Application - Insight Development Grants

Identification

Applicant

Family Name: Dahlke **First Name:** Sherry

Middle Names: Ann

Current Position: Associate professor

Primary Affiliation: University of Alberta

Department/Division: Faculty of Nursing

Application

Application Title Cannabis in the closet? Seniors' perceptions of stigma and their influence on use and access to medicinal cannabis

Language of the Application (•) English ( ) French

Committee 08 - Sociology, demography and related fields

Joint or special initiative Select

Is this a research-creation project? ( ) Yes (•) No

Does your proposal involve Indigenous Research as defined by SSHRC? ( ) Yes (•) No

Scholar Type

Are you an Emerging Scholar or Established Scholar? Established

Confirmed Scholar Type Established

Established Scholars: Proposed Versus Ongoing Research

Established Scholars: Proposed Versus Ongoing Research

My main program of research focuses on nursing practice with older people, so this proposed study to examine how stigma influences older people's experiences with cannabis for health reasons is a new direction. To date, I have examined nurses' perceptions, experiences, and education to better understand how to improve nursing practice with older people. After taking stock of my program of research, I recognized a gap in understanding the perspectives of older people themselves. I believe a focus on older people's experiences can empower them; this, in turn, will foster greater sensitivity among healthcare providers who deal with older people in their various practices.
My interest in cannabis has developed through conversations with friends and family aged 60+ who expressed interest and raised questions about cannabis for their health conditions. My subsequent literature search revealed that many healthcare providers know very little about this; further, older people's perspectives about cannabis are not well represented. In this project, I include an expert on stigma and experts on cannabis to support me in this new venture examining a social phenomenon —stigma—and how it affects older people using cannabis for their health needs. These study findings will inform a future program of research targeted at understanding how social contexts influence older individuals. As well, this study provides me with the opportunity to develop understanding of a key social phenomenon and to publish in sociological journals. Thus far, my publications have mostly been in nursing journals related to older people or to education.
My prior research has focused on four themes:
1. How teams influence nursing practice with older people
2. How nursing education about older people influences their practice with that population
3. How clinical contexts influences nursing practice with older people and how it shapes student nurses' perceptions about the older generation.
4. The influence of nurses' perceptions of safety and harm on their practice with older people.
These four themes clearly put the focus on nurses— their roles, their understandings, their contributions to care of older people. This new study turns away from this, instead focusing on the perspectives and experiences of older members of society who may or may not engage with the health care system, but who claim some agency in managing their health concerns through cannabis use. This orientation to understanding older persons' experiences is an exciting new program of research that I hope to develop over the next several years.

Administering Organization

Organization University of Alberta

Department/Division Faculty of Nursing

Invitations

Role	Last Name	First Name	Organization	Department
Co-applicant	Hunter	Kathleen	University of Alberta	Faculty of Nursing
Co-applicant	Toubiana	Madeline	University of Alberta	Strategy Management and Organization
Collaborator	Kalogirou	Maya	University of Alberta	Nursing
Collaborator	Scheuerman	Melissa	No Primary Affiliation	No Department/Division

Activity Details

Certification Requirements

Does the proposed research involve humans as research participants?

(•) Yes ( ) No

Does the proposed research involve animals?

( ) Yes (•) No

Impact Assessment

Will any phase of the proposed research take place outdoors?

( ) Yes (•) No

Keywords

List up to 10 keywords that best describe the proposal.

social stigma, cannabis, older people

Disciplines

Indicate and rank up to three disciplines relevant to your proposal, with #1 the most relevant and #3 the least relevant.

1. Sociology Social Relations
2. Education Educational Psychology
3. Psychology Psychology

Areas of Research

Indicate and rank up to three areas of research relevant to your proposal, with #1 the most relevant and #3 the least relevant. If you select "Not Subject to Research Classification" in #1, the system will automatically remove any other areas of research when you save this page.

1. Elderly
2. Health
3. Education

Temporal Periods

Indicate up to two historical periods covered by your proposal.

	From		To	
	Year	Period	Year	Period
1.				
2.				

Geographical Regions

Indicate and rank up to three geographical regions relevant to your proposal, with #1 the most relevant and #3 the least relevant.

1. Western Canada
2. Central Canada
3. Atlantic Provinces

Countries

Indicate and rank up to five countries relevant to your proposal, with #1 the most relevant and #5 the least relevant.

1. Canada
2. United States
3. Netherlands
4. Norway
5. United Kingdom

Revisions since previous application

Summary of Proposal

Cannabis has been used for recreational and medicinal purposes for millennia. Yet, the use of cannabis has also been intensely stigmatized and characterized as a "danger" to society. Cannabis has now been legalized and research indicates the medicinal benefits of this drug: however, the stigma associated with it can influence individuals' perceptions and therefore their access and/or use of the drug. This is especially true for older Canadians who may hold beliefs of cannabis as an illegal and dangerous product. Consequently, even if such populations desire to try the product for its medicinal benefits, they may seek to conceal their interest or usage for fear of stigmatization-which, in turn, can shape how they seek information, obtain cannabis for health reasons, or discuss it with their healthcare providers. As cannabis holds potential benefits for health conditions but also unique risks for older Canadians, ensuring education and information about its use is accessible to this group is crucial. However, to date, scant research has sought to examine the impact of perceptions of stigma by seniors who may seek access to medicinal cannabis information and products, creating serious and important implications for their health.

In response to this knowledge gap, we will examine how stigma perceptions influence older persons' information seeking and access cannabis for health reasons. Our overarching aim is to reduce this stigmatization so that older Canadians feel comfortable in starting meaningful and information-rich conversations about cannabis with their healthcare providers. This will enable safer acquisition and use of cannabis to meet their health condition, whether through the medical system where one is prescribed cannabis for a disease or symptom, or through licensed retailers that offer cannabis for any reason to any member of the public (aged 18+ years). In Phase 1 of the study, we will survey and interview older persons considering or using cannabis about their perceptions of stigma, information seeking and choice of a cannabis product and vendor. Findings will shed light on the information older people want and need related to use of cannabis for health conditions, and the stigma they fear and/or experience when they look for this information. In Phase 2, we will assemble an advisory group comprising the research team, healthcare professionals, and a selection of interviewees to develop (a) information products to answer the

types of questions older potential medicinal cannabis users may have, and (b) strategies to make the information accessible to older Canadians, healthcare providers, and the public.

Cannabis users can experience euphoria, relaxation, increased energy, or medicinal benefits- most commonly cited as relief from pain or nausea. Yet, cannabis can also cause anxiety, paranoia, or other negative side effects, which are especially true for older Canadians given the physiological changes that accompany aging. Thus, it is crucial that older persons receive accurate information about cannabis, be this the various forms available for cannabis consumption - oil, edible, vaporization, inhalant- and which form would be most effective for their health condition, or the appropriate dose and risk of side effects. Unfortunately, stigmatization fears may mean they purchase it from a retail store or an illicit seller to ensure anonymity. This access pathway increase the likelihood of getting unreliable proportions of the active compounds (such as CBD and/or THC) or consuming inconsistent dosages, thereby exacerbating possible side effects. Our study aims to ameliorate these issues. We plan a robust knowledge mobilization initiative and will provide research training to two graduate students.

Roles and Responsibilities

The research team includes Dr. Sherry Dahlke as the Applicant, Co-applicants Dr. Kathleen Hunter, and Dr. Madeline Toubiana; collaborators Dr. Maya Kalogirou and Melissa Scheu erman, and two trainees, one each at the doctoral and master's levels.

Dr. Sherry Dahlke's program of research focuses on nursing practice with older people. She is an associate professor in the Faculty of Nursing, University of Alberta. Dr. Dahlke has played a leadership role in national, provincial, and local gerontological groups and has expertise as a clinician, leader and teacher, and researcher. Dr. Dahlke holds certification in Gerontological Nursing and has been internationally recognized for excellence in gerontological nursing education. Dr. Dahlke is an expert with qualitative methods. Dr. Dahlke will provide oversight to all aspects and activities related to the project. This will be approximately 6 hours a week, which is 40% of her research time. This project represents a novel topic to Dr. Dahlke's program of research, which has previously focused on nursing practice rather than older persons' experiences and fears of social stigma.

Dr. Kathleen Hunter's (co-applicant) program of research is focused on clinical nursing care of older persons. She is a professor and coordinator of the Nurse Practitioner Program in the Faculty of Nursing at the University of Alberta. Dr. Hunter has developed innovative tools to support families of people living with dementia, on their admission to hospital. Dr. Hunter is also an expert with qualitative methods. Dr Hunter will provide assistance with data analysis and knowledge mobilization. This will be approximately 3 hours a week, which is 20% of her research time.

Dr. Madeline Toubiana's (co-applicant) program of research has focused on processes of stigmatization and their impacts on social change, innovation, and personal transformation. She is an assistant professor in the Strategy, Entrepreneurship and Management department at the University of Alberta. Dr. Toubiana has worked extensively with stigmatized populations in her research, including previously incarcerated men, immigrant taxi-drivers, sex workers, and persons with disabilities. She has shaped and influenced the study of stigmatization in management, and has published on the topic in top tier journals. Dr. Toubiana will provide assistance with qualitative research design and writing. She will contribute 10% of her research time.

Dr. Maya Kalogirou's (collaborator) program of research is focused on climate change, health, and nursing practice. She is an early-career researcher who has recently graduated from the University of Alberta. Dr. Kalogirou has significant personal interest in cannabis: how cannabis use affects personal well-being and development, as well as cannabis cultivation. In the past, she has worked extensively alongside Dr. Dahlke and Dr. Hunter, investigating how best to educate nurses and nursing students to work with older people. Since Dr. Kalogirou is PhD prepared and is involved in the development of cannabis cultivation, she will be a valuable collaborator in supporting the trainees and guiding the recruitment for this project. Dr. Kalogirou will provide assistance with trainees, recruitment support and data analysis. This would be approximately 3 hours a week (20%), which would be in addition to a post-doctoral fellow position she has applied for (we will hear about her success in February)

Melissa Scheuerman (collaborator) is the Medical Cannabis Manager at Alberta Craft Cannabis. Melissa

has a Bachelor of Science from the University of Alberta and a Master of Science in Nutrition Education from Teachers College, Columbia University. She served as the Director of Medical Outreach at Emerald Leaf Cannabis Clinic and as a Medical Cannabis Educator with The Clinic Network, where she provided medical cannabis counselling to over 1300 patients. Previously, Melissa was a Clinical Research Coordinator at Columbia University Medical Center, where she managed several Cystic Fibrosis and Asthma clinical trials. Melissa is passionate about medical cannabis research, education, and advocacy and is excited to be working towards expanded access to medical cannabis for patients, with Canada at the forefront of this historic global shift in healthcare. Ms. Scheureman will be involved in recruitment and in knowledge mobilization. We anticipate this will be approximately 2 hours a week (10%)

Roles and Training of Students

We will hire a doctoral student trainee, and a master's student trainee, following equity, diversity, and inclusion principles in our recruitment of these individuals. The trainees will have bimonthly training meetings via video-conferencing with Dr. Dahlke, which will facilitate their knowledge development related to the change process, data analysis, working in teams, and knowledge mobilization. They will have the opportunity to learn from older Canadians, research team members, and our advisor group. Trainees will play a key role in manuscript writing, a development opportunity facilitated by Dr. Dahlke.

Specific activities of each trainee are as follows:
PhD trainee: This person will be involved in recruitment, data collection, data analysis, and manuscript writing. Recruiting participants will include liaising with healthcare providers, cannabis retailers, and agencies that support older people. Data collection will entail setting up the survey on a survey platform and interviewing participants. This trainee will be involved in the coding of the data and work with the research team in discussing and developing the categories and themes from the data. With the guidance of Dr. Dahlke, this individual will also be given the opportunity to write portions of the manuscripts, recruit participants for the advisory group, and participate in knowledge mobilization activities.

Master's trainee: This person will be involved in the data analysis and manuscript writing, and participate in the advisory group and knowledge mobilization. Data analysis activities will include examining codes developed from the data and meeting with the PhD trainee and the research team to develop categories and themes from the data. This trainee will be supported to write portions of the manuscripts that arise from the data. In addition, the masters' trainee and the PhD trainee will be involved in facilitating advisory group meetings and facilitating knowledge mobilization activities.

Trainees will also be supported through various educational opportunities for research and knowledge mobilization that are offered through the University of Alberta Library services. Additionally, trainees will be able to learn about research ethics through on-line tri-council education sessions supported by the research services office. Funding will be set aside to ensure trainees' participation in professional conferences and attendance at a workshop on data analysis. Dr. Dahlke will take each one of the trainees with her to a conference, to provide mentorship on academic presentations.

Knowledge Mobilization Plan

To engage the public, seniors and the cannabis industry:
* Animated narrative vignette of one of our final advisory meetings—a graphic recording that involves using text and pictures to record conversation in real time.
* Game-based approaches as motivational tools—this innovative strategy has been effective with a variety of populations and could be effective at creating anti-stigma messages (Koivisto & Hamari, 2018; Koivisto & Malik, 2020).
* Cannabis Senior Forum—with professionals from the cannabis industry.
* Website—to host publications, infographics, podcasts, publications, and game-based e-learning activities from this study, which will be accessible to all Canadians.
* Publication in The Conversation Canada, a website that publishes academic stories for a lay audience, that will mobilize information needed forcannabis use for health reasons in a non-stigmatizing

way.
* Podcasts—to explain older persons' experiences with social stigma related to cannabis use.
* Media stories in radio and tv—with accounts that highlight the stigma associated with health-related use of cannabis in Canada.
* Social media through use of Twitter and Facebook—for public messaging aimed at dispelling stigma and providing accurate information about cannabis and older people.
* Public talks by the researchers—about the importance of dispelling stigma associated with cannabis use at community centres and at organizations like the Canadian Association of Retired People (CARP).

Traditional Strategies to target researchers and educators:
* Research conferences—such as the Canadian Association on Gerontology, and Sociology conferences.
* Peer-reviewed and open-access journals—we will target those with international audiences, such as the Journal of Sociology, Canadian Journal of Sociology, Administrative Science Quarterly, or Canadian Journal on Aging.

Expected Outcomes

Scholarly Benefits

Indicate up to three scholarly benefits of the proposed project. (required)

1. Knowledge creation/intellectual outcomes
2. Student training/skill development
3. Enhanced theory

Summary of Expected Scholarly Outcomes

* Findings about older persons' experiences of stigma in obtaining information and cannabis for health reasons—for professionals working in the cannabis industry and healthcare professions across Canada and internationally
* Information products—especially for healthcare professions across Canada and internationally.
* Knowledge and experience of research methods and knowledge mobilization, and better understandings of stigma—for trainees working with the research team.
* Typical academic outcomes—through which we will present the study findings:
* Presentations at academic conferences, like the Canadian Association on Gerontology, and Sociology conferences, attended by researchers, educators, and clinicians/decision-makers
* Publications in academic peer-reviewed journals, like the Journal of Sociology, Canadian Journal of Sociology, or Canadian Journal on Aging.
* Findings will enhance theory development about stigma and older persons' use of cannabis for health reasons

Societal Benefits

Indicate up to three societal benefits of the proposed project.

1. Enriched public discourse
2. Behavioural outcomes
3. Cultural outcomes

Summary of Expected Societal Outcomes

* We will develop strategies and an implementation plan to reduce stigmatization surrounding senior cannabis use for health reasons within the Canadian public
* We will promote public discourse through our knowledge mobilization strategies—such as podcasts and publications in venues for the general public, like The Conversation Canada—about the negative implications of stigmatization on older people. This will open doors to have frank conversations about negative perceptions and practices within our Canadian society.

* The advisory group will develop messages that dispel stigma related to cannabis, which will further open up the public conversation in an honest and transparent manner, one we anticipate will move Canadians forward in diminishing stigma related to cannabis use for health problems

Audiences

Indicate up to five potential target audiences for the proposed project.

1. General public
2. Academic sector/peers
3. Canadian government
   Federal
4. Artist-researchers
5.

Summary of Benefits to Potential Target Audiences

* Healthcare providers that encounter older people will have more accurate information about cannabis and an understanding of the type of information older Canadians require to use cannabis for health problems.
* Canadians' negative stigmas of older people using cannabis for health reasons will be diminished.
* Older people, the majority of the public, will benefit from improved information about using cannabis for health reasons.
* Disseminating the findings in scholarly journals and informal journals, such as The Conversation Canada, will advance global understanding about diminishing stigma related to older people using cannabis for health reasons.

Funds Requested from SSHRC

Year 1

Personnel costs			
Student salaries and benefits/Stipends	**Number**	**Amount**	**Justification**
Undergraduate			
Masters			
Doctoral	1	$18,000.00	will support recruitment, data analysis, manuscript writing, presentations, the advisory group and knowledge mobilization. Salary is at the AGSA bargained rate of $1500/month for 1 day/week
Subtotal		**$18,000.00**	
Non student salaries	**Number**	**Amount**	**Justification**
Postdoctoral			
Professional/Technical Services			
Other			

Subtotal		**$0.00**	
Travel and Subsistence Costs for Research	**Number**	**Amount**	**Justification**
Applicant/Team Member(s)			
Student(s)			
Subtotal		**$0.00**	
Travel and Subsistence Costs for Dissemination	**Number**	**Amount**	**Justification**
Applicant/Team Member(s)			
Student(s)			
Subtotal		**$0.00**	
Other Expenses		**Amount**	**Justification**
Supplies			
Non-disposable equipment			
Incentives		$7,950.00	Recruitment costs to encourage motivation and participation in the learning activities. We will offer $30 gift cards to participants x 265 participants = 7950
Posters		$200.00	Posters to aid in recuitment 10/poster x20 = 200 for distribution in cannabis stores and healthcare providers offices.
Subtotal		**$8,150.00**	
Grand total year 1		**$26,150.00**	

Year 2

Personnel costs			
Student salaries and benefits/Stipends	**Number**	**Amount**	**Justification**
Undergraduate			
Masters	1	$16,500.00	MN graduate trainee—will assist with data analysis, manuscript writing, the advisory group and knowledge mobilization. Salary is at a similar AGSA bargained rate due to the similar types of

			activities, for $1375/month for 1 day per week for the second year (16,500 x 1)
Doctoral	1	$18,000.00	will support recruitment, data analysis, manuscript writing, presentations, the advisory group and knowledge mobilization. Salary is at the AGSA bargained rate of $1500/month for 1 day/week
Subtotal		**$34,500.00**	

Non student salaries	**Number**	**Amount**	**Justification**
Postdoctoral			
Professional/Technical Services	1	$2,500.00	Whiteboard designer - to graphically record one of our knowledge mobilization meetings with the advisory team in the year 2. This will generate knowledge mobilization products
Other	1	$5,000.00	Instructional Designer—to assist in developing the knowledge mobilization tools, such as a web-site, gaming style educational products, infographics, and facilitating podcasts. Salary of $60/hr for 82 hours in year 2
Subtotal		**$7,500.00**	

Travel and Subsistence Costs for Research	**Number**	**Amount**	**Justification**
Applicant/Team Member(s)			
Student(s)			
Subtotal		**$0.00**	

Travel and Subsistence Costs for Dissemination	**Number**	**Amount**	**Justification**
Applicant/Team Member(s)	2	$2,500.00	Funding to attend conferences such as the Social Sciences Arts and Humanities conference, Canadian Gerontological Conference, and International Gerontology and Geriatric Conferences to disseminate both our findings and the information about stigma perceptions and seniors' information seeking about cannabis. Estimate per conference: ($700/conference registration) + (hotel costs $200/night x 3 nights = $600) + (flights at $900) + (ground transportation and meals at $300/conference) = $2500/confere
Student(s)	2	$2,500.00	Funding to attend conferences such as the Social Sciences Arts and Humanities conference, Canadian Gerontological Conference, and International Gerontology and Geriatric Conferences to disseminate both our findings and

		the information about stigma perceptions and seniors' information seeking about cannabis. Estimate per conference: ($700/conference registration) + (hotel costs $200/night x 3 nights = $600) + (flights at $900) + (ground transportation and meals at $300/conference) = $2500/confere
Subtotal	**$5,000.00**	

Other Expenses	**Amount**	**Justification**
Supplies	$200.00	The PhD and Masters trainees will be supported to attend a workshop on data analysis. Estimate: $100/trainee
Non-disposable equipment		
Zoom membership	$200.00	Zoom membership—to facilitate the bi-monthly meetings with the seniors advisory committee and partners, at $200/year for second year
Subtotal	**$400.00**	
Grand total year 2	**$47,400.00**	
Grand total	**$73,550.00**	

Funds from Other Sources

You must include all contributors (e.g., individuals, not-for-profit organizations, philanthropic foundations, private sector organizations) that are providing contributions for the project. Indicate whether or not these contributions have been confirmed.

If a funding source is not listed, you must:

(a) type the source name in Funding Source
(b) identify the contribution type
(c) enter an amount.

If you have received, from a single funding source, more than one contribution of the same type (e.g., cash) and confirmation status, you must combine these into one entry (e.g., two $20,000 confirmed cash contributions from a university become one $40,000 confirmed cash contribution).

For examples of Canadian and international sources of eligible cash and/or in-kind support, see SSHRC's Guidelines for Cash and In-Kind Contributions.

Note: All contributions must be indicated in Canadian currency.

Funding Source	Contribution Type	Confirmed	Year 1	Year 2	Total
					$0.00
Details					
					$0.00
Details					

Funding Source	Contribution Type	Confirmed	Year 1	Year 2	Total
					$0.00
Details					
Grand total					$0.00

Reviewer Exclusion

Excluded Reviewers

Exclusion Type	Family Name / Collaboration	First Name	Initials	Organization	Department	Email
No records to display.						

OBJECTIVES, SIGNIFICANCE, & ORIGINALITY

Research related to cannabis has typically focused on younger people. The cannabis literature considers older consumers of this substance as those 50+, even though individuals are not considered as older persons until age 60 (World Health Organization, 2015). Older cannabis users (50 +) are a diverse group with differing needs, and who may also hold different views of its associated stigma. Our **aim** in this project is, therefore, to understand older persons' (60 years of age and older) fears and experiences of stigma related to cannabis.
Our specific **objectives** are as follows:

1. Examine how these fears and experiences affect older persons' information seeking and access to cannabis to manage a health problem.
2. Develop information materials to provide older individuals with the types of information they identify that they need to be informed consumers of cannabis for health reasons.
3. Develop strategies to ensure this necessary information reaches older Canadians interested in cannabis products.

Cannabis has both benefits and risks for older Canadians, largely dependent on the proportion of cannabidiol (CBD) and tetrahydrocannabinol (THC) present in the products they consume (Atakan, 2012). Older people – those 60+ (World Health Organization, 2015) – are more likely than younger individuals to seek cannabis for health reasons (Choi, et al., 2017; Hakkarainen et al., 2019; Lum et al., 2019), but they are at greater risk of experiencing negative side effects or severe health consequences (Hall, 2018; Minerbi et al., 2019). This is especially so if they unknowingly consume the wrong dosage of THC (Wolf et al., 2019). Further, they also must know how to ensure they receive the same dosage of CBD and/or THC each time they consume cannabis.

Clearly, these older individuals need to receive accurate information about the form of cannabis – oil, edible, vaporization, inhalant – that would be most effective for their health condition. However, various factors affect both the information they receive about cannabis, as well as their usage of it. Consuming the wrong form or dose of this substance can be related to the labelling of cannabis in retail stores or through a licensed distributor or due to obtaining it from an illicit seller (Wolf et al., 2019), whether directly (such as self-purchased) or indirectly (such as receiving it as a gift) (Kamrul et al., 2019; Lum et al., 2019). Further, those who obtain cannabis from a retail store may perceive that it is as a medical grade product because of the name of the store, when in fact, it may not be (Baumbusch & Sloan, 2020; Lum et al., 2019).

Notably, what is unique for older users of cannabis is this: Their perceptions of stigma surrounding the use of cannabis have the potential to seriously harm them when using these products—to the extent that they do not engage with information seeking and may conceal behaviours (Kamrul et al., 2019). Specifically, stigma may encourage older people to conceal their interest or usage, or to decline discussing their cannabis use with healthcare providers. In turn, this prevents them from receiving accurate information, thereby increasing the possibility of drug interactions with other medications they take. **As such, a significant need exists for research into this constellation of factors related to cannabis: stigmatization, older users, and medicinal cannabis use.**

CANNABIS: USAGE, STIGMA, & OLDER USERS

Cannabis has been one of the most widely used illicit drugs around the world. In Canada, most people have used it recreationally before turning 30 (Adlaf et al., 2005; Erickson et al., 2013). Cannabis has been used for thousands of years to treat rheumatism, pain, sleep, inflammation, nausea, anxiety, and many other conditions (Zuardi, 2006). Some recent evidence suggests that cannabis may also be helpful in treating pain, nausea, arthritis, anxiety, sleep issues, and depression (Bauchhuber et al., 2019; Briscoe & Casarett, 2018; Lum et al., 2019; Kamrul et al., 2019; Stockings et al., 2018). Relevant here is that cannabis has been legal in Canada for health reasons since 2001 and since 2018 for recreational use (Cox, 2018; Statistics Canada, 2019), but older people have lived most of their lives with cannabis as an illicit drug. Sociological research related to use of drugs such as cannabis has suggested that "a sense of moral outrage [of illicit drug use] has relatively little basis in the pharmacological" (Roberts & Chen, 2013, p.118) properties of the drug; nonetheless, cannabis may well carry the associated history of stigma for older potential or actual users. The consequence is that this may make them reluctant to discuss it with their healthcare provider as a possible avenue to manage health problems.

We know that fear of stigmatization can drive behaviour and actions underground and lead people to conceal or avoid stigmatized activities or practices. In this, cannabis use is no different. Regardless of its legalization in our country, Canadian evidence of stigmatization related to cannabis use persists, whether it is used for health or recreational reasons (Bottorff et al., 2013; Duff et al., 2012; Hathaway, 2004). Bottoff et al. (2013) examined perceptions of cannabis use for health conditions in Canada and found that the stigma associated with cannabis use affected users' social, professional, family, and healthcare provider relationships. Participants in another Canadian study restricted their use of cannabis to places and times where they were less likely to encounter other people, as a means to avoid experiencing stigmatization (Duff et al., 2012). This finding supports sociological and management research related to stigmatization, which suggests people will engage in avoidance or concealing behaviour when they are afraid of stigmatization (Link & Phelan, 2001; Zhang et al., 2020).

Despite this stigmatization, cannabis use in persons aged 60+ has increased by 4% since legalization in Canada, which is a greater increase than in other age groups (Cox, 2018; Statistics Canada, 2019). Similar spikes in cannabis usage for this age group have been seen in the United States as well (Han et al., 2016). Studies show that older users seek it out for health reasons and combatting pain, a well researched symptom that cannabis can ameliorate (Abuhasira et al., 2018; Bobitt et al., 2019; Choi et al., 2017; Kaskie et al, 2017; Kostandinov, & Rocke, 2017). However, in one study only one person had a prescription (Baumbusch & Sloan, 2019). A study in Israel of cannabis users aged 60+ reported that they used cannabis for pain and nausea associated with palliative care, and were able to decrease their narcotic use. The most common side effects were dizziness and dry mouth (Abruhasira et al., 2018). Similarly, in another study, the older cannabis users reported benefits and the ability to decrease their use of opioids (Lum et al., 2019), even though 22% of them experienced some memory loss due to their cannabis use.

Importantly, we cannot assume that those who do use or consider using cannabis are comfortable disclosing that they do so, including to their doctors. A study in Colorado confirms that people ages 60+ lacked information about cannabis, but were reluctant to discuss it with healthcare providers and had challenges accessing cannabis (Bobbit et al., 2019). Prior diverse histories

with this substance are factors here, such as whether they are first-time users, have used cannabis as a youth, or have used it recreationally for most of their lives (Aurora et al., 2019). These experiences (or lack thereof) certainly shape their perceptions of stigma, as well as how they access cannabis and seek information about its use for their health problems. In one Canadian study, the participants believed that the cannabis they purchased from a retail store was medical cannabis, due to the name of the store, even though it was not (Baumbusch & Sloan, 2019).

Another aspect to consider is that those who seek cannabis for health reasons are choosing an alternative or complementary therapy to manage their health problems, which could expose them to both the stigma associated with cannabis and the stigma associated with using an alternative approach to their health (Low, 2005). Low's (2005) study participants expressed that these factors made them reluctant to discuss their use of complementary therapy with their healthcare provider and sometimes even their family members. This lends support to our concerns that the same is true with older people using cannabis for health reasons.

Finally, the evidence of cannabis efficacy and safety in older persons is scant, as Minerebi et al. (2019) report that evidentiary studies focus on younger people. For older users, cannabis use is complicated further depending on its proportion of THC, which may lead to cognitive changes, falls, heart attacks, or psychotic episodes— negative side effects related to physical age-related changes that cause some healthcare providers to be concerned about cannabis use in older persons (Minerbi et al., 2019; Wu & Blazer. 2011). The mixed and scant evidence related to older people's use of cannabis for health conditions has led to relevant Canadian clinical guidelines for this population, to help healthcare providers thoughtfully guide older persons seeking cannabis for health conditions (Bertram et al., 2020). This makes it all the more imperative that users aged 60+ feel comfortable seeking advice from their healthcare provider and disclosing their use (or desire to use). At present, however, we have little extant research that addresses these issues despite the important and potentially problematic influence of stigma.

THEORETICAL FRAMEWORK: SOCIETAL STIGMA

Stigma is "a discrediting mark" that is attached to individuals, items, organizations, or products (Goffman, 1963). Stigma can be associated with different sources, whether they are physical, like a disability, or moral, like engagement in activities deemed morally dubious (Zhang et al., 2020). Stigma can lead to stigmatization. Stigma "is the mark, the condition or status that is subject to devaluation, [but] stigmatization is the social process by which the mark affects the lives of all those touched by it" (Pescosolido & Martin, 2015, p. 91). While sometimes stigma is associated with elements that are uncontrollable (like one's race), other stigmas are seen as controllable, such as with cannabis use (Crocker et al., 1998; Hudson, 2008; Jones et al., 1984; Ragins, 2008). Generally, the more controllable a perceived stigma, the greater the risk of stigmatization, which can lead to a host of negative implications for those stigmatized, from social ostracization and shaming to decreased employment opportunities, morale, and personal wellbeing (Ali, Lyons, & Ryan, 2017; Creed et al., 2018; Harding et al., 2018; Ruebottom & Toubiana, forthcoming). As a result, people generally seek to avoid stigmatization by avoiding sources of stigma, or by concealing their involvement or use of such sources (Jones & King, 2014; Leavitt & Sluss, 2015; Ragins, 2008).

A key feature of stigma is that it is dynamic and socially constructed, meaning that perceptions of stigma change over time; thus, stigmatization can be reduced or even eliminated (Lamont,

2018; Zhang et al., forthcoming). During periods of change or destigmatization, different actors can become more or less stigmatized for their involvement (Lashley & Pollock, 2020). In regard to cannabis usage, while stigma could be reduced for recreational use of cannabis by adults in their 20s, it may not be similarly reduced for other populations. Any consideration of stigma and its impact must therefore be grounded in the perceptions of those involved. This research project could enhance the limited theory about older persons' experiences with stigma related to cannabis use for health reasons.

METHODOLOGY

OBJECTIVE 1 (YEAR 1)

We plan a naturalistic inquiry using qualitative descriptive methods (Sandellowski, 2000) to explain how older people's experiences of social stigma related to cannabis influence how they seek information and access cannabis for health reasons. Qualitative description aims to encapsulate all the elements of an event that come together to make it the event that it is, providing a useful approach to exploring a poorly understood phenomenon (Sandelowski, 2000).

Sample. We plan to purposefully sample English-speaking older Canadians who have used or are considering using cannabis to manage a health problem. Since we anticipate that older individuals may not come forward due to experiences of stigma, we will provide two options: being interviewed or completing an online survey using the same open-ended questions. Using both a survey and interviews will allow for a diverse sample across Canada; the survey, in particular, will provide more anonymity for those individuals who otherwise would not express their experiences. We will also interview various professionals in the cannabis field who sell or give advice on cannabis to understand their experiences working with older people who are seeking cannabis for health reasons.

Recruitment: We plan to ask retail stores, medical cannabis dispensaries, and healthcare providers if we can hang a poster explaining our study (both survey or interview) in their office or place of business. Our collaborators, Melissa Scheuerman and Dr. Maya Kalogirou, are well situated within the cannabis industry and will be of critical assistance in recruitment. We will also contact local, provincial, and national agencies (such as CanAge and HelpAge) that work with and support older people, to ask them to post information about our study on their websites. In addition, we will use social media, such as Facebook, to get information about our study out to older Canadians. Participants will self-select to participate by contacting the researchers via telephone, email, or by completing the online survey. As a small incentive, participants will receive a gift card in appreciation of their time, a strategy that has been found to facilitate recruitment (Dillman et al., 2014). We anticipate conducting approximately 45 interviews with this older population of cannabis users (or cannabis curious) and 20 with cannabis professionals (such as retailers who have experience with older persons asking them questions related to cannabis use for health reasons) (N= total 65), but ultimately, we will conduct interviews until theoretical saturation is reached. We estimate approximately 200 older individuals will complete the online survey.

Data collection. A semi-structured interview guide will be used to interview older participants via telephone, in person, or via Zoom (their choice, as well as honouring public health guidelines). The same interview guide will be used in the survey that participants can access online. Participants' interviews will be audio- or video-recorded and then transcribed. A semi-structured interview guide will also be used to interview cannabis industry professionals about their experiences with older persons questions about using cannabis for health reasons.

Data analysis. We plan to use a deductive and inductive analytic approach by first developing an initial codebook based on our research objectives and interview guide. Next, we will use an inductive approach to look for emerging codes and themes, with three researchers coding the

first three transcripts or survey responses. This will enable us to develop new codes for the codebook. When we reach agreement among the researchers about the codebook, the remaining transcripts and survey responses will be coded. We plan to use NVivo to support thematic analysis by analyzing each code for frequently used words and phrases. Once we identify important concepts within codes, we will group them together to form categories and the categories will be grouped together to form themes (Braun & Clarke, 2006; Vaismoradi et al., 2013).

Findings from the interviews and survey will provide an understanding about older individuals' experiences with stigma related to cannabis used for health reasons. We also expect to learn where older Canadians seek information about cannabis, what types of information they seek, where they get their cannabis, and their experiences with healthcare providers and cannabis—all of which will enable us to proceed with the second phase of the research, described below.

OBJECTIVES 2 & 3 (YEAR 2)

In the second year of the project, an advisory group consisting of older Canadians, healthcare professionals, cannabis professionals and the research team will be formed. Older Canadians will be recruited from our sample, by asking select participants if they are interested in participating in the advisory group. The aim of this group is twofold: to develop information products about cannabis that answer the types of questions older potential users may have (Obj 2), and to develop strategies to make the information accessible to older Canadians, healthcare providers, and the public (Obj 3).

We will be guided by the advisory group to identify the most potentially relevant *short-term strategies.* We will also seek to ensure that the information older people require to determine if cannabis may be helpful with their health problem is developed into *forums that will reach them,* along with healthcare providers, and the general public. We believe it is important to also reach the general public, as family members may give their older relatives cannabis as gifts, and thus they also need this crucial information. We will share these information products with local, provincial, and national agencies that support older individuals so they can post it on their websites (such as CanAge and HelpAge, with whom we have previous relationships).

Some of the strategies to make information accessible to the public (Obj 3) could be a Cannabis Senior Forum. This would include healthcare professionals and professionals from the cannabis industry and older Canadians in either an on-line or face to face venue (depending on public health guidelines) in which older Canadians can pose questions to healthcare professionals and professionals from the cannabis industry. Healthcare professionals and professionals from the cannabis industry can also ask questions of older Canadians and one another. If there are older Canadians from our study who are willing to be a part of the forum we would give them a list of questions about information gaps that we learn from part one of our study. We would record this forum with permission from the participants to upload on a website we will develop and to other agencies that serve older Canadians. These strategies and others that we will develop with the advisory group will diminish fears and stigma related to approaching healthcare professionals and professionals in the cannabis industry to ask questions about using cannabis for health conditions.

TIMELINE

Date	Ethics	Recruitment	Data Collection	Data Analysis	Advisory Group	Knowledge Mobilization
June 21	√					
July 21	√					
Aug 21	√					
Sept 21		√	√			
Oct 21		√	√	√		
Nov 21		√	√	√		
Dec 21		√	√	√		
Jan 22		√	√	√		
Feb 22		√	√	√		
Mar 22		√	√	√		
April 22		√	√	√		
May 22				√		
June 22				√		
July 22				√	√	
Aug 22				√	√	
Sept 22					√	
Oct 22					√	
Nov 22					√	
Dec 22					√	
Jan 23					√	
Feb 23					√	√
Mar 23					√	√
April 23					√	√
May 23						√
June 23						√
July 23						√
Sept 23						√
Oct 23						√
Nov 23						√
Dec 23						√
Jan 24						√
Feb 24						√
Mar 24						√
April 24						√
May 24						√

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