Cannabis Prevalence and Interventions in Inuit Communities:

A literature review

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PAUKTUUTIT
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Acknowledgments

This literature review is an important component of a three-year project helping to reduce the potential harms associated with cannabis by informing Inuit of them, thereby promoting Inuit youth and maternal health.

The goal of the literature review is to identify and summarize academic and grey literature about:

- Cannabis use by Inuit and by Indigenous peoples in Canada overall; and
- Effective substance use interventions that have been described and evaluated by/for Indigenous peoples in Canada (including culture and land-based interventions, gender and trauma-informed interventions, and strength-based wholistic interventions).

The review has been written by the Centre of Excellence for Women's Health with the support of Pauktuutit Inuit Women of Canada and our Project Advisory Committee.

We are appreciative to the feedback, insights and knowledge of the Advisory Committee in the development of this literature review. This important work would not have been possible without their expertise and dedication to the project.

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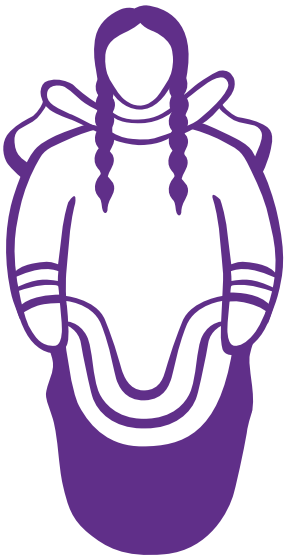

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Introduction

There is very limited data on the prevalence of cannabis use among Inuit. In a community consultation with the Canadian Public Health Association (CPHA) in January 2018 regarding cannabis use, participants in Nunavut identified: a lack of statistics on cannabis use in the territory; worry about problematic patterns of consumption (e.g. over-use to cope with trauma); concerns regarding use by certain sub-groups, including youth; and a lack of data, resources and programs that address cannabis use in the territory [7]. Data on cannabis use among Inuit communities is essential to inform education, prevention and harm reduction initiatives that align with the social context of Inuit knowledge, attitudes, and behaviours around cannabis consumption [1, 7].

Information on the prevalence of cannabis use, knowledge, attitudes and experiences of Inuit women and their partners during pregnancy are also lacking [1, 7]. Participants in the aforementioned community consultation in Iqaluit identified concerns about cannabis use during pregnancy and a lack of information and resources, particularly harm reduction resources [7]. Lessons from the broader substance use and Fetal Alcohol Spectrum Disorder (FASD) prevention fields have underlined the importance of integrating culture into substance use prevention and treatment. In those contexts, a wellness model is integrated, such as identified in the First Nations Mental Wellness Continuum Framework [8] and Honouring our Strengths: A Renewed Framework to Address Substance Use Issues Among First Nations People in Canada [9] to re-centre substance use prevention and treatment around culture and the principles of land, lineage, and language [10-13]. While we base these notions in First Nations worldviews and epistemologies; they could apply similar integrative approaches using Inuit values, including the principles of Inuit Qaujimajatuqangit, as an integral element of future cannabis prevention, awareness, treatment and support efforts.

This report presents the findings of a scoping review conducted to inform a larger project with Inuit women, youth, and their partners that will develop an awareness and education campaign that encompasses a harm reduction approach to cannabis use. The scoping review sought to identify and summarize academic and grey literature about:

1. Cannabis use by Inuit and by Indigenous peoples in Canada overall; and

2. Effective substance use interventions described and evaluated by/for Indigenous peoples in Canada (including culture and land-based interventions, gender and trauma informed interventions, and strength-based wholistic interventions).

Given the limited evidence on cannabis use and interventions amongst Inuit, the literature review was expanded to include information about cannabis prevalence for Indigenous peoples in Canada and circum-polar regions and substance use treatment interventions for Indigenous peoples in Canada.

Methods

A scoping review was conducted using the methods outlined by Arksey and O'Malley (2005) [14]. The research questions were:

RQ1. What evidence on cannabis use by Inuit and by Indigenous peoples in Canada overall has been published in the academic and grey literature?

RQ2. What substance use interventions have been described and evaluated by/for Indigenous peoples in Canada?

Identifying relevant studies

Academic Search Strategy

The searches were conducted in health and Indigenous related academic databases with international coverage, including: MEDLINE, CINAHL, PsycINFO, Embase, via Ovid; Sociological Abstracts via ProQuest; Bibliography of Native North Americans via EbscoHost; Web of Science and Cochrane Database of Systematic Reviews.

The search included studies published in English from January 1990 to January 2020, combining keywords related to Indigenous peoples and either 1) cannabis and related search terms to answer RQ1 or 2) substance use interventions (brief intervention, harm reduction, treatment, prevention and health promotion) and related search terms to answer RQ2. See Appendix A for a full list of search terms. References of highly relevant papers were also searched for additional sources, and key journals (e.g., Journal of Circumpolar Health, International Journal of Indigenous Health) were manually searched for relevant articles.

Grey Search Strategy

A grey literature search was conducted using grey literature for health sciences databases including: des Libris, Canadian Best Practice Portal (PHAC), Public Health+, Canadian Government Publications Research Guide, and a customized Google search of non-governmental organizations. The grey literature database search was supplemented by a manual, targeted search for relevant grey literature on the following Canadian websites:

Canadian:

1. Pauktuutit Inuit Women of Canada
2. Inuit Tapiriit Kanatami
3. Thunderbird Partnership Foundation
4. Canadian Public Health Association (CPHA)
5. National Center for Complementary and Integrative Health (NCCIH)
6. Centre of Excellence for Women's Health (CEWH)
7. Canadian Centre on Substance Use and Addiction (CCSA)

8. Centre for Addiction and Mental Health (CAMH)
9. Health Canada
10. Assembly of First Nations (AFN)
11. Provincial/territorial/Indigenous governments, public health associations, and cannabis commissions in Inuit Nunangat, including:
    a. The Government of Nunavut
    b. The Nunatsiavut Government
    c. The Northwest Territories Liquor and Cannabis Commission
    d. Institut national de santé publique du Québec (INSPQ)

The search strategy, name of database and/or website, and date that the search was conducted was entered in an Excel spreadsheet, along with the search terms. The search terms included: "Indigenous or Aboriginal or Inuit or First Nation or American Indian and Alaskan Native and cannabis or marijuana or pot or drug or substance use". These terms were used to search the databases and websites for relevant documents. The first 50 returns were reviewed/considered for inclusion.

Study Selection

The citation information and abstract of identified papers were exported to Covidence, an online software for the management of literature reviews. The title of each article was screened by one reviewer to remove papers that did not meet the inclusion criteria (see below), or to remove papers that based on title, did not provide information directly related to the two research questions.

Included papers were located and screened by abstract and/or by reading the full paper by two reviewers. Papers were included by abstract if the abstract provided enough information to determine eligibility in the review. If not, the full paper was downloaded and reviewed for inclusion. The team had weekly web meetings in January 2020 and February 2020 to discuss the progress and scope of the review and to resolve any coding discrepancies. Any discrepancies were resolved by discussion and consensus.

Inclusion Criteria

Study Design

Randomized controlled trials (RCTs); case-control studies; interrupted time series; cohort studies; cross-sectional studies; observational studies; qualitative studies; and case series and case studies were included.

Systematic reviews, meta-analyses and narrative reviews were included in the screening phase. However, the references were checked for primary sources meeting our inclusion criteria, and the reviews were then excluded.

The following literature were included in the grey literature review: book chapters; reports; practice guidelines; health policy documents; unpublished research, theses; magazines; and conference abstracts.

Country of studies

RQ1 included studies published in or including data from Canada, or other Arctic and circumpolar regions. Papers for RQ2 only included studies published in, or including, data from Canada.

Date of publication

The literature search covered studies published between 1990 and 2020.

Language

Only studies published in the English language were included.

Intervention Type

In RQ2 we included culturally specific substance use and wellness interventions (that target substance use). Interventions that compared outcomes among Indigenous and non-Indigenous peoples were included. Opioid substitution therapy or methadone maintenance programs without an Indigenous cultural component were excluded.

P (**P**roblem or **P**atient or **P**opulation)	Inuit, Aboriginal, First Nations, Indigenous persons or communities in Canada.
I (intervention/indicator)	Substance use interventions including: prevention, health promotion, addiction treatment, harm reduction services, brief interventions, community initiatives, cultural interventions, gender and trauma informed interventions, and strength-based wholistic interventions.
C (comparison)	Usual/ current practice; before/ after; or no comparison.
O (outcome of interest)	Improved outcomes as described by the study: e.g. reduced substance use, increased harm reduction behaviors, improved cultural connection, improved satisfaction, longer retention in services, increased access to substance use services, improved skills or self-efficacy.

Charting the data

Information from the included papers was extracted by one reviewer and charted in Excel using the following categories:

RQ1: Aim; Study design; Population; Country; Outcomes/ findings; and Suggestions for future research

RQ2: Aim; Study design; Population; Country; Intervention type (treatment, brief intervention, policy, wellness frameworks, etc.); Target substance; Description of intervention; Outcomes; and Suggestions for future research

Research Question 1: Indigenous Cannabis Prevalence

Overview of included studies

There were 34 articles included on cannabis use by Inuit (encompassing populations from Canada and other Arctic regions) and Indigenous peoples in Canada. Most of the literature was from Canada (21) with other studies conducted in Canada and the United States (6), the United States (4), Greenland (2), Norway (2), and the United States and Russia (1). Overall, just under half of the articles (18) were Inuit-specific, but only 8 of the articles from Canada were Inuit-specific. There were no studies published that included data collected by post-cannabis legalization in Canada.

Besides the academic literature, nine pieces of grey literature (including narrative reports, conference proceedings, commentaries, and health survey data) were found on cannabis use by Inuit and Indigenous peoples in Canada, four of which were Inuit-specific. Three of the nine articles had been published since cannabis legalization.

Prevalence of cannabis use in Indigenous populations

Most articles (17) focused on determining prevalence of cannabis use (specifically) or substance use (including cannabis as a substance of interest) amongst Inuit and Indigenous people. Seven of these articles identified Inuit or circumpolar specific prevalence rates. Nine additional grey literature resources were identified on cannabis and substance use prevalence among Indigenous peoples, four of which were Inuit-specific.

Prevalence of cannabis use amongst Inuit

Among the Canadian and circumpolar Inuit-specific literature, cannabis was often cited as the most common and frequently used substance [15-18]. Two studies presented prevalence rates four times higher than non-Indigenous peoples in Canada [15, 19]. Factors identified to be associated with cannabis use among Inuit populations and in circumpolar regions included: being male, 15-19 years old, having a lower BMI, having a lower income, and lifetime problem gambling [15, 19-22]. In a study with maternal-adolescent dyads, seven out of ten Inuit adolescents reported cannabis use in the previous year, 60% started cannabis use before they were age 14, and 45% of adolescents consumed cannabis daily [20].

Research on cannabis use among women shows that approximately one third of Inuit in Nunavik reported cannabis use in their pregnancy [5, 23]. Additionally, a large proportion also reported tobacco smoking, alcohol and other substance use during pregnancy and in the year prior to pregnancy [5]. Women in a relationship who did not consume cannabis were more likely to decrease their binge alcohol drinking at conception [23]. In another study, prevalence rates of cannabis use among women of childbearing ages were lower among those who accessed local treatment resources compared to those who travelled to a treatment facility [16]. In a study of maternal-adolescent dyads in Nunavik, there was an association between mothers' frequency of cannabis use and adolescents' age of cannabis initiation and cannabis frequency, although this association was not statistically significant [20].

High rates of cannabis use in Inuit Nunangat may be attributed to the more affordable nature of cannabis compared to other substances (such as alcohol), particularly in more remote communities [1, 5]. The stigma associated with cannabis use, which remains particularly among older Inuit despite cannabis legalization, may introduce challenges around discussing cannabis use [1].

Among adults in the circumpolar region, one study of Alaska Native peoples showed that cannabis dependence was higher and dependence began earlier for men, compared to women [18, 24]. Cannabis dependence was often the most frequent substance use dependency among men and women across all ethnic groups (though the highest rate of cannabis use dependence was reported by Alaskan Native women) [18].

Prevalence of cannabis use amongst non-Inuit

The broader literature on cannabis use prevalence amongst Indigenous peoples often showed cannabis was the most common or frequently used substance, along with tobacco and alcohol [25-28].

Factors associated with cannabis use among Indigenous peoples included: being male (among adults), older adolescent age, lower family income, cigarette smoking, alcohol use, unhappy home life/not getting along with parents, mental health issues, being bullied, and having friends who use [29-31]. Prenatal maternal joint occurence of smoking and binge drinking also increased the odds of adolescent cannabis use [32].

Five studies compared cannabis use among Indigenous girls and boys [26, 27, 33-35]. Among eight Innu community in Quebec, more girls than boys had ever used cannabis: 43.1% of the girls and 34.9% of the boys [33]. Girls who used cannabis also used more frequently [33]. In a population of five communities from Ontario, boys were more likely to have used cannabis before age 10, and girls were more likely to start use between age 15 and 16 [27]. By age 13, about 35% of the adolescents in this sample had used cannabis, and the rates increased as adolescents aged [34]. Among these adolescents aged 12-16, the cumulative lifetime prevalence of ever using cannabis was higher among girls than boys [26, 35].

Nine studies compared prevalence rates among Indigenous and non-Indigenous students, youth or adolescents in Canada of varying ages in grades ranging from 5 to 12 [30, 36-43]. Cannabis use was higher for Indigenous youth compared to non-Indigenous youth, with progressive increases of use with older

age/higher grade found for both Indigenous and non-Indigenous youth [30, 40, 43]. In these comparison studies, results were mixed for Indigenous boys or girls as having the highest rates of use. Indigenous youth also reported younger age of onset for cannabis use (about 12-13 years, as opposed to about 14 years for non-Indigenous youth) [37].

In a report on cannabis use among First Nations peoples published by the Thunderbird Partnership Foundation, 75% of respondents indicated they had not used cannabis in the last twelve months; and only 27 (of n = 232) people reported frequently using cannabis to get high, to reduce the use of other drugs, as a coping mechanism, or for pain relief [3].

Section Summary – Prevalence, Associated Factors

Fifty-five articles (37 academic, 9 grey) have been published on cannabis prevalence rates and associated factors among Indigenous peoples in Canada, including seventeen articles on Inuit-specific prevalence in Canada. Findings suggest that cannabis is the most common and frequently used substance, with cannabis use rates four times higher than non-Indigenous peoples in Canada.

There is evidence to suggest that:

- nearly half of Inuit youth, particularly male youth, consume cannabis daily;
- a large proportion of pregnant women (primarily in Nunavik) are at risk of using cannabis and other substances during pregnancy and in the year prior to pregnancy; and,
- there is limited sex and/or gender-specific data on prevalence of cannabis use.

Factors associated with cannabis use included being male, 15-19 years old, having a lower BMI, having a lower income, and lifetime problem-gambling.

Future research that looks at cannabis use, associated factors harms and health outcomes particularly in the post-legalization context, is necessary.

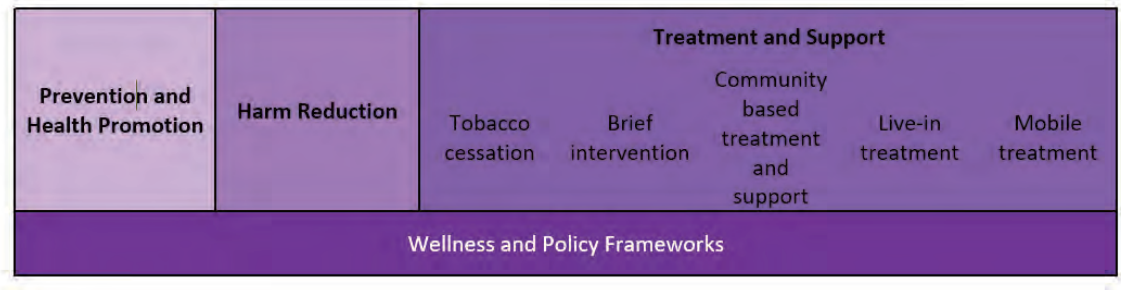
Research Question 2: Indigenous Substance Use Interventions

Overview of included studies

There were 52 articles included that described and evaluated substance use interventions for Indigenous peoples in Canada, and three grey literature resources that described Inuit-specific substance use interventions; however, no interventions were cannabis specific. It is not uncommon in the substance use literature for interventions to focus on overall recovery from substance use disorders, rather than being substance specific (other than interventions for tobacco).

Thirteen of the described interventions were inclusive of Inuit, including an integrated equine therapy [44-46], a community of practice [47], a wellness framework [10], and regulatory approaches [48, 49]. However, these interventions did not include Inuit-specific outcomes. Eight interventions were Inuit-specific, including an online tobacco cessation intervention [50], culture-based healing programs [51], and substance use treatment programs [51, 52]. See Figure 1 for a diagram describing the continuum of substance use services presented below.

Figure 1. Continuum of Indigenous Substance Use Interventions



Treatment and Support

Thirty-one studies evaluated or described substance use treatment interventions, including brief interventions, tobacco quitlines[1], community-based treatment interventions and culture, land, and animal-based interventions. While some substance use treatment programs may have been inclusive of Inuit adults and adolescents, such as the National Youth Solvent Addiction Program (NYSAP) or National Native Addiction Drug Abuse Program (NNADAP); only eight Inuit-specific treatment interventions were found [51]. Seventeen of the treatment interventions were live-in treatment or case management programs that combined group therapy, individual counseling, education sessions, life skills development, and culture-based or used culture-specific practices including smudging, land-based programming, etc. [53-55].

[1]Quitlines is a phone-based smoking cessation service offering the services of trained counsellors who provide information, advice, support, and referrals via phone to individuals who use tobacco.

Inuit Substance Use Treatment Interventions

Ten Inuit-specific substance use treatment interventions and supports were described. The interventions include two smoking cessation interventions in the Inuvialuit Settlement Region and Nunavik, counselling and support groups in Nunatsiavut, Pond Inlet, Clyde River, and Rankin Inlet, five live-in treatment programs in Kuujjuaq, Cambridge Bay, Iqaluit, Sheshatshiu, and Ottawa, and two mobile treatment programs in Nunavut. All the described treatment interventions were outlined in meeting minutes from the 2007 Mamisarniq Conference. No outcomes were described [51].

Changing the Culture of Smoking was a community-based participatory research project in Inuvialuit Settlement Region. The five-year project ran in Aklavik and Ulukhaktok with n = 992 individuals to build individual and community capacity, critical skills, and tobacco reduction. Program activities included tobacco-free activities and challenges, youth training sessions, cessation-based counselling and support, and community-wide education. In Nunavik, the Stay Quit to Win challenge is an incentive-based smoking cessation challenge run annually across fourteen communities. The challenge was adapted from the province-wide version, to include youth, adults, communities, and schools [6].

Quama was a mobile treatment in Nunavut for residential school survivors that ran between 2003 and 2009 as in Igloolik, Chesterfield Inlet, Gjoa Harbour, Repulse Bay, Iqaluit and Rankin Inlet. The program worked with participants over a four-week period to promote healing, reconciliation, and forgiveness through one-on-one counselling and workshops on grief, coping skills, anger management, and healing [51, 56].

The Tuvvik Centre offered a family-based healing program for families in Iqaluit in the 1980s and 1990s. It offered drop-in and live-in programs for families to addressing substance use, mental health, trauma, and financial challenges. When the centre closed, Inuusiqsiavik, an abstinence-based treatment centre opened and was operational until 2000 [56].

The Cambridge Bay Wellness Centre offered the Mobile Addictions Treatment Pilot Program to offer culturally appropriate substance use treatment in Nunavut. The program included staff from the Government of Nunavut's Department of Health and Social Services, mental health consultants, substance use counsellors, Elders, and local social service agencies. In subsequent program provision, the program included cultural teachings, Inuit Societal Values, and recognition of the role of relationships in the healing process[56].

In Nunatsiavut, Honouring Abstinence celebrates people in recovery who have become role models, mentors, and supports with the mission to help build healthy individuals, families and communities by demonstrating that if one person can be abstinent; others can be too. The program can be established in almost any community with very little cost. The program is an alternative to Alcoholics Anonymous and invites beneficiaries with three or more years of abstinence from drugs and alcohol to meet once a month. A spiritual drumming circle of 12 members has also emerged from the group. The Charles J Andrew Youth Treatment Centre (CJAY) is based just outside of Nunatsiavut in Sheshatshiu, Labrador. The program services Innu, Inuit, and First Nations youth and families. CJAY offers a holistic land- and clinical-based programming to help families build their confidence and upon their strengths [56].

In Kuujjuaq, the Isuarsivik Residential Treatment Program is an abstinence-based program that honours Inuit culture, worldview, and history. The program offers gender-specific healing sessions with nine participants per cycle [57]. In Cambridge Bay, the Wellness Centre offers pre-treatment and residential treatment. The program is facilitated largely by Inuit staff and includes healing circles, recreational activities, and Alcoholics Anonymous. The Wellness Centre works closely with other counsellors and workers in the community, to support clients in addressing trust, self-esteem, communication, family violence, relapse prevention, self-care, and transition back into the community. In Ottawa, the Mamisarvik Healing Centre provides treatment for substance use and trauma-related concerns. Elders offer traditional healing knowledge and on-the-land activities are integrated [51].

In Pond Inlet, traditional Inuit healing therapies are used in healing circles and counselling to support individuals with mental health and substance use concerns [51]. In Cylde River, Ilisaqsivik Society offers community wellness programming, including substance use and trauma counselling. All programs integrate Inuit language, culture, traditions, values. Land-based counselling is central to the model; which integrates Inuit knowledge with Western approaches. In Rankin Inlet, Pulaarvik Kablu Friendship Centre offers healing programs throughout the Kivalliq region. Palaarvik also offers wellness programs, including substance use and anti-violence counselling, for justice-involved individuals at the Rankin Inlet Healing Facility [56].

The Government of Nunavut offers substance use and trauma treament services, including counselling and services in corrections facilities. All communities offer community wellness programs which include programming for healthy beginnings, chronic disease and injury prevention, and mental health and substance use services. Future planning for the Nunavut Recovery Centre in Iqaluit has begun. The Centre will provide substance use and trauma services founded on Inuit cultural practices and values. Specialized pregnancy and youth services have been highlighted as a priority [56].

Indigenous Substance Use Interventions

Tobacco Cessation

Two studies tested the impact of tobacco cessation interventions between Indigenous and non-Indigenous participants. Data from two quitlines in Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Ontario, Manitoba, and Saskatchewan showed while quit attempts were similar between Indigenous and non-Indigenous callers, tobacco abstinence rates were higher among Indigenous callers, and men had a prolonged abstinence rate compared to women [58]. In another study on smoking cessation behaviours and attitudes towards cessation options (nicotine patch, nicotine gum, and bupropion), Wardman et al. (2007) found Indigenous participants had higher quit attempts and tobacco reduction compared to non-Indigenous participants, and were less likely to seek physician services and less willing to use nicotine patch or bupropion. Among Indigenous participants, being aware of the drug therapy subsidy increased the likelihood of willingness to use drug therapy, while requiring a physician prescription was related to less willingness to use drug therapy [59].

Brief Interventions

A pilot study tested a culturally adapted brief group psychoeducational and cognitive behavioural approach for adolescents who engaged in risky alcohol use. The intervention integrated Mi'kmaq traditional knowledge and teachings in delivering two brief 90-minute alcohol interventions. Among the youth in the intervention group (20 female, 9 male), the intervention resulted in reduced alcohol use, reduced binge drinking (considered 5 drinks or more per occasion), fewer alcohol-related problems, and increased likelihood of abstaining from alcohol. Participants also decreased their cannabis use, even though the intervention was designed as a brief alcohol intervention, demonstrating the benefits that the intervention may have in addressing multiple substances [60].

Outpatient and Live-in Gender and Family-Based Treatment Options

While none of the programs explicitly stated they were for pregnant women, several of these programs were geared towards families. The Kakawis Family Development Centre on the west coast of BC provided family-based treatment to six families over a six-week period [55], and the Indigenous Healing and Seeking Safety (IHSS) program incorporated trauma-informed elements to address intergenerational trauma and post-traumatic stress disorder (PTSD) [61]. Between one third and one half of the participants from Kakawis Family Development Centre reported being sober at one-year follow-up. Four participants reported the sessions did not have a positive effect because of other complex situations occurring during the time of treatment (i.e. divorce) [55]. Participants of the latter program found that Seeking Safety was an important component to integrate because it explained the links between colonization, trauma, substance use, and healing. At publication, five of the seventeen participants noted their children had been returned to their custody and were abstinent [61].

Other gender-informed programs included the Healing Lodge for Indigenous women, an outpatient program that included anger management, counselling, a sweat lodge, sharing circles, fasting camps, among other initiatives [62, 63]. Cultural components of the Healing Lodge were highly important in reducing mental health concerns for women engaged in prescription opioid use. Specifically, women mentioned that Mother Earth was a therapeutic component for women with substance use concerns, and both the sweat lodge and smudging were important in creating a connection with the spiritual world [63]. A gender-based program, for males in federal custody, was identified to support men in reducing risk of substance use relapse and recidivism. The program used traditional and cultural healing practices, cognitive behavioural therapy, and values-based learning. Program participants had a significantly lower new offense rate (5—6% compared to 16—20%) and were less likely to test positive for hazardous substances [64].

Outpatient, Live-in, and Mobile Treatment for Youth

Many of the interventions available to youth used culture, land, or animal-based interventions, largely as part of NYSAP. NYSAP—similar to NNADAP—uses land-based cultural camps, Elders' teachings,

ceremonial feasts, and including community members in the treatment centers, combined with Western resiliency theory and emotional intelligence, within a positive psychology framework [65]. The program has had positive outcomes. In an evaluation of nine NYSAP treatment centres, Dell and Hopkins (2011) found half the youth reported being abstinent at 90-day follow-up and 74% reported not using at six-month follow-up. Besides being substance free, 54.2% reported that they attended school at three-month follow-up, and 83.64% reported attending school at six-month follow-up [44]. Dell and colleagues also explored the efficacy of equine assisted learning (EAL) at NYSAP treatment centres, including the White Buffalo Youth Inhalant Treatment Centre [46] and Nimkee NupiGawagan Healing Centre (NNHC) [44]. They found using EAL offered a healing space for First Nations and Inuit Youth [44].

NNHC also offered gender-based treatment for First Nations and Inuit adolescents. Using land and wellness-based programming to increase mental, physical, spiritual, cultural, and emotional health had positive outcomes on clients' communication and relationships with their families and communities [52].

Listening to One Another is a family-centered substance use program for youth and their families. The program includes 15-weekly learning sessions to promote family well-being and Indigenous values, to adopt a healthy lifestyle. The program equips youth with tools to avoid bullying, substance use, and other 'risky' behaviours. Parents or other family members are invited into sessions to discuss parenting issues. The program has been adapted in different communities, using Elders and the local culture to guide its development [66].

Other Community-Based and Mobile Treatment Modalities

Other community-based treatment modalities described included a mobile community treatment program to reduce substance use concerns, a treatment program for homeless individuals, and one program to support community-based mental health and substance use management. The Building Health Communities (BHC) program assists First Nations and Inuit communities in developing community-based mental health and youth solvent use prevention approaches [67].

The identified mobile treatment program was built on community values and used culturally based activities and counselling to increase awareness and provide treatment and aftercare activities [68]. I'taamohkanoohsin (Everyone Comes Together) was intended for those who were precariously housed and experiencing substance use [69]. The program was built using Niitsitapi' beliefs and evidence on addictions recovery and comprised of a tipi gathering every other Friday where people would gather in a downtown park to share hot drinks, snacks, and a lunch as well as drumming, singing, story-telling, and face-painting. The gatherings provided the opportunity to share Niitsitapi' values through storytelling and increased individuals' spiritual identity [69].

Section Summary – Treatment and Support

Fifty-four articles (51 academic, 4 grey) outlined Inuit and Indigenous-specific substance use treatment and support interventions. They included a wide range of programming, spanning from tobacco cessation and brief interventions to outpatient, live-in, community-based, and mobile substance use treatment; thus providing many options for potential program development.

Program aspects identified included:

- local culture, language, traditions, and knowledge into the programming; thus highlighting the importance of individual, family, and community wellness;
- additional support in addressing health, social, and spiritual concerns impacting an individual's ability to reduce or stop using substances, including mental health, anti-violence, relationship-building, nutrition, and housing support; and,
- the importance of being trauma-informed to support the health and wellness of communities and clients in addressing colonial and intergenerational trauma, and promoting healing.

The range of described treatment and support interventions highlight the efficacy of different forms of treatment and support. While none of the described programs were designed specifically for pregnant women, the interventions designed for women, families, and youth - including brief interventions, live-in, and outpatient programming - use approaches that can be drawn upon when planning and delivering perinatal services. Future programs should integrate land-based, cultural skills and activities, life skill development, and educational activities.

Harm Reduction Programs

Seven articles on harm reduction interventions or approaches were identified. One article described a pilot program of an emergency warming centre (EWC) for homeless people in Inuvik, Canada. The EWC is a harm reduction approach piloted in an Inuit context, to reduce harms for people experiencing homelessness and using substances. The program provides a warm place to sleep and food for people under the influence of alcohol or other substances, while restricting on-site substance use [70]. While the authors did not measure cannabis use outcomes, the pilot program showed reduced intention to use alcohol and improved social functioning among participants.

Two studies described or evaluated managed alcohol programs (MAPs), which provide managed distribution of alcohol and access to health and social services to clients on site who experience homelessness with chronic alcohol use dependence. In the programs reviewed, tailoring for Indigenous people included on-site Elder support and access to cultural activities such as drumming circles [71, 72]. Two articles described Manito Ikwe Kagiikwe (the Mothering Project), a comprehensive harm reduction program designed for pregnant and parenting women who have substance-use concerns, to increase opportunities for access to comprehensive services and relationship building [10, 73].

Last, two articles described Working with Addiction and Stress retreats, which included four days of group counselling with two expert-led ayahuasca ceremonies and a sweat lodge ceremony. Results from this study show while self-reported alcohol, tobacco and cocaine use decreased, cannabis and opioids use did not decline. Participants reported they had fewer substance use cravings and reduced use after the retreat, a positive impact on their relationships with themselves and others compared to previous treatment experiences, and an improved spiritual connection [74].

Section Summary – Harm Reduction

Seven articles (all academic) outlined Inuit and Indigenous-specific harm reduction interventions. These interventions were drop-in, in-patient, and periodic; highlighting the diversity of approaches that can be used to reduce harm.

The Mothering Project, was the only identified intervention designed for pregnant and parenting women. Similar to the treatment programs, the harm reduction interventions were often culture and trauma-informed, and integrated elements to address the social and structural determinants of health.

Despite the limited number of harm reduction interventions found in the literature, the grey literature highlighted an increasing interest in adopting harm reduction-oriented approaches [1-5], particularly in addressing cannabis use.

Health Promotion and Substance Use Prevention

Health Promotion

Five health promotion interventions or approaches were identified. One paper identified the potential for applying a health promotion framework to research on prescription drug misuse among First Nations in Canada [75]. The culturally informed health promotion framework includes Western and Indigenous understandings of health and wellness, integrates First Nations cultural understandings of healing, aligns with and integrates cultural values and understandings, and accounts for colonial history and advocates for First Nations self- determination. Further, this framework highlights the importance of using a decolonizing research approach that applies community based participatory action methods, and engages and prioritizes the wisdom and experience of community members and Elders throughout the research process [75].

The other three papers described health promotion interventions or programs for youth. One paper described the Youth Outreach Program (YOP)—an intensive, individualized outreach and support program based on a social determinant of health approach for Indigenous youth (ages 13-18) with characteristics associated with FASD [76]. The YOP has led to improved health and social outcomes, including feedback from participants on reductions in alcohol and cannabis use. Health promotion approaches for youth addressing tobacco reduction were also identified. One paper provided findings from a case study of an early learning program for Indigenous children ages 3-5 years. The Aboriginal Head Start Urban and Northern Communities (AHSUNC) program in Ontario sought to improve positive identity among Indigenous children through education, health promotion and social support, and has showed reduced tobacco consumption among parents and caregivers, along with other improved health and social outcomes [77]. In addition, Collins (2013) described a distance education program on tobacco reduction offered to health care providers in all Inuit regions in Canada [50]. The education included learning materials and core competencies related to community education and facilitating support groups for adults and youth on the health effects of smoking and social and cultural context of tobacco use among Inuit. Feedback on the course suggested participants provided community smoking reduction and cessation support as part of the project, with some reporting reduced rates of smoking. This intervention may be appropriate across Inuit Nunangat, because it was implemented and tested in Inuit communities.

Substance Use Prevention

Thirteen prevention interventions or approaches were identified: two provided prevention programming related to alcohol, three on tobacco, and the remaining eight papers described substance use prevention approaches sommarily. Several papers described community-based prevention initiatives, including substance use prevention education for youths, adults and families. A model was created in which various Indigenous communities can culturally adapt key constructs [78].

One paper highlighted eight exemplary FASD prevention and wellness programs from Indigenous communities across Canada that have enacted the eight principles for FASD prevention from the Truth and Reconciliation Commission of Canada (TRC) Call to Action #33 [10]. The eight programs were developed

to: apply to the culture and community; integrate the wisdom of Elders; use kinship languages; use land-based approaches and provide strength-based programming. One such approach highlighted included the Parent Child Assistance Program (PCAP), a home visitation program using a case management model for women at risk of substance use who are pregnant, postpartum, or likely to become pregnant. PCAP has been culturally adapted through community collaboration and engagement [79].

Prevention Interventions for Youth

Seven prevention interventions were described for youth, including one for Inuit youth. In Nunavut, the Inuit Tobacco-Free Network partnered with the Nunavut's Department of Health and Social Services to develop a video screening contest in secondary schools. The videos are authentic stories from Inuit youth impacted by smoking. The contest intent was to encourage youth to consider the impact of smoking in their lives. The videos made students aware of the harmful effects of smoking, which reinforced their decision not to smoke or consider quitting. The videos demonstrated how challenging it was to quit smoking while also providing strategies to abstain [80]. Having videos from the North and available in Inuktitut was an important element that made the videos be received more favourably than other tobacco reduction or cessation campaigns.

Another tobacco prevention program called Aboriginal Kids Walk Away (from Tobacco Abuse) is a youth engagement and education program on tobacco and smoking prevention. The program included information on traditional tobacco use, peer prevention education, and activities including powwow and tobacco free sports [81].

In British Columbia, a culture camp was created for Carrier Sekani youth to prevent youth suicide by offering cultural activities and traditional skill building. The intervention intended to build positive identity and community connection and has shown improvements in alcohol and substance use outcomes [82].

Four prevention approaches for youth were offered in schools. One pilot study evaluated the short-term affects of a culturally sensitive tobacco prevention approach for First Nations children in two schools in Alberta that included education on the health effects of commercial tobacco use, peer refusal strategies and integrated traditional knowledge and activities (e.g. smudging, opening circle) [83]. The Alexis Nakota Sioux Nation, also in Alberta, culturally adapted and tested a substance abuse prevention program for Indigenous students at Alexis Nakota Sioux Nation School. The school-based program was translated and culturally adapted to integrate Nakota ways of knowing, including: ceremonies, prayer, storytelling, Elder engagement, and various cultural activities reflective of the health education content [84, 85].

Other school-based interventions included a universal addiction prevention program for youth delivered in workshops in Innu school classrooms in Quebec, and aimed at building social and interpersonal skills [86]. Two reflective approaches to substance use prevention, integrated education, arts and cultural activities, to create a dialogue with urban Indigenous youth in cities in British Columbia and Alberta [87]. The Life Skills Training Program, delivered outside of a classroom setting, is a substance use prevention program that works to build resistance strategies, build confidence and a positive self-image, and develop healthy

coping mechanisms. Evaluation of this program showed the importance of alignment with the school to ensure youth retention [88]. While these school-based prevention programs have not specifically addressed cannabis use, substance use prevention interventions that create an open dialogue and integrate empowering arts, education and cultural activities may be a promising approach for providing cannabis prevention and harm reduction education for Inuit youth.

Section Summary – Prevention and Health Promotion

They found eighteen substance use prevention and health promotion interventions in the literature (all academic). The interventions ranged broadly, from health promotion and prevention frameworks, to outreach programs. Ten of the health promotion and prevention interventions were targeted to youth, showing the interest in starting prevention efforts earlier.

Only two of the health promotion and prevention interventions were Inuit-specific: a distance education, tobacco cessation course and a video screening contest. The two interventions were both tobacco specific and integrated both cultural-contexts of tobacco amongst Inuit and harm reduction-oriented approaches. Findings from the grey literature highlight the importance of aligning cannabis programming and messaging with those previously created for tobacco and alcohol prevention. Examples highlighted in the literature include land-based healing programs, youth and Elder programs, warning signs and labels, and alignment with Tobacco Reduction Strategies and TB prevention strategies that share information about the harms of sharing smoking devices [1, 6].

The grey literature points to how cannabis awareness campaigns and educational efforts should:

- share information on different strains and forms of cannabis, the relationship of cannabis use with mental health, known facts about cannabis use and pregnancy, where cannabis is accessed legally, and proper storage;
- be regionally and culturally specific; and,
- be disseminated through multiple mediums, including posters, community forums, radio messaging, and pamphlets/workbooks [1, 3, 4].

Resources for service providers should align with community messaging to ensure there is consistency in health promotion efforts.

Wellness Frameworks

Three wellness frameworks were identified, all of which apply to substance use despite one describing eight tenets for FASD prevention in response to the TRC Call to Action #33 [10].

Two articles described or applied Honouring our Strengths—a comprehensive continuum of care framework for addressing mental health and addictions programming for First Nations based on the following guiding principles: holistic, community centred, connected, resiliency focused, balanced, shared responsibility, culturally competent and culturally safe [11, 12]. Honouring our Strengths was developed to support changes in NNADAP and NYSAP and offers a framework for developing, implementing and testing substance use and mental health programs for First Nations [12]. Honouring our Strengths has been applied to develop measures of individual's wellness based on the four quadrants of the medicine wheel. These measures of wellness have been validated with selected NNADAP and NYSAP programs [11].

Honouring our Strengths and the First Nations Mental Wellness Continuum Framework has been used by Mental Wellness Teams. The teams are multi-disciplinary community-based and provide culturally safe mental health and substance use services to First Nations and Inuit communities. They integrate First Nations and Inuit worldviews and knowledge with western clinical perspectives to address the substance use continuum of care [67].

A final paper describes a wise practice framework as a basis for creating a dialogue within First Nations communities, specifically, the authors describe how the seven Grandfather Teachings may provide a foundation for a community health model that can support knowledge exchange and cultural safety [89]. While these wellness frameworks are not Inuit specific, responses to cannabis use could be built on Inuit understandings of wellness and wise practices, such as the Inuit Societal Values, and guided by the social, spiritual and cultural realities and beliefs of Inuit.

Policy Frameworks

Five studies described or evaluated alcohol (3) or tobacco (2) policies in communities and territories. Davison et al. (2011) described uptake of alcohol policies in 78 First Nations, Métis, and Inuit communities between 1970 and 2008; half of the included communities adopted an alcohol policy. The policies ranged from dry (communities where alcohol is prohibited) to restricted (communities where there were measures regarding the quantity of alcohol for individual possession, limited liquor store hours) and open (communities where there were no other measures than those included in the Territory's Liquor Act). The authors found communities with restrictions are often younger, more isolated, and comprised of a larger Indigenous demographic [48].

In a study comparing wet versus dry approaches in Nunavut, authors found a relationship between policy approaches and violence: wet communities presented more violent crime rates than dry communities [49]. In another study of alcohol policies in Ontario, four of 129 Indigenous communities identified having an alcohol management policy [90]. The authors found communities described fewer alcohol-related problems,

criminal activity, and liquor license violations. However, findings were based on the perceptions of a limited number of stakeholders, and like the research in Nunavut, are not generalizable.

Summary

Despite limited research on cannabis use prevalence and treatment for Inuit, existing evidence indicates cannabis is the most frequently used substance across Inuit Nunangat, in part due to the more affordable nature and ease in transporting cannabis compared to other substances, such as alcohol [1, 5, 15, 19]. There is evidence to suggest nearly half of Inuit youth, particularly male youth, consume cannabis daily [20]. Research among Inuit women has found cannabis use often occurs together with smoking and drinking, and that these behaviours may continue into pregnancy [5, 16, 23].

While many of the existing prevalence studies have been done in Nunavik, there is evidence to suggest these trends could apply across Inuit Nunangat [1, 5]. Longitudinal research is needed to monitor cannabis use trends across Inuit Nunangat, particularly in the post-legalization context, and with sub-populations, including women and youth. There is also a need to better understand health outcomes of cannabis use and to reframe the focus to be strength-based and away from stigmatizing. Exemplary is Thunderbird Partnership Foundation's National Cannabis Dialogue Report [3], which uses strength-based language, and outlines advantages and harms cannabis users reported in a harm reducing manner.

Fifty-one substance use interventions which may be helpful when addressing cannabis use problems are described in this report: eight were Inuit-specific. Despite limited evidence on Inuit-specific substance use prevention, treatment, and support; existing evidence highlights the importance of integrating language and culture into substance use interventions. The range of interventions—from quitlines to community-based supports to mobile treatment—illustrate a continuum of support offered in Inuit, other Indigenous and non-Indigenous contexts, that will be important for communities to discuss.

Many of the Inuit-specific interventions, including several of the treatment programs [57], support groups [51], and policy interventions [49] were abstinence-based. However, the grey literature supports furthering harm reduction-oriented [1-5] and preventive approaches [1-5, 9, 66, 85].

In the broader substance use literature, and in the literature identified in this review related to prevalence, factors influencing use, and interventions - strength-based, wellness and resiliency-oriented factors are not adequately investigated and reported. It will be important when designing cannabis prevention and treatment programming to ensure these positive foci are integrated. The Indigenous wellness frameworks described in these findings and Inuit values, such as Inuit Qaujimajatuqangit, can guide this work.

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Appendix 1. Academic Literature Search Terms

Research Question 1

Medline

1. exp Indians, North American/ or exp Inuits/ or exp Health Services, Indigenous/.

2. exp Nunavut/ or (Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut).mp. or (Arctic Regions/ and Canada.mp) or (arctic or circumpolar).mp.

3. (Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives).mp.

4. 1 or 2 or 3.

5. exp Cannabis/ or marijuana abuse/.

6. (marijuana or cannabis).mp.

7. 7 or 8 or 9.

8. 6 and 10.

CINAHL

1. (MH "Inuit") OR "Inuit".

2. (MH "Native Americans").

3. TI, SU, AB (Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).

4. 1 or 2 or 3 .

5. (MH "Cannabis") OR "cannabis".

6. TI, SU, AB (marijuana or cannabis) .

7. 5 or 6.

8. 4 and 7.

PsycINFO

1. inuit.mp. or exp Inuit/.

2. (Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).mp.

3. 1 or 2.

4. exp "Cannabis Use Disorder"/ or exp Cannabis/ or cannabis.mp. or marijuana.mp.

5. 3 and 4.

Embase

1. inuit.mp. or exp Inuit/

2. (Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).mp.

3. 1 or 2.

4. exp Cannabis/ or cannabis.mp. or marijuana.mp.

5. 3 and 4.

Sociological Abstracts

• Anywhere (Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or

[2]Database specific search term

Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar) AND (marijuana OR cannabis).

• Limits- Source Type: Scholarly Journals, Location: Canada.

Bibliography of Native North Americans

1. TI, SU, AB (Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).

2. TI, SU, AB (marijuana or cannabis) .

3. 1 and 2.

Cochrane

• cannabis AND Inuit.

• cannabis AND indigenous .

• cannabis AND first nation*.

Web of Science

1. Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives (topic).

2. Canada* or Aboriginal or "First Nation*" or native* or Indigenous or Inuit* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar (topic).

3. marijuana or cannabis (topic).

4. 1 and 2 and 3.

Research Question 2

MEDLINE

1. Inuits.mp. or exp Inuits/ or Health Services, Indigenous/ or exp Indians, North American/.

2. (Aboriginal or "First Nation* s" or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives).mp.

3. 1 or 2.

4. (treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*").mp.

5. Substance-Related Disorders/.

6. ("substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*).mp.

7. 4 or 5 or 6.

8. (Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).mp.

9. 5 and 6 and 9 and 10.

PsycINFO

1. (Aboriginal or "First Nation* s" or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives).mp. or exp Indigenous Populations/.

2. ("substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*). mp. Or exp Addiction/ or exp Drug Addiction/.

3. (treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or

"health promotion" or prevention or outreach or "harm reduction" or "wellness program*").mp.

4. 2 and 3.

5. (Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).mp.

6. 1 and 4 and 5.

Embase

1. Inuits.mp. or exp Inuits/ or Health Services, Indigenous/ or exp Indians, North American/.

2. (Aboriginal or "First Nation* s" or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives).mp.

3.1 or 2 .

4. Substance-Related Disorders/ or ("substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*). mp.

5. (treatment* or "brief interv on" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*").mp.

6. 4 and 5.

7. exp drug dependence treatment/.

8. 6 or 7.

9. (Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).mp.

10. 3 and 8 and 9.

CINHAL

1. (MH "Inuit") OR "inuit" OR (MH "Indigenous Peoples") OR (MH "Health Services, Indigenous") OR (MH "Indigenous Health") .

2. TI, AB, SU (Aboriginal or "First Nation* " or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives).

3. 1 or 2 .

4. (MH "Substance Use Disorders") .

5. TI, AB, SU ("substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*).

6. 5 or 6.

7. TI, AB, SU (treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*").

8. 6 and 7.

9. (MH "Substance Use Rehabilitation Programs").

10. 8 or 9.

11. TI, AB, SU (Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).

Bibliography of Native North Americans

1. TI, AB, SU (treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*").

2. TI or AB ("substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*) .

3. 1 and 2.

4. TI, AB, SU (Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar).

1. 3 and 4.

Cochrane Database of Systematic Reviews

• Aboriginal or First Nation or First Nations or Indigenous or Inuit* AND Topics- Tobacco, drugs & alcohol .

Sociological Abstracts

1. Aboriginal or "First Nation* " or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives or"native peoples of Canada ".

2. "substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*.

3. treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*".

4. Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar.

5. 1 and 2 and 3 and 4.

Web of Science

1. Aboriginal or "First Nation* " or Indigenous or Inuit*or Eskimo* Inuvialu* or Inuinnaqtun or Inuvialuktun or Innu or Innus or Inuk or Esquimau* or Nunavik or Qikqtaalumiut* or Uqqurmiut* or Nugumiut* or Akuliarmiut* or Qaumauangmiut* or Sikusilaamiut* or Oqomiut* or Talirpingmiut* or Qingaumiut* or Kingnaitmiut* or Saumingmiut* or Itivimiut* or Sanikiluarmiut* or Tarramiut* or Netsilik or Dogrib* or Gwich'in or Gwichin or Gwitchin or Sahtu or North Slave or Deh Cho or South Slave or Yellowknives.

2. "substance use" or "substance abuse" or addiction or "drug dependence" or tobacco or drugs or alcohol or cannabis or marijuana or opioid*.

3. treatment* or "brief intervention" or "motivational interviewing" or screening or abstinence or detox* or rehab* or cessation or recovery or "land based" or "strengths based" or "culture based" or "health promotion" or prevention or outreach or "harm reduction" or "wellness program*".

4. Canada* or Nunavut or Iqaluit or Nunavik or Nunatsiavut or NunatuKavut or arctic or circumpolar.

5. 1 and 2 and 3 and 4.

Search terms adapted from:

Campbell, Sandy, Marlene Dorgan and Lisa Tjosvold. Filter to Retrieve Studies Related to Indigenous People of Canada's North (including Northern Quebec and Labrador) OVID MEDLINE Database. John W. Scott Health Sciences Library, University of Alberta. Rev. February 8, 2016.

http://guides.library.ualberta.ca/ld.php?content_id=13959040

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