BMJ Open Cannabis use among youth in Canada: a scoping review protocol

Toula Kourgiantakis , ¹ Travonne Edwards , ¹ Eunjung Lee, ¹ Judith Logan, ² Ragave Vicknarajah, ³ Shelley L Craig, ¹ Monique Simon-Tucker, ¹ Charmaine C Williams ¹

To cite: Kourgiantakis T, Edwards T, Lee E, *et al.* Cannabis use among youth in Canada: a scoping review protocol. *BMJ Open* 2022;**12**:e061997. doi:10.1136/ bmjopen-2022-061997

➤ Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2022-061997).

Received 12 February 2022 Accepted 06 June 2022



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, Ontario, Canada ²John P. Robarts Library, University of Toronto, Toronto, Ontario, Canada ³Information Studies, University of Toronto, Toronto, Ontario,

Correspondence to

Toula Kourgiantakis; toula.kourgiantakis@utoronto.ca

ABSTRACT

Introduction Canadian youth (aged 15–24) have the highest rates of cannabis use globally. There are increasing concerns about the adverse effects of cannabis use on youth physical and mental health. However, there are gaps in our understanding of risks and harms to youth. This scoping review will synthesise the literature related to youth cannabis use in Canada. We will examine the relationship between youth cannabis use and physical and mental health, and the relationship with use of other substances. We will also examine prevention strategies for youth cannabis use in Canada and how the literature addresses social determinants of health.

Methods and analysis Using a scoping review framework developed by Arksey and O'Malley, we will conduct our search in five academic databases: MEDLINE, Embase, APA PsycInfo, CINAHL and Web of Science's Core Collection. We will include articles published between 2000 and 2021, and articles meeting the inclusion criteria will be charted to extract relevant themes and analysed using a qualitative thematic analysis approach.

Ethics and dissemination This review will provide relevant information about youth cannabis use and generate recommendations and gaps in the literature. Updated research will inform policies, public education strategies and evidence-based programming. Results will be disseminated through an infographic, peer-reviewed publication and presentation at a mental health and addiction conference. Ethics approval is not required for this scoping review.

INTRODUCTION

Canadian youth (aged 15–24) have one of the highest rates of cannabis use worldwide^{1 2} with prevalence rates that are almost double that of adults. Recent data indicate that 44% of youth aged 16–19, and 51% of youth aged 20–24, report past year cannabis use versus 21% of adults over the age of 25.³ Daily cannabis use is linked to more significant adverse effects⁴ and is reported by 16% of youth aged 16–19 and 23% of those aged 20–24.³ In Canada, recreational cannabis use was legalised in 2018 across the 10 provinces and 3 territories, and one of the key objectives of the Cannabis Act is to protect the health and safety of youth.⁵ Despite this objective,

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This is the first comprehensive review examining youth cannabis use in Canada.
- ⇒ The search strategy has been developed by a research team with expertise in the methodology and subject area.
- \Rightarrow This scoping review will include all article types and methodologies.
- Due to the nature of the scoping review framework, the studies included in the review will not be appraised for quality.

cannabis use among youth continues to be a public health concern linked with physical and mental health concerns including anxiety, depression, by psychosis, espiratory problems and use of other illicit substances. Vouth with mental health concerns have higher rates of cannabis use, and early initiation of cannabis use is linked with *increased* mental health concerns. Earlier initiation and higher frequency of cannabis use are associated with more adverse effects and a higher risk of dependence.

Studies show that health knowledge and awareness of perceived risks influence the rates of cannabis consumption with higher rates when a substance is not perceived as harmful, which makes education and prevention a public health priority. 15 17 Canadian youth have a wide range of beliefs about recreational cannabis use, and many have misconceptions and lack information about the risks and harms associated with cannabis use. 18 19 Service providers also have gaps in knowledge about cannabis use in youth and need more education and training.²⁰ ²¹ A recent survey conducted in the USA where 11 states have legalised recreational cannabis use found variation and gaps in service providers' knowledge and beliefs on cannabis. Many service providers described discomfort discussing cannabis use with clients.²² Parents and caregivers also need more information



Canada

on the harms associated with cannabis use in youth, and studies have shown that parents have concerns about the adverse effects of cannabis use on mental health. ²³ ²⁴ There is inadequate support for families and insufficient knowledge that is drawn from the lived experiences of diverse families. ²⁵ Parents have been described as 'invisible experts' as they are often the core support for youth with substance use disorders, but their perspectives are often excluded from research, services, and policies. ²³ ²⁶

Despite widespread use and robust evidence of associations between cannabis use and adverse effects on youth, ^{78 27} there are several gaps in the current literature on youth cannabis use. These knowledge gaps are even wider with marginalised populations such as sexual and gender minority youth, immigrant and refugee youth, and Black, Indigenous and youth of colour. ²⁸⁻³⁰ There is some research showing gender differences in cannabis use, ³¹ as well as ethnoracial and immigrant group differences, ³² but more research is needed to increase our understanding of factors that may be contributing to these differences.

Given the gaps in our understanding of risks and harms to youth, updated research can inform policies, public education strategies and evidence-based programming. 28 33 Hawke and colleagues 27 state that there is a need for research that is youth-specific and cannabis-specific with a focus on concurrent disorders. Others argue that research and educational interventions do not consider contextual and cultural factors³⁴ and have not engaged youth and parents adequately. 25 35 Few studies have examined parents' perspectives on addressing cannabis use, resulting in substance use programmes that are not evidence-based and developed without the lived experiences and expertise of parents and youth. ²⁵ Furthermore, this underlines the importance of research that focuses on diversity within the Canadian youth population and the influence of social determinants of health. 5 28 36

Early intervention is essential to mitigate the adverse effects of cannabis use on youth. However, the lack of service continuity contributes to 52% of youth dropping out of treatment, resulting in untreated mental health and substance use concerns, poorer long-term mental health outcomes and increased risk of severe mental illness, homelessness, high school dropout and unemployment. ¹³ In Canada, several factors contribute to high rates of untreated mental health and substance use concerns,³ including a lack of a national strategy and pan-Canadian policy, unresponsive and fragmented services that do not meet the needs of youth with concurrent disorders,³⁸ and inadequate engagement of youth and families in service development and delivery. $^{39\,40}$ Moreover, LGBTQ youth, 41 immigrant and refugee youth, as well as Black, Indigenous, youth of colour²⁸ have additional barriers to accessing mental health and addiction services related to inequities, discrimination and systemic racism. 42-44

The objectives of this protocol are to (1) scope the literature on cannabis use among youth under 25 in Canada; (2) examine the relationship between cannabis use

and physical and mental health in Canadian youth; (3) examine the relationship of cannabis use and co-occurring use of other substances in Canadian youth; (4) identify prevention strategies, interventions and programmes to address cannabis use in Canada; (5) explore how the Canadian literature considers the influence of social determinants of health on youth cannabis use; and (6) identify gaps and recommendations in the literature.

METHODS AND ANALYSIS

Scoping reviews are widely used approaches for mapping the literature on topics that have insufficient evidence, and they provide greater breadth and depth than other reviews. 45 Due to the limited research on cannabis use among Canadian youth, this form of knowledge synthesis will be valuable in providing an overview of existing literature, and it will identify knowledge gaps and generate recommendations to inform policies and services. 46 47 This scoping review will follow the methodological framework introduced by Arksey and O'Malley, 48 which includes the following five phases: (1) identification of the research question, (2) identification of relevant studies, (3) selection of relevant articles, (4) charting of the data, and (5) identification, synthesisation and reporting on study findings. 48 This scoping review is also following guidelines described in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). 49 See online online supplemental appendix A for the PRISMA-ScR checklist.

Stage 1: identifying the research question

As highlighted in our preliminary review of the literature, there are significant gaps in the literature on youth cannabis use in Canada. Using a population, concept and context framework, the research team consisting of four social work faculty members (TK, EL, SLC and CCW), one research coordinator who is a doctoral candidate (TE), one social sciences librarian (JL) and two graduatelevel research assistants (RV and MS-T) developed these research questions: (1) what type of literature is available describing youth cannabis use in Canada? (2) how does the literature describe the relationship between cannabis use and physical and mental health? (3) how does the literature describe the relationship between Canadian youth cannabis use and use of other substances? (4) what are the programmes and prevention/intervention strategies used to address youth cannabis use in the Canadian literature? (5) how does the literature consider the influence of the social determinants of health on cannabis use in Canadian youth? (6) what are the gaps and recommendations identified in the literature on cannabis use in Canadian youth?

Step 2: identifying relevant studies

A social sciences librarian (JL) will design a comprehensive search of the published literature. Text words and controlled vocabulary relating to youth, Canada

Table 1	Search strategy for MEDLINE (Ovid)
Number	Searches
1.	(canad* or "british columbia*" or "Colombie britannique" or alberta* or saskatchewan* or manitoba* or ontari* or quebec* or "nouveau brunswick" or "nova scotia*" or "nouvelle ecosse" or "prince edward island*" or newfoundland* or labrador* or nunavu* or nwt or "northwest territori*" or yukon* or nunavik or inuvialuit).tw,kf,jw,nw.
2.	exp Canada/
3.	1 or 2 [Canada]
4.	"delta(9)-tetrahydrocannabinolic acid".nm. or (cannabi* or dronabinol or ha?chi?ch\$1 or hashis?h\$1 or hash or mari#uana* or tetrahydrocannabi* or tetra hydro cannabi*or THC or bhang or bhangs or cesamet or dexanabinol or dronabinol or ganja or ganjas or hemp or marinol or nabilone or nabiximol* or sativex or indica or sativa or CBD).tw,kf. or (tetrahydro adj cannabi*).tw,kf. or ((blunt or blunts or pot) adj2 smok*).tw,kf.
5.	exp cannabinoids/ or cannabis/ or "marijuana abuse"/ or exp "marijuana use"/ or "medical marijuana"/ or "cannabinoid receptor agonists"/ or "marijuana abuse"/
6.	4 or 5 [Cannabis]
7.	(teen* or youth* or adolescen* or child* or puberty or pubescen* or juvenile* or (young adj2 (adult* or person* or individual* or people* or population* or man or men or wom#n)) or youngster* or highschool* or college* or universit* or ((secondary or high*) adj2 (school* or education)) or "emerging adult*").tw,kf.
8.	adolescent/ or young adult/ or child/ or Adolescent Health Services/
9.	7 or 8 [Youth]
10.	3 and 6 and 9
11.	limit 10 to yr="2000 -Current"

and cannabis will be adapted from reputable published search terms. 50-53 Table 1 presents a draft search strategy developed for MEDLINE (Ovid). The search strategy will be peer-reviewed by an independent librarian and translated into Embase (Ovid), APA PsycInfo (Ovid), CINAHL (EBSCO) and Web of Science Core Collection, which includes Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index, Emerging Sources Citation Index, Conference Proceedings Citation Index and Book Citation Index. A date limit of 2000+ will be applied. Search results will be downloaded on a single day and then uploaded to Covidence for deduplication and screening.

Step 3: study selection

We will include articles meeting the following inclusion criteria: (1) written in English or French; (2) published on or after 2000; (3) focus on Canada and/or any of its provinces, territories or other jurisdictions; (4) focus on youth aged 24 and younger; (5) focus on cannabis and/ or cannabis use; and (6) empirical studies using any type of method (ie, quantitative, qualitative and mixed). Papers that examine substance use are eligible if cannabis is specifically identified. Likewise, papers that focus on adult populations and include young adults aged 18-24 are also eligible if the young adult age group is distinguished. We will also include papers that compare findings related to cannabis use and youth across countries, provided Canada is included as one of the countries of comparison. We will exclude reviews, theoretical or conceptual papers, books, book chapters, book reviews, dissertations, commentaries and editorials.

After selecting a list of articles from our search strategy, we will use an iterative two-stage peer review screening process and include two independent screeners at each stage. In the first stage, two independent reviewers (TE, RV and/or MS-T) will screen articles for suitability based on title, abstract and keywords. In the second stage, the reviewers will conduct an independent full-text review of articles selected in phase I. The first author (TK) will resolve discrepant findings between the first and second reviewers and hold debriefing meetings to clarify questions around eligibility. To support the process, we will use Covidence, a web-based software for systematic and scoping reviews that facilitates screening, study selection and data extraction.⁵⁴

Step 4: charting the data

Based on the objectives and research questions, the research team has developed charting categories, and these will be used to extract relevant information from the selected papers. A data charting form will be prepared that includes the following charting categories: (1) authors; (2) year of publication; (3) name of journal; (4) type of paper (eg, empirical, review and conceptual); (5) method (eg, qualitative, quantitative and mixed methods); (6) sample size and characteristics; (7) physical and mental health outcomes; (8) use of other substances; (9) programmes, prevention and intervention strategies; (10) influence of social determinants (eg, poverty, housing, access to healthcare, racism and discrimination); (11) youth and/or family engagement in research; and (12) gaps and recommendations for policy, practice, education and research. To enhance reliability, two reviewers (TE, RV, and/or MS-T) will independently chart the first five articles meeting the inclusion criteria, and the lead author (TK) will review charting completed by the reviewers and resolve conflicts. Any discrepancies



will be discussed in a debriefing meeting and charting categories will be refined if necessary. Full data abstraction will only begin after sufficient agreement has been achieved on charting (>90%). Findings will be organised and presented on a data extraction spreadsheet.

Step 5: identification, synthesis and report of study findings

Findings on the data extraction form will be synthesised and analysed using descriptive numerical summaries and thematic analysis. ⁵⁵ There will be multiple forms of knowledge translation used to report study findings, including an open-access publication in a peer-reviewed journal, presentation at a relevant addiction and/or mental health conference, and an infographic that presents the findings in a more engaging manner.

Patient and public involvement

While we will not involve patients or members of the public in this review, we will disseminate the results of this scoping review to mental health and substance use community organisations serving youth and families.

ETHICS AND DISSEMINATION

The scoping review protocol outlined in this paper will advance knowledge of cannabis use in Canadian youth. The information gathered for this paper and the outlined scoping review were retrieved from publicly available sources; therefore, ethics approval is not required for this project. The results will be disseminated through a peer-reviewed journal and reported at national and international conferences on mental health and addictions.

Twitter Toula Kourgiantakis @DrKourgiantakis

Contributors All authors made substantive intellectual contributions to the development of this protocol. TK, EL, SLC, and CCW contributed to the conceptualisation of the protocol. TK developed, wrote, and edited the initial protocol. TE, RV and MS-T contributed to editing and writing parts of the protocol. JL developed the search strategy and contributed to the writing of the protocol. All authors critically reviewed and revised the final version prior to submission.

Funding This scoping review protocol is supported by a 2021-2022 Royal Bank of Canada Graduate Fellowship in Applied Social Work Research, Factor-Inwentash Faculty of Social Work, University of Toronto.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, reporting or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially,

and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iDs

Toula Kourgiantakis http://orcid.org/0000-0002-2491-2595 Travonne Edwards http://orcid.org/0000-0001-6054-2774

REFERENCES

- 1 World Health Organization. Social determinants of health and wellbeing among young people. health behaviour in school-aged children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: WHO Regional Office for Europe, 2012.
- 2 United Nations Office on Drugs and Crimes. World drug report: cannabis and hallucinogens
- 3 Canada H. Canadian cannabis use survey 2019 summary 2019
- 4 Volkow ND, Swanson JM, Evins AE, et al. Effects of cannabis use on human behavior, including cognition, motivation, and psychosis: a review. JAMA Psychiatry 2016;73:292–7.
- 5 Government of Canada. Controlled drugs and substances act. food and drugs act. Cannabis Act.
- 6 Xue S, Husain MI, Zhao H, et al. Cannabis Use and Prospective Long-Term Association with Anxiety: A Systematic Review and Meta-Analysis of Longitudinal Studies: Usage du cannabis et association prospective à long terme avec l'anxiété: une revue systématique et une méta-analyse d'études longitudinales. Can J Psychiatry 2021;66:126–38.
- 7 Butler A, Patte KA, Ferro MA, et al. Interrelationships among depression, anxiety, flourishing, and cannabis use in youth. Addict Behav 2019:89:206–15.
- 8 Weinberger AH, Zhu J, Lee J, et al. Cannabis use among youth in the United States, 2004-2016: faster rate of increase among youth with depression. *Drug Alcohol Depend* 2020;209:107894.
- 9 Batalla A, Maat A. Cannabis use and psychosis susceptibility: a call to action. Eur Neuropsychopharmacol 2022;54:70–1.
- 10 Godin S-L, Shehata S. Adolescent cannabis use and later development of schizophrenia: an updated systematic review of longitudinal studies. *J Clin Psychol* 2022. doi:10.1002/jclp.23312. [Epub ahead of print: 11 Jan 2022].
- 11 Radhakrishnan R, Wilkinson ST, D'Souza DC. Gone to Pot A Review of the Association between Cannabis and Psychosis. Front Psychiatry 2014;5:54.
- 12 Hawke LD, Wilkins L, Henderson J. Early cannabis initiation: substance use and mental health profiles of service-seeking youth. J Adolesc 2020;83:112–21.
- 13 Sheidow AJ, McCart M, Zajac K, et al. Prevalence and impact of substance use among emerging adults with serious mental health conditions. Psychiatr Rehabil J 2012;35:235–43.
- 14 Hosseini S, Oremus M. The effect of age of initiation of cannabis use on psychosis, depression, and anxiety among youth under 25 years. Can J Psychiatry 2019;64:304–12.
- 15 Leos-Toro C, Fong GT, Meyer SB, et al. Cannabis health knowledge and risk perceptions among Canadian youth and young adults. Harm Reduct J 2020;17:1–13.
- Behrendt S, Beesdo-Baum K, Höfler M, et al. The relevance of age at first alcohol and nicotine use for initiation of cannabis use and progression to cannabis use disorders. *Drug Alcohol Depend* 2012;123:48–56.
- 17 Wallingford S, Konefal S, Young MM, Student Drug Use Surveys Working Group. Cannabis use, harms and perceived risks among Canadian students. Ottawa, ON: Canadian Centre on Substance use and Addiction, 2019.
- 18 Hamid MA, Shaikh R, Gunaseelan L, et al. Recreational cannabis Legalization in Canada: a pediatrics perspective. Substance Use & Misuse 2021:1–3.
- 19 McKiernan A, Fleming K. Canadian youth perceptions on cannabis, Ottawa. Ont: Canadian Centre on Substance Use, 2017.
- 20 Bélanger RE, Grant CN. Counselling adolescents and parents about cannabis: a primer for health professionals. *Paediatr Child Health* 2020;25:S34–40.
- 21 Elkrief L, Belliveau J, D'Ignazio T, et al. Assessing the current state of medical education on cannabis in Canada: preliminary findings from Quebec. Paediatr Child Health 2020;25:S29–33.
- 22 Kansagara D, Morasco BJ, Iacocca MO, et al. Clinician knowledge, attitudes, and practice regarding cannabis: results from a national Veterans health administration survey. Pain Med 2020;21:3180–6.
- 23 Tambling RR, Russell B, D'Aniello C. Where is the family in young adult substance use treatment? the case for systemic family therapy



- for young adults with substance use disorders. *Int J Ment Health Addict* 2021:1–12.
- 24 Wisk LE, Levy S, Weitzman ER. Parental views on state cannabis laws and marijuana use for their medically vulnerable children. *Drug Alcohol Depend* 2019;199:59–67.
- 25 Haines-Saah RJ, Mitchell S, Slemon A, et al. 'Parents are the best prevention'? troubling assumptions in cannabis policy and prevention discourses in the context of Legalization in Canada. Int J Drug Policy 2019;68:132–8.
- 26 Kourgiantakis T, Ashcroft R, Mohamud F, et al. Family-focused practices in addictions: a scoping review. J Soc Work Pract Addict 2021;21:18–53.
- 27 Hawke LD, Koyama E, Henderson J. Cannabis use, other substance use, and co-occurring mental health concerns among youth presenting for substance use treatment services: sex and age differences. J Subst Abuse Treat 2018;91:12–19.
- 28 Mental Health Commission of Canada. Immigrant, refugee, ethnocultural and racialized populations and the social determinants of health: a review of the 2016 census data 2019.
- 29 Hatzenbuehler ML, Jun H-J, Corliss HL, et al. Structural stigma and sexual orientation disparities in adolescent drug use. Addict Behav 2015;46:14–18.
- 30 Russell ST, Fish JN. Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. Annu Rev Clin Psychol 2016;12:465–87.
- 31 Zuckermann AME, Battista K, de Groh M, et al. Prelegalisation patterns and trends of cannabis use among Canadian youth: results from the COMPASS prospective cohort study. BMJ Open 2019;9:e026515.
- 32 Hamilton HA, Owusu-Bempah A, Boak A, et al. Ethnoracial differences in cannabis use among native-born and foreign-born high school students in Ontario. J Ethn Subst Abuse 2018;17:123–34.
- 33 Cooke M, Milicic S, MacDonald JA, et al. Provincial patterns and trends in cannabis use: Ontario. Waterloo, Ont.: University of Waterloo and Canadian Centre for Substance Use and Addiction, 2020.
- 34 Moffat BM, Haines-Saah RJ, Johnson JL. From didactic to dialogue: assessing the use of an innovative classroom resource to support decision-making about cannabis use. *Drugs: Education, Prevention* and Policy 2017:24:85–95.
- 35 Hawke LD, Relihan J, Miller J, et al. Engaging youth in research planning, design and execution: practical recommendations for researchers. *Health Expect* 2018;21:944–9.
- 36 Jenkins E, McGuinness L, Haines-Saah R, et al. Equipping youth for meaningful policy engagement: an environmental scan. Health Promot Int 2020;35:852–65.
- 37 Nelson CH, Park J. The nature and correlates of unmet health care needs in Ontario, Canada. Soc Sci Med 2006;62:2291–300.
- 38 Sukhera J, Lynch J, Wardrop N, et al. Real-Time needs, real-time care: creating adaptive systems of community-based care for emerging adults. Can J Commun Ment Health 2017;36:41–53.

- 9 Amir E. New developments for family caregivers in the context of mental health in Canada. Can J Commun Ment Health 2015;34:143–9.
- 40 Malla A, Shah J, Iyer S, et al. Youth mental health should be a top priority for health care in Canada. Can J Psychiatry 2018;63:216–22.
- Veale JF, Peter T, Travers R, et al. Enacted stigma, mental health, and protective factors among transgender youth in Canada. Transgend Health 2017;2:207–16.
- 42 Fante-Coleman T, Jackson-Best F. Barriers and facilitators to accessing mental healthcare in Canada for black youth: a scoping review. Adolesc Res Rev 2020;5:115–36.
- 43 Hagle HN, Martin M, Winograd R, et al. Dismantling racism against black, Indigenous, and people of color across the substance use continuum: a position statement of the association for multidisciplinary education and research in substance use and addiction. Subst Abus 2021;42:5–12.
- 44 Nguemo Djiometio JB, Buzuayew A, Nelson LE, et al. A scoping review of the prevalence of use of substance among African, Caribbean, and black (ACB) people in Canada. J Subst Use 2020;25:575–90.
- 45 Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci* 2010;5:69.
- 46 Munn Z, Peters MDJ, Stern C, et al. Systematic review or scoping review? guidance for authors when choosing between a systematic or scoping review approach. BMC Med Res Methodol 2018;18:1–7.
- 47 Tricco AC, Lillie E, Zarin W, et al. A scoping review on the conduct and reporting of scoping reviews. BMC Med Res Methodol 2016;16:1–10.
- 48 Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8:19–32.
- 49 Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018;169:467–73.
- 50 Campbell S. Hedge to retrieve studies related to Canada and Canadian provinces from most databases [Internet]. John W. Scott Health Sciences Library, University of Alberta 2020.
- 51 Campbell S, Kung JYC. Filter to retrieve studies related to cannabis in the Ovid Medline database [Internet]. John W. Scott Health Sciences Library, University of Alberta 2018.
- 52 Canadian Health Libraries Association. Cannabis [Internet]. Canadian Health Libraries Association, 2018
- 53 Tessier V, Lacourse M. Adolescents et jeunes adultes [Internet. Canadian Health Libraries Assocation, 2018.
- 54 Macdonald M, Martin Misener R, Weeks L, et al. Covidence vs Excel for the title and Abstract review stage of a systematic review. Int J Evid Based Healthc 2016;14:200–1.
- 55 Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.