)	28 (57.7)	25 (39.7)	16 (45.7)	95 (46.6)
Pressure from others to vape					
Yes	22 (33.3)	6 (10.7)	18 (23.7)	8 (18.2)	54 (22.3)
No	44 (66.7)	50 (89.3)	58 (72.3)	36 (81.8)	188 (77.7)
Offered to share your e-cigarette[2]					
Yes	61 (95.3)	45 (81.8)	72 (97.3)	39 (90.7)	217 (91.9)
No	3 (4.7)	10 (18.2)	2 (2.7)	4 (9.3)	19 (8.1)
Have used someone else's e-cigarette					
Yes	66 (100.0)	51 (91.1)	76 (100.0)	43 (97.7)	236 (97.5)
No	0 (0.0)	5 (8.9)	0 (0.0)	1 (2.3)	6 (2.5)
Parental knowledge of vaping behaviour[2,3]					
Yes	29 (55.8)	---	30 (46.2)	---	59 (50.4)
No	23 (44.2)	---	35 (53.8)	---	58 (49.6)
Social media advertisement exposure					
Yes	48 (72.7)	23 (41.1)	64 (84.2)	30 (68.2)	165 (68.2)
No	18 (27.3)	33 (58.9)	12 (15.8)	14 (31.8)	77 (31.8)
Top advertisement exposure platforms[1]					
Instagram	24	8	21	7	60
YouTube	12	7	16	4	39
Snapchat	10	9	14	3	36
No exposure	40	40	44	35	159

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 5. *Vaping behaviour for Nova Scotia respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.64 (1.27)	17.36 (2.01)	15.05 (1.19)	18.09 (1.99)	16.08 (2.13)
Number of serious quit attempts (> 24 hours)	5.37 (14.17)	3.22 (3.71)	6.80 (22.55)	2.36 (1.62)	4.82 (14.69)
Days vaped per week	5.51 (2.30)	6.05 (1.88)	4.67 (2.42)	4.93 (2.40)	5.33 (2.30)
Vaping episodes per day	28.71 (32.03)	29.79 (32.03)	16.99 (22.14)	15.82 (22.92)	23.36 (28.60)
Number of puffs per episode	7.49 (7.01)	7.63 (6.78)	7.30 (5.89)	5.24 (3.33)	7.11 (6.17)
Since the onset of COVID-19*					
Days vaped per week	---	---	---	---	---
Vaping episodes per day	---	---	---	---	---
Number of puffs per episode	---	---	---	---	---
Number of people who have used your e-cigarette	52.34 (282.34)	19.17 (28.46)	14.59 (15.06)	9.04 (7.69)	24.31 (141.37)
Average spending per week on vaping products	13.74 (11.80)	19.06 (12.95)	15.12 (10.50)	13.77 (11.06)	14.79 (12.35)
Pods used per week (pod-based devices)*	---	---	---	---	---

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses.

Table 5. *Vaping behaviour for Nova Scotia respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total,** *N* (%)
Strongest influence to start vaping[1]					
Friends	95	72	121	51	339
Wanting to quit smoking	18	54	20	22	114
Social media exposure	9	5	16	9	39
Negative side-effects[2]					
Yes	48 (41.4)	54 (35.5)	60 (35.9)	29 (34.1)	191 (41.3)
No	68 (58.6)	80 (52.6)	78 (46.7)	46 (54.1)	272 (58.7)
Pressure from others to vape					
Yes	42 (31.3)	42 (27.6)	58 (34.7)	30 (35.3)	172 (32.0)
No	92 (68.7)	110 (72.4)	109 (65.3)	55 (64.7)	366 (68.0)
Offered to share your e-cigarette[2]					
Yes	113 (94.2)	134 (91.8)	141 (97.2)	72 (92.3)	460 (94.1)
No	7 (5.8)	12 (8.2)	4 (2.8)	6 (7.7)	29 (5.9)
Have used someone else's e-cigarette					
Yes	133 (99.3)	149 (98.0)	166 (99.4)	83 (97.6)	531 (98.7)
No	1 (0.7)	3 (2.0)	1 (0.6)	2 (2.4)	7 (1.3)
Parental knowledge of vaping behaviour[2,3]					
Yes	70 (64.8)	---	65 (43.9)	---	135 (52.7)
No	38 (35.2)	---	83 (56.1)	---	121 (47.3)
Social media advertisement exposure					
Yes	110 (82.1)	93 (61.2)	152 (91.0)	69 (81.2)	424 (78.8)
No	24 (17.9)	59 (38.8)	15 (9.0)	16 (18.8)	114 (21.2)
Top advertisement exposure platforms[1]					
Instagram	35	36	50	22	143
Snapchat	28	22	43	10	103
YouTube	22	15	33	10	80
No exposure	68	94	89	50	301

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 6. *Vaping behaviour for Ontario respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.49 (1.47)	16.65 (1.77)	14.63 (1.16)	17.33 (1.89)	15.78 (2.02)
Number of serious quit attempts (> 24 hours)	4.83 (7.80)	4.20 (4.03)	4.29 (6.60)	2.90 (1.91)	4.11 (5.71)
Days vaped per week	6.06 (1.78)	6.37 (1.45)	5.60 (1.95)	6.02 (1.75)	6.02 (1.75)
Vaping episodes per day	24.95 (28.91)	30.78 (31.72)	25.15 (27.89)	26.39 (30.50)	26.83 (29.79)
Number of puffs per episode	5.62 (4.35)	6.23 (5.13)	5.50 (4.14)	5.36 (4.38)	5.68 (4.51)
Since the onset of COVID-19					
Days vaped per week	4.55 (2.72)	4.93 (2.41)	4.26 (2.65)	4.91 (2.46)	4.68 (2.55)
Vaping episodes per day	12.55 (18.37)	16.65 (23.03)	14.19 (24.30)	15.54 (21.81)	14.80 (21.91)
Number of puffs per episode	4.39 (3.49)	5.83 (5.58)	5.43 (5.71)	5.33 (5.07)	5.26 (5.04)
Number of people who have used your e-cigarette	26.74 (29.94)	28.85 (45.55)	17.21 (20.86)	17.89 (27.66)	22.66 (32.59)
Average spending per week on vaping products	16.74 (18.06)	17.41 (16.21)	11.09 (11.92)	14.62 (11.33)	15.22 (14.89)
Pods used per week (pod-based devices)	2.38 (1.94)	3.38 (3.20)	2.12 (2.95)	2.25 (1.52)	2.52 (2.51)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 6. *Vaping behaviour for Ontario respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Ever tried to quit vaping					
Yes	66 (65.3)	61 (61.0)	56 (58.3)	52 (52.0)	235 (59.2)
No	35 (34.7)	39 (39.0)	40 (41.7)	48 (48.0)	162 (40.1)
Strongest influence to start vaping[1]					
Friends	72	61	80	67	280
Quitting smoking	12	22	3	17	54
Social media exposure	3	3	5	5	16
Negative side-effects[2]					
Yes	47 (56.0)	47 (53.4)	50 (63.3)	45 (53.6)	189 (56.4)
No	37 (44.0)	41 (46.6)	29 (36.7)	39 (46.4)	146 (43.6)
Pressure from others to vape					
Yes	34 (33.7)	28 (28.0)	35 (36.5)	23 (23.0)	120 (30.2)
No	67 (66.3)	72 (72.0)	61 (63.5)	77 (77.0)	277 (69.8)
Offered to share your e-cigarette[2]					
Yes	90 (90.0)	91 (91.9)	90 (96.8)	92 (92.9)	363 (92.8)
No	10 (10.0)	8 (8.1)	3 (3.2)	7 (7.1)	28 (7.2)
Have used someone else's e-cigarette					
Yes	101 (100.0)	97 (97.0)	96 (100.0)	99 (99.0)	393 (99.0)
No	0 (0.0)	3 (3.0)	0 (0.0)	1 (1.0)	4 (1.0)
Parental knowledge of vaping behaviour[2,3]					
Yes	48 (57.1)	---	28 (34.6)	---	76 (46.1)
No	36 (42.9)	---	53 (65.4)	---	89 (53.9)
Social media advertisement exposure					
Yes	80 (79.2)	59 (59.0)	87 (90.6)	70 (70.0)	296 (74.6)
No	21 (20.8)	41 (41.0)	9 (9.4)	30 (30.0)	101 (25.4)
Top advertisement exposure platforms[1]					
Instagram	26	28	34	29	117
Snapchat	22	20	33	16	91
Posters	19	18	16	29	82
No exposure	51	55	39	47	192

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 7. *Vaping behaviour for Prairies respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Age of onset	14.58 (1.28)	16.40 (1.93)	14.34 (1.15)	16.82 (1.82)	15.36 (1.86)
Number of serious quit attempts (> 24 hours)	3.22 (2.24)	4.15 (4.52)	6.41 (22.53)	3.35 (2.80)	4.26 (11.55)
Days vaped per week	6.30 (1.64)	6.54 (1.20)	6.18 (1.70)	6.30 (1.59)	6.32 (1.56)
Vaping episodes per day	36.30 (33.81)	43.10 (35.35)	34.47 (35.27)	33.99 (33.23)	36.83 (34.50)
Number of puffs per episode	5.80 (4.86)	5.34 (3.46)	7.29 (6.38)	5.73 (4.77)	6.11 (5.11)
Since the onset of COVID-19					
Days vaped per week	5.51 (2.40)	5.85 (1.84)	4.57 (2.61)	5.12 (2.35)	5.22 (2.38)
Vaping episodes per day	29.47 (35.42)	24.27 (29.16)	21.20 (32.96)	21.25 (29.27)	24.26 (32.10)
Number of puffs per episode	5.87 (6.51)	4.67 (4.21)	6.93 (7.37)	5.78 (5.22)	5.91 (6.13)
Number of people who have used your e-cigarette	23.69 (31.15)	29.24 (41.69)	22.28 (23.04)	16.39 (21.56)	23.00 (30.24)
Average spending per week on vaping products	13.91 (13.29)	17.74 (15.06)	11.34 (11.61)	11.95 (10.75)	13.72 (13.00)
Pods used per week (pod-based devices)	2.96 (2.21)	2.95 (1.97)	2.32 (1.84)	2.80 (2.82)	2.76 (2.21)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 7. *Vaping behaviour for Prairies respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total,** *N* (%)
Ever tried to quit vaping					
Yes	72 (68.6)	52 (65.0)	54 (52.4)	40 (56.3)	218 (39.3)
No	33 (31.4)	28 (35.0)	49 (47.6)	31 (43.7)	141 (60.7)
Strongest influence to start vaping[1]					
Friends	84	52	85	48	269
Quitting smoking	9	16	4	13	42
Social media exposure	3	2	6	4	15
Negative side-effects[2]					
Yes	36 (40.0)	41 (59.4)	50 (55.6)	30 (48.4)	157 (50.5)
No	54 (60.0)	28 (40.6)	40 (44.4)	32 (51.6)	154 (49.5)
Pressure from others to vape					
Yes	46 (43.8)	36 (45.0)	34 (33.0)	21 (29.6)	137 (38.2)
No	59 (56.2)	44 (55.0)	69 (67.0)	50 (70.4)	222 (61.8)
Offered to share your e-cigarette[2]					
Yes	89 (87.3)	71 (89.9)	96 (96.0)	66 (93.0)	322 (91.5)
No	13 (12.7)	8 (10.1)	4 (4.0)	5 (7.0)	30 (8.5)
Have used someone else's e-cigarette					
Yes	102 (97.1)	80 (100.0)	103 (100.0)	70 (98.6)	355 (98.9)
No	3 (2.9)	0 (0.0)	0 (0.0)	1 (1.4)	4 (1.1)
Parental knowledge of vaping behaviour[2,3]					
Yes	60 (69.0)	---	54 (59.3)	---	114 (64.0)
No	27 (31.0)	---	37 (40.7)	---	64 (36.0)
Social media advertisement exposure					
Yes	70 (66.7)	48 (60.0)	85 (82.5)	47 (66.2)	250 (69.6)
No	35 (33.3)	32 (40.0)	18 (17.5)	24 (33.8)	109 (30.3)
Top advertisement exposure platforms[1]					
Instagram	37	20	37	10	104
Snapchat	27	12	35	5	79
YouTube	24	8	29	3	64
No exposure	48	42	46	47	183

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported. [2]Participants who answered "I don't know" to this question were not included in this estimate. [3]Question not asked to young adults.

Table 8. *Product information for the total sample.*

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N (%)*
Type of e-cigarette					
Cig-a-like	2 (0.4)	8 (1.7)	3 (0.6)	4 (1.1)	17 (.9)
Vape pen	80 (16.4)	77 (16.5)	118 (22.8)	74 (19.8)	349 (18.9)
Mod	76 (15.6)	97 (20.7)	87 (16.8)	71 (19.0)	331 (17.9)
Pod	329 (67.6)	286 (61.1)	309 (59.8)	225 (60.1)	1149 (62.3)
Currently prefer flavoured vape juices[1]					
Yes	415 (88.9)	397 (87.8)	461 (94.7)	327 (90.3)	1600 (90.5)
No	52 (11.1)	55 (12.2)	26 (5.3)	35 (9.7)	168 (9.5)
Used flavoured vape juice at initiation*					
Yes	317 (89.8)	285 (90.2)	332 (94.9)	268 (92.7)	1202 (91.9)
No	36 (10.2)	31 (9.8)	18 (5.1)	21 (7.3)	106 (8.1)
Would you vape if you could not buy flavoured juices?[1]					
Yes	279 (67.2)	221 (55.7)	257 (55.7)	155 (47.4)	912 (57.0)
No	136 (32.8)	176 (44.3)	204 (44.3)	172 (52.6)	688 (43.0)
Content added to vape juice					
Yes	121 (24.8)	91 (19.4)	130 (25.1)	40 (10.7)	382 (20.7)
No	366 (75.2)	377 (80.6)	387 (74.9)	334 (89.3)	1464 (79.3)
Nicotine concentration[1]					
10-20 mg/mL	20 (4.6)	53 (13.9)	36 (8.3)	40 (13.7)	149 (9.8)
35 mg/mL	87 (19.8)	103 (27.1)	90 (20.8)	84 (28.7)	364 (23.9)
50-60 mg/mL	311 (75.6)	224 (59.0)	306 (70.9)	169 (57.6)	1010 (66.3)
Vaping product content at onset*					
Vape juice with nicotine	223 (63.2)	222 (70.3)	222 (63.4)	211 (73.0)	878 (67.1)
Vape juice without nicotine	126 (35.7)	79 (25.0)	125 (35.7)	65 (22.5)	395 (30.2)
Dry cannabis	3 (0.8)	8 (2.5)	1 (0.3)	4 (1.4)	16 (1.2)
Liquid cannabis	1 (0.3)	7 (2.2)	2 (0.6)	9 (3.1)	19 (1.5)
Vaping product content at present[1]					
Vape juice with nicotine	457 (94.2)	434 (92.7)	467 (90.3)	329 (88.0)	1687 (91.7)
Vape juice without nicotine	13 (2.7)	9 (1.9)	30 (5.8)	17 (4.5)	69 (3.8)
Dry cannabis	4 (0.8)	6 (1.3)	2 (0.4)	4 (1.1)	16 (.9)
Liquid cannabis	11 (2.3)	17 (3.6)	16 (3.1)	24 (6.4)	68 (3.6)
Know nicotine content[1]					
Yes	446 (97.6)	430 (99.1)	458 (98.1)	311 (94.5)	1645 (97.5)
No	11 (2.4)	4 (0.9)	9 (1.9)	18 (5.5)	42 (2.5)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses. [1]Question not answered by all participants.

Table 9. *Product information for British Columbia respondents*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Type of e-cigarette					
Cig-a-like	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	1 (0.3)
Vape pen	22 (30.2)	19 (23.8)	22 (29.3)	22 (29.7)	85 (27.4)
Mod	13 (15.1)	11 (13.8)	12 (16.0)	12 (16.2)	48 (15.5)
Pod	46 (54.7)	50 (62.5)	40 (53.3)	40 (54.1)	176 (56.8)
Currently prefer flavoured vape juices[1]					
Yes	66 (85.7)	67 (84.8)	61 (87.1)	66 (92.3)	260 (87.5)
No	11 (14.3)	12 (15.2)	9 (12.9)	5 (7.7)	37 (12.5)
Used flavoured vape juice at initiation					
Yes	66 (81.5)	70 (87.5)	70 (93.3)	68 (91.9)	274 (88.4)
No	15 (18.5)	10 (12.5)	5 (6.7)	6 (8.1)	36 (11.6)
Most used flavour at initiation					
Berry	21 (30.4)	19 (27.1)	22 (29.3)	29 (41.4)	91 (32.0)
Confectionary	7 (10.1)	8 (11.4)	5 (6.7)	6 (8.6)	26 (9.2)
Mango	14 (20.3)	16 (22.9)	14 (18.7)	15 (21.4)	59 (20.8)
Menthol	8 (11.6)	11 (15.7)	8 (10.7)	6 (8.6)	33 (11.6)
Tobacco	1 (1.4)	1 (1.4)	0 (0.0)	1 (1.4)	3 (1.1)
Other	18 (26.1)	15 (21.4)	26 (34.7)	13 (18.6)	72 (25.4)
Most used flavour at present					
Berry	21 (31.3)	11 (18.0)	18 (27.3)	19 (27.5)	69 (26.2)
Confectionary	1 (1.5)	6 (9.8)	1 (1.5)	7 (10.1)	15 (5.7)
Mango	17 (25.4)	9 (14.8)	16 (24.2)	12 (17.4)	54 (20.5)
Menthol	10 (14.9)	17 (27.9)	11 (16.7)	16 (23.2)	54 (20.5)
Tobacco	3 (4.5)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.1)
Other	15 (22.4)	18 (29.5)	20 (30.3)	15 (21.7)	68 (25.9)
Would you vape if you could not buy flavoured juices?[1]					
Yes	48 (72.7)	44 (65.7)	39 (63.9)	33 (50.0)	164 (63.1)
No	18 (27.3)	23 (34.3)	22 (36.1)	33 (50.0)	96 (36.9)
Content added to vape juice					
Yes	15 (18.5)	15 (18.8)	15 (20.0)	4 (5.4)	49 (15.8)
No	66 (81.5)	65 (81.2)	60 (80.0)	70 (94.6)	261 (84.2)
Nicotine concentration[1]					
10-20 mg/mL	4 (5.8)	10 (14.5)	4 (5.8)	15 (25.0)	33 (12.4)
35 mg/mL	16 (23.2)	24 (34.8)	20 (29.0)	19 (31.7)	79 (29.6)
50-60 mg/mL	49 (71.0)	35 (50.7)	45 (65.2)	26 (43.3)	155 (58.0)
Vaping product content at onset					
Vape juice with nicotine	51 (63.0)	60 (75.0)	42 (56.0)	56 (75.7)	209 (67.4)
Vape juice without nicotine	29 (35.8)	16 (20.0)	33 (44.0)	15 (20.2)	93 (30.0)

Dry cannabis	1 (1.2)	2 (2.5)	0 (0.0)	0 (0.0)	3 (1.0)
Liquid cannabis	0 (0.0)	2 (2.5)	0 (0.0)	3 (4.1)	5 (1.6)
Vaping product content at present					
Vape juice with nicotine	74 (92.5)	75 (93.8)	70 (93.3)	67 (90.5)	286 (92.6)
Vape juice without nicotine	1 (1.2)	1 (1.2)	2 (2.7)	3 (4.1)	7 (2.3)
Dry cannabis	1 (1.2)	1 (1.2)	0 (0.0)	1 (1.3)	3 (1.0)
Liquid cannabis	4 (5.1)	3 (3.8)	3 (4.0)	3 (4.1)	13 (4.1)
Know nicotine content[1]					
Yes	74 (100.0)	75 (100.0)	70 (100.0)	65 (97.0)	284 (99.3)
No	0 (0.0)	0 (0.0)	0 (0.0)	2 (3.0)	2 (0.7)
Device purchase location[2]					
Specialty vape shop	27	49	13	54	143
From a friend	32	13	38	16	99
Retail location	17	29	7	22	75
Juice purchase location[2]					
Specialty vape shop	25	49	13	56	143
From a friend	35	5	44	9	93
Retail location	21	33	5	20	79

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 10. *Product information for Manitoba respondents*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Type of e-cigarette					
Cig-a-like	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Vape pen	17 (25.8)	20 (35.7)	18 (23.7)	12 (27.2)	67 (27.7)
Mod	14 (21.2)	10 (17.9)	16 (21.1)	16 (36.4	56 (23.1)
Pod	35 (53.0)	26 (46.4)	42 (55.2)	16 (36.4)	119 (49.2)
Currently prefer flavoured vape juices[1]					
Yes	60 (92.3)	47 (87.0)	67 (97.1)	40 (93.0)	214 (92.6)
No	5 (7.7)	7 (13.0)	2 (2.9)	3 (7.0)	17 (7.4)
Used flavoured vape juice at initiation					
Yes	63 (95.5)	47 (83.9)	74 (97.4)	41 (93.2)	225 (93.0)
No	3 (4.5)	9 (16.1)	2 (2.6)	3 (6.8)	17 (7.0)
Most used flavour at initiation					
Berry	14 (20.6)	6 (13.0)	28 (37.8)	13 (28.3)	61 (26.1)
Confectionary	11 (16.2)	9 (19.6)	11 (14.9)	5 (10.9)	36 (15.4)
Mango	3 (4.4)	9 (19.6)	5 (6.8)	7 (15.2)	24 (10.3)
Menthol	9 (13.2)	5 (10.9)	7 (9.5)	3 (6.5)	24 (10.3)
Tobacco	5 (7.4)	3 (6.5)	0 (0.0)	0 (0.0)	8 (3.4)
Other	26 (38.2)	14 (30.4)	23 (31.1)	18 (39.1)	81 (34.6)
Most used flavour at present					
Berry	18 (27.3)	15 (31.3)	16 (21.1)	15 (34.9)	64 (27.5)
Confectionary	3 (4.5)	4 (8.3)	9 (11.8)	5 (11.6)	21 (9.0)
Mango	11 (16.7)	8 (16.7)	11 (14.5)	4 (9.3)	34 (14.6)
Menthol	13 (19.7)	7 (14.6)	13 (17.1)	4 (9.3)	37 (15.9)
Tobacco	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	1 (0.4)
Other	21 (31.8)	14 (29.2)	26 (34.2)	15 (34.9)	76 (32.6)
Would you vape if you could not buy flavoured juices?[1]					
Yes	35 (58.3)	30 (63.8)	45 (67.2)	17 (42.5)	127 (59.3)
No	25 (41.7)	17 (36.2)	22 (32.8)	23 (57.5)	87 (40.7)
Content added to vape juice					
Yes	16 (24.2)	9 (16.1)	23 (30.3)	6 (13.6)	54 (22.3)
No	50 (75.8)	47 (83.9)	53 (69.7)	38 (82.4)	188 (77.7)
Nicotine concentration[1]					
10-20 mg/mL	3 (5.4)	11 (24.4)	5 (7.6)	9 (26.5)	28 (13.9)
35 mg/mL	18 (32.1)	14 (31.1)	14 (21.2)	5 (14.7)	51 (25.4)
50-60 mg/mL	35 (62.5)	20 (44.5)	47 (71.2)	20 (58.8)	122 (60.7)
Vaping product content at onset					
Vape juice with nicotine	36 (54.5)	38 (67.9)	48 (63.2)	33 (75.0)	155 (64.0)
Vape juice without nicotine	29 (43.9)	15 (26.8)	28 (36.8)	9 (20.4)	81 (33.5)

Dry cannabis	1 (1.6)	2 (3.6)	0 (0.0)	1 (2.3)	4 (1.7)
Liquid cannabis	0 (0.0)	1 (1.7)	0 (0.0)	1 (2.3)	2 (0.8)
Vaping product content at present					
Vape juice with nicotine	62 (93.9)	52 (92.9)	72 (94.8)	39 (88.6)	225 (93.0)
Vape juice without nicotine	3 (4.5)	2 (3.5)	2 (2.6)	1 (2.3)	8 (3.3)
Dry cannabis	1 (1.6)	1 (1.8)	1 (1.3)	0 (0.0)	3 (1.2)
Liquid cannabis	0 (0.0)	1 (1.8)	1 (1.3)	4 (9.1)	6 (2.5)
Know nicotine content[1]					
Yes	61 (98.4)	51 (98.1)	70 (97.2)	38 (97.4)	220 (97.8)
No	1 (1.6)	1 (1.9)	2 (2.8)	1 (2.6)	5 (2.2)
Device purchase location[2]					
Specialty vape shop	17	44	20	31	112
From a friend	32	7	33	3	75
From someone else	15	4	18	3	40
Juice purchase location[2]					
Specialty vape shop	26	44	24	32	126
From a friend	28	2	36	3	69
Retail location	6	12	5	7	30

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 11. *Product information for Nova Scotia respondents*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Type of e-cigarette					
Cig-a-like	0 (0.0)	4 (2.6)	0 (0.0)	1 (1.2)	5 (0.9)
Vape pen	7 (5.2)	12 (7.9)	32 (19.1)	14 (16.5)	65 (12.1)
Mod	26 (19.4)	39 (25.7)	37 (22.2)	21 (24.7)	123 (22.9)
Pod	101 (75.4)	97 (63.8)	98 (58.7)	49 (57.6)	345 (64.1)
Currently prefer flavoured vape juices[1]					
Yes	121 (93.8)	134 (90.5)	161 (98.8)	76 (90.5)	492 (93.9)
No	8 (6.2)	14 (9.5)	2 (1.2)	8 (9.5)	32 (6.1)
Used flavoured vape juice at initiation*					
Yes	---	---	---	---	---
No	---	---	---	---	---
Most used flavour at initiation*					
Berry	---	---	---	---	---
Confectionary	---	---	---	---	---
Mango	---	---	---	---	---
Menthol	---	---	---	---	---
Tobacco	---	---	---	---	---
Other	---	---	---	---	---
Most used flavour at present*					
Berry	---	---	---	---	---
Confectionary	---	---	---	---	---
Mango	---	---	---	---	---
Menthol	---	---	---	---	---
Tobacco	---	---	---	---	---
Other	---	---	---	---	---
Would you vape if you could not buy flavoured juices?[1]					
Yes	79 (65.3)	61 (45.5)	77 (47.8)	34 (44.7)	251 (51.0)
No	42 (34.7)	73 (54.5)	84 (52.2)	42 (55.3)	241 (49.0)
Content added to vape juice					
Yes	37 (27.6)	34 (22.4)	39 (23.4)	12 (14.1)	122 (22.7)
No	97 (72.4)	118 (77.6)	128 (76.6)	73 (85.9)	416 (77.3)
Nicotine concentration[1]					
10-20 mg/mL	6 (5.3)	13 (10.6)	12 (9.4)	3 (5.1)	34 (8.0)
35 mg/mL	18 (15.8)	32 (26.0)	24 (18.8)	18 (30.5)	92 (21.7)
50-60 mg/mL	90 (78.9)	78 (63.4)	92 (71.8)	38 (64.4)	298 (70.3)
Vaping product content at onset*					
Vape juice with nicotine	---	---	---	---	---
Vape juice without nicotine	---	---	---	---	---

Dry cannabis	---	---	---	---	---
Liquid cannabis	---	---	---	---	---
Vaping product content at present					
Vape juice with nicotine	127 (95.5)	139 (91.4)	142 (85.0)	70 (82.4)	478 (89.3)
Vape juice without nicotine	4 (3.0)	2 (1.3)	20 (12.0)	7 (8.2)	33 (6.2)
Dry cannabis	0 (0.0)	4 (2.6)	1 (0.6)	2 (2.4)	7 (1.3)
Liquid cannabis	2 (1.5)	6 (3.9)	3 (1.8)	6 (7.0)	17 (3.2)
Know nicotine content[1]					
Yes	121 (95.3)	138 (99.3)	137 (96.5)	62 (88.6)	458 (95.8)
No	6 (4.7)	1 (0.7)	5 (3.5)	8 (11.4)	20 (4.2)
Device purchase location*					
---	---	---	---	---	---
---	---	---	---	---	---
---	---	---	---	---	---
Juice purchase location*					
---	---	---	---	---	---
---	---	---	---	---	---
---	---	---	---	---	---

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses. [1]Question not answered by all participants.

Table 12. *Product information for Ontario respondents*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Type of e-cigarette					
Cig-a-like	1 (1.0)	3 (3.0)	2 (2.1)	2 (2.0)	8 (2.0)
Vape pen	18 (17.8)	7 (7.0)	15 (15.6)	8 (8.0)	48 (12.1)
Mod	10 (9.9)	21 (21.0)	8 (8.3)	13 (13.0)	52 (13.1)
Pod	72 (71.3)	69 (69.0)	71 (74.0)	77 (77.0)	289 (72.8)
Currently prefer flavoured vape juices[1]					
Yes	85 (87.6)	77 (82.8)	85 (95.5)	84 (86.6)	331 (88.0)
No	12 (12.4)	16 (17.2)	4 (4.5)	13 (13.4)	45 (12.0)
Used flavoured vape juice at initiation					
Yes	95 (94.1)	93 (93.0)	91 (94.8)	90 (90.0)	369 (92.9)
No	6 (5.9)	7 (7.0)	5 (5.2)	10 (10.0)	28 (7.1)
Most used flavour at initiation					
Berry	26 (25.5)	28 (33.3)	36 (38.7)	32 (31.7)	122 (32.1)
Confectionary	15 (14.7)	16 (19.0)	14 (15.1)	14 (13.9)	59 (15.5)
Mango	18 (17.6)	8 (9.5)	14 (15.1)	15 (14.9)	55 (14.5)
Menthol	11 (10.8)	8 (9.5)	7 (7.5)	18 (17.8)	44 (11.6)
Tobacco	1 (1.0)	1 (1.2)	0 (0.0)	2 (2.0)	4 (1.1)
Other	31 (30.4)	23 (27.4)	22 (23.7)	20 (19.8)	96 (25.3)
Most used flavour at present					
Berry	30 (30.9)	14 (18.9)	30 (32.6)	22 (25.3)	96 (27.4)
Confectionary	7 (7.2)	3 (4.1)	4 (4.3)	8 (9.2)	22 (6.3)
Mango	12 (12.4)	17 (23.0)	19 (20.7)	10 (11.5)	58 (16.6)
Menthol	13 (13.4)	19 (25.7)	11 (12.0)	29 (33.3)	72 (20.6)
Tobacco	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.3)
Other	34 (35.1)	21 (28.4)	28 (30.4)	18 (20.7)	101 (28.9)
Would you vape if you could not buy flavoured juices?[1]					
Yes	57 (67.1)	45 (58.4)	45 (52.9)	46 (54.8)	193 (58.3)
No	28 (32.9)	32 (41.6)	40 (47.1)	38 (45.2)	138 (41.7)
Content added to vape juice					
Yes	28 (27.7)	14 (14.0)	21 (21.9)	16 (16.0)	79 (19.9)
No	73 (72.3)	86 (86.0)	75 (78.1)	84 (84.0)	318 (80.1)
Nicotine concentration[1]					
10-20 mg/mL	4 (4.6)	9 (11.3)	8 (11.0)	7 (9.0)	28 (8.8)
35 mg/mL	14 (16.1)	17 (21.3)	14 (19.2)	24 (30.8)	69 (21.7)
50-60 mg/mL	69 (79.3)	54 (67.4)	51 (69.8)	47 (60.2)	221 (69.5)
Vaping product content at onset					
Vape juice with nicotine	67 (66.3)	70 (70.0)	67 (69.8)	64 (64.0)	268 (67.5)
Vape juice without nicotine	32 (31.7)	25 (25.0)	27 (28.2)	29 (29.0)	113 (28.5)

Dry cannabis	1 (1.0)	4 (4.0)	1 (1.0)	2 (2.0)	8 (2.0)
Liquid cannabis	1 (1.0)	1 (1.0)	1 (1.0)	5 (5.0)	8 (2.0)
Vaping product content at present					
Vape juice with nicotine	93 (92.0)	94 (94.0)	86 (89.6)	84 (84.0)	357 (90.4)
Vape juice without nicotine	3 (3.0)	2 (2.0)	3 (3.1)	6 (6.0)	14 (3.5)
Dry cannabis	2 (2.0)	0 (0.0)	0 (0.0)	1 (1.0)	3 (0.8)
Liquid cannabis	3 (3.0)	3 (3.0)	6 (6.3)	9 (9.0)	21 (5.3)
Know nicotine content[1]					
Yes	90 (96.8)	93 (98.9)	84 (97.7)	80 (95.2)	347 (97.2)
No	3 (3.2)	1 (1.1)	2 (2.3)	4 (4.8)	10 (2.8)
Device purchase location[2]					
Retail location	26	46	17	46	135
Specialty vape shop	25	46	13	43	127
From a friend	32	7	48	21	108
Juice purchase location[2]					
Retail location	33	49	17	50	149
Specialty vape shop	23	54	13	45	135
From a friend	37	6	50	10	103

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 13. *Product information for Prairies respondents*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total,** *N* (%)
Type of e-cigarette					
Cig-a-like	1 (1.0)	1 (1.2)	0 (0.0)	1 (1.4)	3 (0.8)
Vape pen	16 (15.2)	19 (23.8)	31 (30.1)	18 (25.4)	84 (23.4)
Mod	13 (12.4)	16 (20.0)	14 (13.6)	9 (12.7)	52 (14.5)
Pod	75 (71.4)	44 (55.0)	58 (56.3)	43 (60.5)	220 (61.3)
Currently prefer flavoured vape juices[1]					
Yes	83 (83.8)	72 (92.3)	87 (90.6)	61 (91.0)	303 (89.1)
No	16 (16.2)	6 (7.7)	9 (9.4)	6 (9.0)	37 (10.9)
Used flavoured vape juice at initiation					
Yes	93 (88.6)	75 (93.8)	97 (94.2)	69 (97.2)	334 (93.0)
No	12 (11.4)	5 (6.2)	6 (5.8)	2 (2.8)	25 (7.0)
Most used flavour at initiation					
Berry	36 (38.3)	19 (21.1)	34 (30.9)	21 (29.6)	110 (30.1)
Confectionary	15 (16.0)	16 (17.8)	19 (17.3)	7 (9.9)	57 (15.6)
Mango	9 (9.6)	6 (6.7)	19 (17.3)	10 (14.1)	44 (12.1)
Menthol	8 (8.5)	13 (14.4)	3 (2.7)	8 (11.3)	32 (8.8)
Tobacco	4 (4.3)	3 (3.3)	3 (2.7)	0 (0.0)	10 (2.7)
Other	22 (23.4)	33 (36.7)	32 (29.1)	25 (35.2)	112 (30.7)
Most used flavour at present					
Berry	18 (22.2)	18 (22.2)	28 (27.5)	14 (20.3)	78 (23.4)
Confectionary	4 (4.9)	2 (2.5)	5 (4.9)	3 (4.3)	14 (4.2)
Mango	13 (16.0)	24 (29.6)	15 (14.7)	9 (13.0)	61 (18.3)
Menthol	17 (21.0)	13 (16.0)	20 (19.6)	14 (20.3)	64 (19.2)
Tobacco	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0)
Other	29 (35.8)	24 (29.6)	34 (33.3)	29 (42.0)	116 (34.8)
Would you vape if you could not buy flavoured juices?[1]					
Yes	60 (72.3)	41 (56.9)	51 (58.6)	25 (41.0)	177 (58.4)
No	23 (27.7)	31 (43.1)	36 (41.4)	36 (59.0)	126 (41.6)
Content added to vape juice					
Yes	25 (23.8)	19 (23.8)	32 (31.1)	2 (2.8)	78 (21.7)
No	80 (76.2)	61 (76.2)	71 (68.9)	69 (97.2)	281 (78.3)
Nicotine concentration[1]					
10-20 mg/mL	3 (3.3)	10 (15.9)	7 (7.2)	6 (9.7)	26 (8.3)
35 mg/mL	21 (22.8)	16 (25.4)	18 (18.8)	18 (29.0)	73 (23.3)
50-60 mg/mL	68 (73.9)	37 (58.7)	71 (74.0)	38 (61.3)	214 (68.4)
Vaping product content at onset					
Vape juice with nicotine	69 (65.7)	54 (67.5)	65 (63.1)	58 (81.7)	246 (68.5)
Vape juice without nicotine	36 (34.3)	23 (28.8)	37 (35.9)	12 (16.9)	108 (30.1)

Dry cannabis	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.4)	1 (0.3)
Liquid cannabis	0 (0.0)	3 (3.7)	1 (1.0)	0 (0.0)	4 (1.1)
Vaping product content at present					
Vape juice with nicotine	101 (96.2)	74 (92.5)	97 (94.2)	69 (97.2)	341 (95.0)
Vape juice without nicotine	2 (1.9)	2 (2.5)	3 (2.9)	0 (0.0)	7 (1.9)
Dry cannabis	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0)
Liquid cannabis	2 (1.9)	4 (5.0)	3 (2.9)	2 (2.8)	11 (3.1)
Know nicotine content[1]					
Yes	100 (99.0)	73 (98.6)	97 (100.0)	66 (95.7)	336 (98.5)
No	1 (1.0)	1 (1.4)	0 (0.0)	3 (4.3)	5 (1.5)
Device purchase location[2]					
Specialty vape shop	41	48	23	43	155
From a friend	38	5	51	7	101
Retail location	20	37	10	29	96
Juice purchase location[2]					
Specialty vape shop	50	49	29	46	174
Retail location	21	39	11	31	102
From a friend	34	5	52	3	94

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 14. *Other substance use behaviours for the total sample*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	13.09 (22.69)	20.90 (27.76)	10.94 (14.67)	12.56 (18.49)	13.91 (21.12)
Days of cannabis use in the last 30 days*	11.03 (14.26)	14.91 (14.71)	10.45 (13.62)	13.96 (19.76)	12.45 (15.69)
Days of alcohol use in the last 30 days*	5.21 (8.34)	8.22 (11.47)	4.83 (6.78)	7.25 (8.19)	6.29 (8.92)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses.

Table 14. *Other substance use behaviours for the total sample (continued).*

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	101 (20.7)	53 (11.3)	185 (35.8)	91 (24.3)	430 (23.3)
Former user	320 (65.7)	357 (76.3)	265 (51.2)	247 (66.0)	1189 (64.4)
Current user	66 (13.6)	58 (12.4)	67 (13.0)	36 (9.7)	227 (12.3)
Tobacco use onset relative to vaping onset[1]					
Before	148 (38.3)	251 (60.5)	159 (47.9)	179 (63.3)	737 (52.0)
During	96 (24.9)	70 (16.9)	70 (21.1)	47 (16.6)	283 (20.0)
After	142 (36.8)	94 (22.6)	103 (31.0)	57 (20.1)	396 (28.0)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	183 (37.6)	150 (32.1)	212 (41.0)	106 (28.3)	651 (35.3)
No	304 (62.4)	318 (67.9)	305 (59.0)	268 (71.7)	1195 (64.7)
Type of drinker*[2]					
Occasional drinker (1 drink/< 2wks.)	153	93	187	100	533
Light drinker (1-5 drinks/wk.)	59	89	72	89	309
Moderate drinker (6-10 drinks/wk.)	48	65	36	48	197

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner as the Nova Scotia survey and thus Nova Scotia data is excluded from these responses. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 15. *Other substance use behaviours for British Columbia respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	10.0 (6.95)	8.00 (7.45)	2.94 (2.01)	7.50 (8.74)	6.94 (6.54)
Days of cannabis use in the last 30 days	14.21 (12.88)	16.33 (13.06)	11.38 (13.39)	14.83 (25.51)	14.23 (16.92)
Days of alcohol use in the last 30 days	5.63 (7.63)	9.09 (8.98)	4.92 (5.84)	9.14 (8.19)	7.21 (7.98)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 15. *Other substance use behaviours for British Columbia respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	17 (21.0)	15 (18.8)	23 (30.7)	18 (24.3)	73 (23.5)
Former user	53 (64.0)	58 (72.5)	42 (56.0)	49 (66.2)	202 (65.2)
Current user	11 (15.0)	7 (8.7)	10 (13.3)	7 (9.5)	35 (11.3)
Tobacco use onset relative to vaping onset[1]					
Before	28 (43.8)	35 (53.8)	13 (25.0)	33 (58.9)	109 (46.0)
During	14 (21.9)	12 (18.5)	15 (28.8)	7 (12.5)	48 (20.3)
After	22 (34.3)	18 (27.7)	24 (46.2)	16 (28.6)	80 (33.7)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	28 (34.6)	31 (38.8)	33 (44.0)	25 (33.8)	117 (37.7)
No	53 (65.4)	49 (61.2)	42 (56.0)	49 (66.2)	193 (62.3)
Type of drinker[2]					
Occasional drinker (1 drink/< 2wks.)	30	21	30	19	100
Light drinker (1-5 drinks/wk.)	15	29	23	23	90
Moderate drinker (6-10 drinks/wk.)	8	12	7	18	45

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 16. *Other substance use behaviours for Manitoba respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth,** *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	3.67 (1.75)	32.33 (62.99)	8.75 (10.42)	15.33 (21.46)	14.43 (33.31)
Days of cannabis use in the last 30 days	9.75 (13.77)	12.44 (13.07)	11.42 (15.04)	15.02 (15.71)	11.89 (14.41)
Days of alcohol use in the last 30 days	5.76 (8.65)	5.41 (7.12)	5.60 (7.06)	7.00 (10.14)	5.85 (8.12)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 16. *Other substance use behaviours for Manitoba respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	10 (15.2)	4 (7.1)	25 (32.9)	8 (18.2)	47 (19.4)
Former user	49 (74.2)	45 (80.4)	42 (55.3)	33 (75.0)	169 (69.8)
Current user	7 (10.6)	7 (12.5)	9 (11.8)	3 (6.8)	26 (10.8)
Tobacco use onset relative to vaping onset[1]					
Before	15 (26.8)	34 (65.4)	20 (39.2)	20 (55.6)	89 (45.6)
During	17 (30.4)	9 (17.3)	11 (21.6)	9 (25.0)	46 (23.6)
After	24 (42.8)	9 (17.3)	20 (39.2)	7 (19.4)	60 (30.8)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	30 (45.5)	17 (30.4)	28 (36.8)	11 (25.0)	86 (35.5)
No	36 (54.5)	39 (69.6)	48 (63.2)	33 (75.0)	156 (64.5)
Type of drinker[2]					
Occasional (1 drink/< 2 wks.)	31	20	39	17	107
Light (1-5 drinks/wk.)	8	15	13	13	49
Moderate (6-10 drinks/wk.)	12	8	12	3	35

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 17. *Other substance use behaviours for Nova Scotia respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	22.21 (39.06)	22.42 (17.59)	14.39 (16.99)	16.07 (23.48)	18.17 (23.65)
Days of cannabis use in the last 30 days*	---	---	---	---	---
Days of alcohol use in the last 30 days*	---	---	---	---	---

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner in the Nova Scotia survey and thus Nova Scotia data is excluded from these responses.

Table 17. *Other substance use behaviours for Nova Scotia respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	37 (27.6)	13 (8.6)	75 (44.9)	23 (27.1)	148 (27.5)
Former user	80 (59.7)	115 (75.7)	64 (38.3)	47 (55.3)	306 (56.9)
Current user	17 (12.7)	24 (15.7)	28 (16.8)	15 (17.6)	84 (15.6)
Tobacco use onset relative to vaping onset[1]					
Before	46 (47.4)	100 (71.9)	67 (72.8)	45 (72.6)	258 (66.1)
During	20 (20.6)	18 (12.9)	10 (10.9)	10 (16.1)	58 (14.9)
After	31 (32.0)	21 (15.2)	15 (16.3)	7 (11.3)	74 (19.0)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	45 (33.6)	33 (21.7)	66 (39.5)	20 (23.5)	164 (30.5)
No	89 (66.4)	119 (78.3)	101 (60.5)	65 (76.5)	374 (69.5)
Type of drinker*					
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Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. *Denotes a question not asked in or not measured in the same manner in the Nova Scotia survey and thus Nova Scotia data is excluded from these responses. [1]Question not answered by all participants.

Table 18. *Other substance use behaviours for Ontario respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	12.71 (16.39)	13.00 (10.37)	10.50 (18.02)	7.00 (5.15)	11.31 (14.41)
Days of cannabis use in the last 30 days	12.14 (16.25)	15.37 (13.32)	9.17 (11.25)	14.42 (20.65)	12.80 (15.96)
Days of alcohol use in the last 30 days	4.66 (9.65)	8.95 (14.03)	4.24 (7.77)	6.41 (7.98)	6.07 (10.29)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 18. *Other substance use behaviours for Ontario respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	21 (20.8)	11 (11.0)	36 (37.5)	30 (30.0)	98 (24.7)
Former user	66 (65.3)	78 (78.0)	50 (52.1)	64 (64.0)	258 (65.0)
Current user	14 (13.9)	11 (11.0)	10 (10.4)	6 (6.0)	41 (10.3)
Tobacco use onset relative to vaping onset[1]					
Before	25 (31.3)	48 (53.9)	28 (46.7)	44 (62.9)	145 (48.5)
During	21 (26.3)	16 (18.0)	12 (20.0)	11 (15.7)	60 (20.1)
After	34 (42.4)	25 (28.1)	20 (33.3)	15 (21.4)	94 (31.4)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	43 (42.6)	38 (38.0)	40 (41.7)	34 (34.0)	155 (39.0)
No	58 (57.4)	62 (62.0)	56 (58.3)	66 (66.0)	242 (61.0)
Type of drinker[2]					
Occasional (1 drink/< 2wks.)	46	30	61	41	178
Light drinker (5-1 drinks/wk.)	18	23	14	29	84
Moderate drinker (6-10 drinks/wk.)	9	22	8	15	54

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.

Table 19. *Other substance use behaviours for Prairies respondents*.

Variables	**Male youth**, *M* (*SD*)	**Male young adults**, *M* (*SD*)	**Female youth**, *M* (*SD*)	**Female young adults**, *M* (*SD*)	**Total**, *M* (*SD*)
Cigarettes smoked per week	10.14 (14.51)	22.50 (20.44)	9.80 (12.32)	10.00 (16.81)	11.52 (14.83)
Days of cannabis use in the last 30 days	8.36 (13.06)	14.66 (18.59)	10.25 (14.77)	11.68 (12.86)	10.93 (15.00)
Days of alcohol use in the last 30 days	5.07 (7.37)	8.39 (12.54)	4.73 (6.22)	6.61 (6.95)	6.02 (8.55)

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24.

Table 19. *Other substance use behaviours for Prairies respondents (continued)*.

Variables	**Male youth**, *N* (%)	**Male young adults**, *N* (%)	**Female youth**, *N* (%)	**Female young adults**, *N* (%)	**Total**, *N* (%)
Tobacco use history					
Never user	16 (15.2)	10 (12.5)	26 (25.3)	12 (16.9)	64 (17.8)
Former user	72 (68.6)	61 (76.3)	67 (65.0)	54 (76.1)	254 (70.8)
Current user	17 (16.2)	9 (11.2)	10 (9.7)	5 (7.0)	41 (11.4)
Tobacco use onset relative to vaping onset[1]					
Before	34 (38.2)	34 (48.6)	31 (40.3)	37 (62.7)	136 (46.1)
During	24 (27.0)	15 (21.4)	22 (28.6)	10 (16.9)	71 (24.1)
After	31 (34.8)	21 (30.0)	24 (31.1)	12 (20.4)	88 (29.8)
Knowledge of anyone who started vaping before smoking cigarettes					
Yes	37 (35.2)	31 (38.8)	45 (43.7)	16 (22.5)	129 (35.9)
No	68 (64.8)	49 (61.2)	58 (56.3)	55 (77.5)	230 (64.1)
Type of drinker[2]					
Occasional drinker (2 drinks/< 2wks.)	46	22	57	23	148
Light drinker (1-5 drinks/wk.)	18	22	22	24	86
Moderate drinker (6-10 drinks/wk.)	19	23	9	12	63

Note. Youth refers to ages 16-18. Young adult refers to ages 19-24. [1]Question not answered by all participants. [2]Participants could choose from several answers. For this reason, only the frequencies of the top answers are reported.