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Unpacking the Effects of Decriminalization: Understanding Drug Use Experiences and Risks among Individuals Who Use Drugs in British Columbia

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Abstract

Objectives On January 31, 2023, a three-year exemption from the Controlled Drugs and Substances Act was granted to the Canadian province British Columbia (BC), allowing the cumulative possession of 2.5 g of specific unregulated drugs amongst adults. The goals of the policy are to reduce health, social, and economic harms associated with criminalization, stigma, drug overdose deaths, as well as drug seizures, arrests, and associated enforcement and court costs. As the inaugural year has passed, we aimed to assess people who use drugs' awareness and knowledge of the, as well as the policy's impact on their drug use patterns and overdose risk.

Methods We conducted 100 telephone-based semi-structured interviews with people who use drugs from across BC, exploring changes in drug use experiences and perceived overdose risk since the implementation of the policy. Participants also completed an interviewer-administered survey assessing socio-demographics and substance use patterns. We utilized a qualitative content analysis approach to analyze the interview data.

Results Our findings indicate a general awareness of the policy among participants, although some policy details were often misunderstood, and participants expressed the need for more widespread dissemination of policy information. While the majority of participants reported that their drug use patterns remained unchanged after decriminalization, some made subtle adjustments, such as carrying under the 2.5 g threshold to minimize the risk of criminalization. Participants highlighted several policy benefits and concerns, including its potential to reduce criminalization and stigmatization, but also increase public drug consumption. Participants offered suggestions for policy improvement.

Conclusion These findings underscore the need for ongoing monitoring of the impacts of decriminalization regarding its potential impact on people who use drugs' drug use patterns and related risks. Reevaluation of the possession threshold and efforts to enhance education and awareness about the policy could help achieve the policy's goals.

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Introduction

In 2023, the Canadian province of British Columbia (BC) introduced a three-year pilot decriminalization policy representing a novel shift in Canadian drug policy, informed by other international efforts. Decriminalization aims to move away from a punitive approach towards a public health approach by reforming the legal framework around the possession of select unregulated drugs [1]. Under this policy, adults over the age of 18 in the province of BC are allowed to possess up to a cumulative amount of 2.5 g of specific drugs, including opioids, methamphetamine, cocaine/crack-cocaine, and MDMA/ecstasy, for personal, non-prescribed use [1]. This policy is a pilot initiative that is in effect for a period of three years, from January 31st, 2023, to January 31st, 2026, and involves a public awareness campaign and police education efforts to increase understanding [1, 2]. The stated goals of the policy include a reduction in health, social, and economic harms associated with criminalization, reduction of stigma, reduction of drug overdose deaths, and a reduction in drug seizures, arrests, and associated enforcement and court costs [3]. Overall, the policy aims to shift the public's perception of drug use and foster a safer environment by reducing stigma against people who use drugs and alleviating concerns of criminal charges. Stigmatization associated with drug use often discourages people who use drugs from seeking help or utilizing essential harm reduction and treatment services. However, many critics have asserted that the goals of the decriminalization policy are ambitious, and that it will not address the overdose crisis, which is largely driven by the toxicity of the unregulated drug supply and a lack of access to regulated, non-toxic substances (i.e., 'safe supply') [4–6]. For instance, in Canada, fentanyl and related analogues now primarily make up the illegal opioid supply [7], and fentanyl-involved opioid deaths are now the leading cause of death in BC for people aged 10–59, with fentanyl being detected in 85% of opioid deaths in the province in 2023 [8]. Moreover, the drug supply has been further tainted with benzodiazepines (i.e., 'BenzoDope') and other adulterants such as xylazine (i.e., 'Tranqdope') [9, 10]. For people who use drugs, the use of unregulated drugs often leads to various harms, including arrest, barriers to accessing services, and increased risk of overdose.

Given this context, the implementation of a cumulative possession threshold of 2.5 g could potentially influence drug use practices and associated risks among this population. As such, this aspect of the policy has been widely contested. For instance, prior to the implementation of decriminalization, researchers, government officials, policymakers, as well as people with lived experience of drug use, and drug advocacy groups (e.g., The Vancouver Area Network of Drug Users [VANDU]) were consulted on the optimal possession threshold. During

these consultations, several thresholds were proposed based on factors such as cost-effectiveness, convenience, risk of receiving a contaminated supply, etc., all of which were above the 2.5 g [11]. Regardless, citing feedback from law enforcement officials across BC, the final possession threshold approved by the government was 2.5 g. For many people who use drugs, this amount was considered too low and not reflective of their use or purchasing patterns, suggesting that the policy may not fully consider the realities of people's drug consumption and purchasing practices [11, 12]. In contrast, other countries that have implemented similar decriminalization initiatives have taken a different approach to drug possession thresholds [13]. For instance, in 2001 Portugal, which implemented what is largely considered to be a successful decriminalization policy, established different threshold amounts for each of the substances included in their policy, based on estimations of the average quantity required for an individual for ten days. Thus, possession thresholds play a pivotal role in the outcome of decriminalization policies, including in regards to whether they are adhered to or affect drug use patterns.

Thorough evaluations of the policy's impact on drug use patterns and adherence to the possession threshold are crucial to understand whether the policy is meeting its intended goals, and to inform potential policy adjustments. To this end, several evaluations are currently being undertaken by independent researchers, and provincial and federal governments, examining different aspects of the policy and the impacts it has on different systems and populations [14]. The introduction of the policy, and particularly the establishment of the 2.5 g threshold, presents an opportunity to explore its impact on drug use among people in BC. As such, we conducted the current qualitative study to explore the initial impact of decriminalization on people who use drugs' use experiences and patterns within the first year of the policy. Specifically, this paper examines people who use drugs' awareness and knowledge of the decriminalization policy, as well as its impact on their drug use patterns and overdose risk. Understanding the knowledge people who use drugs have about the decriminalization policy, including its specific details, can provide valuable insights into how their behaviors and drug use decision-making may have changed following the policy's implementation [15]. These findings can inform potential policy amendments in BC and offer guidance for future decriminalization efforts in other regions.

Methods

Study design and recruitment

We conducted a cross-sectional qualitative study by recruiting people who use drugs from cities located across BC, representing each of the province's five health

regions: Interior, Fraser, Vancouver Coastal, Vancouver Island, and Northern [16–18]. By including participants from within all health regions, we aimed to capture the unique experiences, challenges, and perspectives of people who use drugs, as well as ensure a diverse and representative sample. This approach was underpinned by a multifaceted recruitment plan that involved purposive and snowball sampling to ensure participants were recruited from a wide spectrum of geographic locations, experiences, and backgrounds. Specifically, the purposive sampling approach leveraged established networks of people who use drugs from the Canadian Research Initiative in Substance Matters (CRISM), community-based healthcare and harm reduction providers, and researchers to recruit eligible participants.

Additionally, we collaborated with several drug use advocacy groups, such as VANDU and the Canadian Association of People Who Use Drugs (CAPUD), among others who helped circulate our study flyers throughout their networks and online through social media platforms (e.g., Facebook & Instagram). Study participants were asked to share the study details with their peers who met our inclusion criteria as a snowball sampling technique, which was pivotal for reaching participants from smaller and more rural/remote communities who were less connected to formal health and harm reduction services. We also undertook additional targeted recruitment efforts to elicit information from underrepresented communities. Study recruitment continued until the research team had recruited participants from each of the five health authorities and met our target sample size of 100 participants. The sample size was determined a priori to strike a balance between capturing the depth and diversity of participant experiences and perspectives, while ensuring the ability to conduct thorough, meaningful analyses. This approach also aimed to provide a level of generalizability within the context of the study.

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Eligibility criteria

Prospective participants contacted the research team via a toll-free telephone number or by email and were screened for study inclusion using the following eligibility criteria: (1) resident of BC since before January 31, 2023, (2) aged 18 years or older, (3) access to a telephone or internet, (4) spoke English, and (5) consumed unregulated drugs at least three times a week, to indicate regular drug use. Eligibility screening was interviewer-administered using Research Electronic Data Capture (REDCap) online survey software (a secure web application

for building and managing online surveys and databases) [20, 21].

Data collection

Participants provided informed verbal consent, and all interviews were conducted over the telephone.

The interview contained two components. The first part captured participant socio-demographic and drug use profiles (also recorded in REDCap) in order to describe our sample. Variables included the participant's age, gender, ethnicity, sexual orientation, housing and employment status, highest level of education, as well as drug use and overdose history.

The second part of the interview was a semi-structured, open-ended qualitative component. All interviews were conducted by a trained member of the research team, lasted on average 45 min in length and were audio-recorded for transcription purposes. Interview questions focused on various aspects in relation to participants' drug use patterns, including changes to frequency of use, and related risks. The interview guide was developed collaboratively with the study's working group, including researchers and people who use drugs, which ensured questions were relevant, respectful, and designed to elicit meaningful insights.

All participants were compensated with \$50.00 cash honoraria, adhering to standard remuneration policies [22–24]. This honorarium was sent via an online banking e-transfer to an email address the participant provided or via MoneyGram.

Data analysis and synthesis

Quantitative data analysis

All quantitative socio-demographic and treatment data collected in REDCap were exported to a Microsoft Excel file and basic frequency counts for all data were subsequently analyzed using IBM SPSS Statistics (Version 27) [25].

Qualitative data analysis

Our study adopted a qualitative deductive and inductive content analysis approach to analyze the interview data [16–18, 26]. The process began by importing all interview transcripts into NVivo (Version 12), a specialized software for qualitative data analysis [27]. Initially, FA and CR developed a comprehensive codebook that outlined broad content categories derived from our research objectives, interview questions, and preliminary insights gleaned from interviews, note-taking/memoing, discussions, and debrief meetings after each interview. Subsequently, the initial codebook underwent iterative refinement through feedback from the working group.

We utilized a hierarchical coding structure consisting of parent, child, grandchild, and great-grandchild codes

to capture larger, broader categories, as well as smaller, more specific categories and sub-categories [28] This allowed for a structured approach to data analysis that supported the ability to categorize a large amount of data and manage the complexity of the analysis. Once the coding began, new codes were developed and integrated within the codebook when new insights were identified within the interview data. This iterative process of coding allowed for the systematic organization of the data, ensuring that all information was categorized into clear and definitive groups. An independent coder, ML, coded all interviews, and to bolster the credibility and integrity of our content analysis, we enlisted the expertise of a second coder, MB, to conduct a 'member checking' exercise. MB coded a subset of interviews and met with the team to discuss similarities and discrepancies. Any discrepancies were made note of, discussed, and subsequently resolved.

Further, given the evaluative nature of this study, we were particularly interested in examining potential changes to participants' drug use patterns and drug-related risks post-decriminalization. As such, it was important to draw on methodological diversity to understand both the breadth and depth of participants' experiences [29–33]. After completing the content analysis of all interviews, we sought to quantify participants' changes in experiences, based on their qualitative responses [34]. Specifically, we utilized our parent nodes as the denominator, representing the number of participants who responded to a particular code (e.g., drug purchasing patterns). Once we had identified the denominator, numerators were determined by calculating the number of participants who discussed experiencing specific changes in relation to this code (e.g. such as purchasing or carrying either more or less drugs since decriminalization). This method provided a quantitative representation of our qualitative data, enhancing the understanding of the impact of decriminalization on participants' experiences.

Results

Quantitative findings

Study participants' location of residence

A total of $n=100$ people who use drugs participated in our study. Participants were located throughout BC, encompassing representation from all five health authorities. Specifically, there were 37 participants located in the Interior Health Authority, 31 from the Island Health Authority, 14 from Vancouver Coastal Health Authority, 12 from the Fraser Health Authority, and 6 from the Northern Health Authority.

Study participants' socio-demographic characteristics

The average age of participants was 44 years old ($SD\pm 10.65$). The majority were straight/heterosexual (87%), White (70%) men (56%). Most participants were unemployed (82%), with only a minority engaged in part-time (13%) and full-time employment (5%). A third of participants (33%) had completed secondary/high school, with 26% having some secondary/high school education. Most participants (32%) resided in a private residence with others; however, 28% were currently experiencing homelessness or were unhoused. Of the 100 participants that were interviewed, 9% had experienced an overdose within the past 30 days. See Additional File 1 for a breakdown of study participants' socio-demographic characteristics.

Study participants' drug use profiles

Participants had a diverse range of drug use profiles, engaging in various patterns such as using multiple drugs, utilizing different routes of administration, and engaging in both daily and occasional use (see Additional File 2 for a detailed breakdown of participants' drug use patterns). In terms of the types of drugs used, methamphetamine (59%) was the most commonly reported, followed by illegal/street opioids (54%), and crack cocaine (41%); nearly a quarter of participants (24%) engaged in powder cocaine use as well as stimulant and opioid combinations. Participants also noted the consumption of hallucinogens (12%), non-prescribed opioids (9%), non-prescribed benzodiazepines (8%), ecstasy/MDMA (5%), and non-prescribed stimulants (4%). A substantial proportion (57%) also endorsed polydrug use, where they indicated using more than one category of drug. The primary route of administration among all drugs was inhalation (88%), followed by injection (17%).

Regarding frequency of use, the majority of participants (84%) reported daily drug use, whereas fewer (16%) endorsed less frequent use, indicating they typically use at least 3 times per week. It should be noted that participants endorsed using multiple drugs at varying frequencies.

Qualitative findings

To further contextualize changes in drug use and risk post-decriminalization, we identified several categories from our interviews: (1) People who use drugs' awareness and knowledge of the policy, (2) Impacts of the policy on drug use experiences, including frequency of drug use, purchasing and carrying patterns, (3) Impacts of the policy on overdose risk and risk mitigation strategies, (4) Benefits and pitfalls of the policy, and (5) Recommendations for policy improvement. The categories are narratively outlined and are supported with quotes from the interviews to provide further insight, where appropriate.

See Additional File 3 for quantifiable changes in participants' drug use patterns and risks following the implementation of decriminalization.

Exploring people who use drug's awareness and knowledge of the decriminalization policy

Participants were asked about their awareness and knowledge of the decriminalization policy, and the vast majority were aware of the policy's existence, meaning they knew that decriminalization had been implemented in BC. Fewer participants, however, were familiar with the specific details and features of the policy. Among those that were unfamiliar with policy details, there was a noticeable lack of awareness regarding the possession threshold. Several participants were unaware that the limit was 2.5 g and assumed there was no limit. Others were unaware that the threshold was cumulative and assumed that the limit was drug-specific. Other features of the policy that participants were unfamiliar with included, the time-limited nature of the policy, the specific drugs included under the policy, and the policy's goals. Misinformation about specific policy details and the policy as a whole were also common amongst participants:

"There's confusion when it comes to the [decriminalization] law, you know what I mean? Nobody really knows what the law is, where is it legal, where isn't it legal, how much, and a lot of people don't know, they just don't know... I think if there was more information out there revolving around it, that would help." (Interior Health Authority, Age 49, Woman).

Notably, some participants were entirely unaware of the policy's existence.

Participant responses regarding where they acquired information about the policy varied. Most participants indicated they had heard about it from friends, 'word of mouth', or 'on the street'. Some participants had seen segments about it on the news, had learned about it directly from drug-related advocacy groups they participated in, or harm reduction sites they had visited where they had seen infographics with policy specifics. In some communities (e.g., Vancouver) participants described that they received pamphlets from outreach workers.

Despite a general awareness of the policy, several participants suggested an overall lack of available policy information. For example, even among those who were well integrated within harm reduction and drug advocacy spheres, many lamented a lack of policy promotion:

"Between working [at two different harm reduction sites], I didn't even get any of the information [about decriminalization] that was passed around."

"And I didn't see any [pamphlets] that [were] laying about for people. And I got one through a friend, I got one copy of it. That's how much it was passed around." (Vancouver Coastal Health Authority, Age 42, Woman).

Overall, while the majority of participants were generally aware of the policy, responses revealed instances of misinformation and inaccuracies in participants' comprehension of the policy specifics, as well as a lack of dissemination of policy information.

Policy impact on drug use experiences

Drug use patterns

The majority of participants indicated that there had been no change in their drug use patterns since the implementation of decriminalization. Many participants described their drug use as longstanding and habitual, stating that they were continuing to use drugs in the same ways as before decriminalization due to dependency, financial reasons, and drug use habits. However, a few participants indicated the frequency of their drug use had changed, with several reporting an increase in use, half of whom attributed this directly to decriminalization. Justifications for increased use were primarily due to a reduced fear of criminalization and feeling more comfortable to use drugs in public since the implementation of the policy. For example, the following participant reflected on how decriminalization may have contributed to an increase in their drug use:

"I think I feel a bit safer I guess to [use drugs] in more public areas. So just in a back alley or in a park, away from people of course, but I don't feel like I have to hide it as much. Like if my bowl is out, I don't feel like I have to really hide it as much as I used to feel I did, even though maybe that's just a kind of placebo effect, really. I don't know. [So I find I'm using more because of that on some days]." (Interior Health Authority, Age 48, Woman).

The participants who indicated their use patterns had changed since decriminalization suggested that these changes were primarily unrelated to decriminalization. Instead, changes were attributed to various factors such as financial constraints, external incentives such as the desire to regain custody of their children, coping with loss, personal choice, or becoming more conscious of their drug use since the policy had been implemented, leading them to reassess their patterns and contemplate the legal consequences of their actions.

Purchasing and carrying patterns

Similar to patterns of drug use, the majority of participants indicated that the amount of drugs they typically purchased or carried had not changed since the implementation of the policy. Just over half of participants who spoke about their purchasing patterns mentioned purchasing below the 2.5 g threshold, citing financial constraints as the primary reason. Their drug purchases were typically smaller amounts, such as a few ‘points’ (i.e., 1/10th of a gram), or a ‘half ball’ (i.e., 1.75 grams), based on affordability, with many indicating that they only buy as much as they can afford daily. However, several participants described strategically purchasing and carrying under 2.5 g since decriminalization in order to reduce their risk of criminalization, as described by the following participant:

“Because I didn’t want to carry big amounts, I would only buy like basically two grams at a time sometimes. Well, most of the time. Which can be a real hassle, because, you know, I’m always having to pick up all the time... I didn’t want to be charged... Because I work full time and it’s not a job I want to be caught with drugs with.” (Interior Health Authority, Age 47, Man).

Others suggested they split their total drug purchase with their partner or a peer to ensure they carry less than the possession threshold at any given time:

“Sometimes [I purchase] like a half-ball or a ball, 1.75 grams or 3.5 grams... My husband and I will split [the drugs] so we’re both carrying half of it, so that we’re carrying under [the threshold].” (Interior Health Authority, Age 44, Woman).

The remaining participants described typically purchasing and carrying more than the 2.5 g threshold, often indicating that they purchase amounts that are more commonly sold within the unregulated drug market, such as 3.5 g (an ‘8-ball’), 7 g (a ‘quarter’), 14 g (a half-ounce), 28 g (an ounce), or more. These participants often opted for larger purchases above the possession threshold citing reasons such as reduced costs, enhanced convenience, improved drug quality, and the facilitation of the sharing of drugs with others. The primary justification for purchasing above the threshold was for economic reasons, as the per-unit cost decreased as the amount purchased increased, resulting in participants receiving a significant cost saving. Purchasing over the 2.5 g threshold was also driven by the desire to reduce the number of trips participants needed to make to obtain their drugs, especially among those who shared drugs with others. For instance, participants described the practice of sending one person

to obtain drugs for two or more people at a time to minimize the potential exposure to criminalization. This was particularly common among participants who lived far away from their sellers:

“[I purchase] half an ounce to an ounce [at a time]. Because I don’t want to constantly keep going to the dealer’s house or whatever, you know, and I pick up for myself and my girlfriend...It’s cheaper, it’s more convenient, fewer trips. Like I said, I live out of town, like I’m a long way out of town. And so the guy that I see, he is pretty far away. So it’s hard to get to. So, I just purchase big amounts and take a risk, basically.” (Interior Health Authority, Age 47, Man).

Several participants also suggested that they purchased over the 2.5 g threshold because the further the drugs trickled down the supply chain, the more people handled and “cut/stomped/buffed” the drugs with unknown additives. Participants described how this ultimately increased their risk of receiving a contaminated drug supply. For this reason, participants would purchase a larger quantity to avoid having their supply tampered with:

“We’re definitely going to buy as much as [we can] – and we get better prices that way. When you get it closer to the source or as close to the source, [the drugs are] less cut. That’s the other thing too. It’s less cut.” (Interior Health Authority, Age 44, Woman).

Overall, participants were nearly evenly split on whether they purchased or carried above or below the 2.5 g and provided several justifications for these purchasing patterns. In line with drug use patterns, most participants indicated their purchasing and carrying patterns had also not changed since decriminalization. For many participants, the risk of being caught with over the 2.5 g threshold was outweighed by the convenience and cost benefit of purchasing more at a time.

Overdose risk and risk mitigation strategies

In Canada, the toxicity of the available drug supply largely contributes to the overdose crisis, as such, we examined any shifts in participants’ perceptions of drug quality during decriminalization. Several participants suggested that the quality of their drugs significantly fluctuated. However, participants often contributed these fluctuations to factors unrelated to decriminalization such as legacy impacts from COVID-19-associated changes and disruptions, or general supply chain issues. A minority of participants did however, suggest the policy had affected drug quality, with the addition of adulterants and increased contamination of the drug supply.

Participants commonly discussed the toxicity of the current drug supply, including its direct association with overdose risk, stating: “[I’m] more likely [to overdose] because they’re putting stuff in it that never used to be in it. [The supply] used to be way better and cleaner. Now, apparently, they’re putting different things in it” (Interior Health Authority, Age 53, Man). Specifically, conversations around an increase in the incorporation of benzodiazepines or tranquilizers into the opioid drug supply (i.e., ‘BenzoDope’ or ‘TranqDope’), were common, including reflections on how these specific adulterants were associated with greater risk for experiencing an overdose.

Since decriminalization, some participants suggested that since more people feel comfortable to purchase and carry drugs on them due to a reduced fear of criminalization, there has been an increase in low-level sellers who primarily engaged in small drug transactions, which they linked to a heightened risk of overdose. Specifically, participants described that these sellers often lacked the experience to safely and effectively process the drugs and provide a supply that was not adulterated, raising concerns about their safety:

“Everybody and their dog thinks that they’re a dealer and they know how to cook it. So there’s all these people thinking that they know how to mix – or have the right recipe for fentanyl. And I think that’s why I’ve overdosed so much is because everybody tries to cook it a different way and there’s a lot more hot spots (pure fentanyl) in it.” (Interior Health Authority, Age 44, Woman).

This experience underscores the importance of participants being able to find and maintain relationships with experienced sellers. Participants believed that obtaining drugs from a trusted source minimized their chance of receiving harmful or unknown adulterants that could lead to overdose. This trust often led them to purchase larger quantities at once to maintain a sense of safety and obtain what they deemed to be a ‘safe’ supply. Participants often described longstanding and trusting relationships they had developed with their sellers, which reduced their concerns about receiving an adulterated supply:

“The quality of my drug, I know 100% that there’s no fentanyl in there. I know what I’m smoking. And I don’t have to worry about [my seller] drugging up. I mean, like putting fentanyl or anything in my dope.” (Interior Health Authority, Age 54, Man).

Participants were also asked about their perceptions of their overall risk of overdose and whether they believed decriminalization had any effect. The majority, including

those with previous overdose experiences, expressed little concern about overdosing. They cited factors such as their choice of drug (some considered stimulants to carry a lower overdose risk), their familiarity with their tolerance levels, their utilization of risk reduction strategies like drug testing, and their trust in their supplier, as illustrated by the following participant:

“I’ve been going to the same [seller] for years. I’ve known them for a very long time. I trust them. I trust the product. They’ve never given me or any of my other friends anything that would hurt us or anything like that. They also use what they sell, so I trust them.” (Vancouver Coastal Health Authority, Age 48, Non-Binary).

Participants often discussed other strategies they employed to reduce their risk of overdose, including using drugs in the presence of others. Several participants acknowledged that they had started using drugs with others as a precaution against overdosing, especially since the implementation of decriminalization:

“I’m less likely to use alone, just because, like I said, there’s been more awareness, there’s been more talk about drugs. There’s not as big a stigma on drug addicts. We’re not as ashamed, and there’s more access to Narcan kits, I feel.” (Vancouver Coastal Health Authority, Age 32, Woman).

In general, participants discussed the impact of decriminalization on overdose risk, with a particular focus on drug quality. While some noted fluctuations in drug quality over time, attributing this experience to factors beyond decriminalization, others observed an increase in adulterants in the drug supply and a rise in low-level sellers since decriminalization was introduced, which has heightened their risk of overdose. To mitigate this risk, participants discussed the importance of having trusted drug sellers and using drugs with others.

Policy perspectives: highlighting the benefits and pitfalls of the decriminalization policy

Given the insights from participants regarding their awareness of and experiences with decriminalization and its impact on their drug use patterns and overdose risk, they were asked about their thoughts and opinions on the policy and any suggestions they had for improvement.

The vast majority of participants viewed the policy positively and supported its implementation for a variety of reasons. For instance, some participants drew on their knowledge of similar decriminalization initiatives or drug policy reforms that have occurred in other jurisdictions like Portugal, describing the benefits afforded to

those jurisdictions with the hope that the same benefits would be realized in BC. Some suggested that the policy reform was long overdue, stressing that it should have been implemented earlier. Others likened the policy to other regulated substances such as cannabis, alcohol, and tobacco, stating that drug use is a personal choice, and adults should have the freedom to use without fearing legal repercussions.

Importantly, participants highlighted the decriminalization policy's effectiveness in reducing criminalization. Most notably, the majority emphasized a decreased fear of arrest as the primary benefit of the policy, indicating that it is likely meeting its main goal. For instance, participants emphasized that they feel more comfortable carrying their drugs:

"I don't have to worry about getting busted and going to jail because I have some dope in my pocket to smoke. That's not a thought that I have to be holding...I just don't have to be so conscious all the time about what I have on me." (Interior Health Authority, Age 24, Woman).

Participants also discussed the potential impact of the decriminalization policy on the broader drug toxicity crisis. The majority expressed optimism, believing the policy could lead to positive changes to the overdose crisis over time. They envisioned the policy gradually reshaping the drug use landscape by potentially reducing stigma and improving access to harm reduction and addiction treatment services. Participants suggested that if the policy leads to open discussions and raises awareness about drug use and its related risks (e.g., overdose due to a toxic drug supply), it could contribute to a long-term decrease in overdose incidents.

Although most participants indicated their overall support for the policy, others suggested they were split on the matter. Some recognized benefits and drawbacks, with several proposing the policy is a 'catch-22' or a 'double-edged sword', reflecting on both positive and negative aspects. One of the primary concerns was the potential for decriminalization to enable drug use, specifically amongst younger populations, as described by the following participant:

"It's the younger people, like I say under 25, like 19 to 25. They're going to take advantage of [the policy], for sure. I'm afraid that they might go into something else that's more harmful. The fentanyl problem out here is severe. And if they do pot here, they're going to go onto crack and meth (The use of one drug leads to the use of another)." (Island Health Authority, Age 73, Man).

Participants also expressed concern about the potential for the policy to lead to increased public drug consumption, as some cited observations of this occurring in their community. Some participants felt that people were taking advantage of the policy change, leading to more open drug consumption due to people being emboldened to use in public:

"I think some people kind of take it a little too far. They think just because they can't get charged, it means that they can just do [drugs] anywhere, anytime. It's not really appropriate." (Fraser Health Authority, Age 57, Man).

As such, participants were often in favour of bylaws and legislation that limited public drug use [35]. They believed these measures would better protect their communities from witnessing drug use in public spaces, particularly shielding children from exposure.

A rise in drug use among non-users was also noted as a concern among some participants. They mentioned that since decriminalization has the potential to increase public consumption of drug use, some individuals may then feel tempted to experiment with it. For instance, one participant described how decriminalization might facilitate youth initiation of drug use:

"[Decriminalization] is enabling like young people too. Like, you know, and young people are trying these heavier drugs without the awareness of [repercussions] — and I don't even know, they're pretty stupid if they're going down any street and seeing the people on the drugs, you know — but they want to try it." (Island Health Authority, Age 47, Man, Housed/Other).

Furthermore, some participants expressed concern that the decriminalization policy may inadvertently contribute to a rise in overdose deaths. They feared that reducing the fear of legal consequences might encourage more people to use drugs, potentially increasing the risk of overdoses. Further, participants discussed how the potential normalization of drug use under decriminalization could lead to easier access to drugs and associated repercussions such as a higher frequency of use and subsequent overdose risk, as postulated by the following participant:

"[People who use drugs] definitely would probably tend to carry more [under decriminalization]. And then that might possibly mean that they're going to do more [drugs] to the point where they might actually have an overdose, that they possibly wouldn't

have [otherwise].” (Fraser Health Authority, Age 57, Man).

Some participants also expressed skepticism towards the government’s intentions. They pointed a disconnect between the policy and the realities of people who use drugs, such as the threshold not reflecting their actual drug use, the policy’s inclusion of only select drugs, and the time-limited nature of the policy. Participants argued that if the government genuinely wanted to help people who use drugs, the policy should better reflect their lived experiences:

“I think it’s [the policy] a bit unrealistic. I think it reaches an agenda. It reaches an agenda because it’s a simple fact that no one’s going to have under 2.5 grams... It doesn’t make sense, essentially...And [if benzodiazepines aren’t included in the policy and you] could be [charged], then that whole law makes no sense whatsoever. Because 70 per cent of the dope around here has benzos in them.” (Vancouver Coastal Health Authority, Age 42, Woman).

In general, most participants were supportive of the policy and suggested it could result in tangible benefits including reducing criminalization and attenuating the overdose crisis. However, many participants voiced concerns about the policy, and particularly its potential to increase drug use and public drug consumption. Some participants also expressed broader apprehensions about the policy’s effectiveness within the context of BC, as well as skepticism about the government’s intentions in designing and implementing the policy.

Refining the framework: recommendations for improving the decriminalization policy

With these concerns in mind, participants were prompted to offer suggestions they had for improving the policy. Approximately one-third of participants proposed increasing the possession threshold from the current 2.5 g, expressing the view that “[the threshold] is way too low” (Interior Health Authority, Age 47, Man), and different thresholds were proposed ranging from 3.5 g to unlimited quantities. Participants argued that this increase could cater to both casual users and those who buy in larger quantities, better aligning with the diverse substance use profiles of people who use drugs. Additionally, participants highlighted that 3.5 g was a more commonly purchased and sold amount, as described by the following participant:

“Maybe 3.5 would be a better number, because 2.5 is like an odd number... If people were to buy what we call a ball, 3.5 grams, that’s kind of the base-

line minimum of purchase. You get to save a bit of money. So buying 2.5 isn’t a standard purchase... But maybe upping that to 3.5 for the average street user would allow for the fact that maybe they bought 3.5 because they’re going to save a little money themselves.” (Island Health Authority, Age 34, Woman).

Another common suggestion was to remove the cumulative nature of the threshold which presented challenges, especially for participants who were polydrug users. Participants suggested that the cumulative nature of the policy is illogical as some drugs are typically purchased in larger amounts compared to others, and if people are using multiple drugs, the amount they carried on them at a time would be over the possession threshold:

“I think as a side [meth] user, I would say a ball (3.5 g) is a fair amount because that’s usually what people buy is either a ball, or half-ball, or an ounce. But with down (heroin/fentanyl), I think it goes by points, right? So most down users that I know, they’re going to smoke at least probably five or six points a day. So I think that to have that little [threshold], I think, again, it’s not a realistic number, the 2.5 g” (Interior Health Authority, Age 48, Woman).

Several participants advocated for drug regulation such as legalization and safe supply, suggesting that decriminalization does not go far enough to address the root cause of the overdose crisis. Consequently, participants felt that legalization could guarantee people who use drugs access to a regulated pharmaceutical-grade drug supply through regulation, and that this would be more effective in reducing overdose deaths. For instance, one participant suggested that decriminalization should be complemented with safe supply programs in order to reduce drug-related overdoses:

“But I feel like listening to more of like the spirit of what we’re asking for...might be helpful. And just decriminalizing all drugs and making a regulated supply available will really just completely solve the problem rather than just taking a little chisel to it.” (Vancouver Coastal Health Authority, Age 40, Non-Binary).

In conclusion, participants recognized the importance of the decriminalization policy, but also acknowledged that amendments to the policy may be necessary in order to better reflect the needs of people who use drugs. This includes increasing the 2.5 g threshold to be commensurate with their use and purchasing patterns. Participants also proposed other amendments such as removing the policy’s cumulative nature to better meet the needs of

polydrug users, and the need for access to a regulated supply of drugs.

Discussion

This study presented findings demonstrating people who use drugs' awareness and knowledge of the decriminalization policy, and its impact on their drug use patterns and overdose risk. Specifically, we sought to understand their awareness and perceptions of the policy, as well as any changes they made to their drug use and purchasing patterns post-policy implementation.

The study's findings revealed that while the majority of participants were aware of the policy's existence, many lacked a clear understanding of its specifics, leading to confusion among people who use drugs. Lack of knowledge about the policy, including details on the possession threshold, the cumulative nature, and the included substances left people who use drugs vulnerable to the risk of continued criminalization. Participants expressed the importance of accessible information sources about the policy, as most of their knowledge came from word of mouth. With better awareness and understanding of policy details, people who use drugs can make informed decisions about their drug use and can potentially adapt their patterns to reduce their risk for criminalization. For instance, knowing the 2.5 g threshold influenced some participants to purchase or carry less to avoid the risk of criminalization. As such, misconceptions or a lack of knowledge about policy details may undermine the goals of decriminalization, hindering informed decision-making regarding substance use practices [36]. Limited knowledge and awareness of the policy can also impact interactions with police, harm reduction services, and addiction treatment services [36]. This underscores the important role of education and public health communication regarding policy details [37]. Providing education in a variety of formats, including in plain language, audio and visual, and on accessible and commonly utilized platforms is needed and can support equitable understanding of the policy [36].

Notably, people who use drugs identified the 2.5 g threshold as a significant feature of the policy. Therefore, it is essential for the policy to accurately reflect the realities of drug use practices and to consider a possession threshold that aligns with these practices. Interestingly, the findings from this study demonstrate that the possession threshold did not appear to have a substantial impact on participants' frequency of drug use, purchasing and carrying patterns, or other drug-related risks. Participants reported high drug use frequencies and tolerances, with nearly a third indicating polydrug use, and nearly two thirds indicating daily use. Accordingly, the minimal impact of the decriminalization policy on these patterns may suggest that the 2.5 g threshold may

not be appropriate, particularly for high frequency and polydrug use patterns [11]. Moreover, the threshold was considered inadequate, as about half of the participants indicated they commonly purchase drugs in amounts exceeding it for several reasons, which were largely unrelated to the decriminalization policy. Some people who use drugs bought above the threshold to reduce their frequency of seller interactions, to reduce costs, to split or share with others, or to guarantee a 'safer' supply that has not been exposed to additional handlers who may have potentially cut or 'stomped on' the drugs. Additionally, while many people who use drugs indicated that they purchased less than the 2.5 g, this was related to an inability to afford and purchase more at a time, which was also unrelated and unaffected by the decriminalization policy. The disconnect between the possession threshold and people who use drugs' use patterns was substantiated by participant's suggestions to increase the threshold amount to 3.5 g, and to amend the policy so that it is no longer cumulative. However, it was noted that some participants strategically carried less than the threshold to reduce the risk of criminalization, which was a direct impact of the decriminalization policy. This finding demonstrates a slight adaptation in behaviour due to the policy and reflects an evolving understanding among some people who use drugs of the legal landscape. This understanding is important as it sheds light on how people who use drugs may navigate the specifics of the decriminalization policy, particularly regarding the inclusion of a legal threshold. These considerations underscore the importance of setting a threshold that aligns with the realities of people who use drugs.

In addition to understanding whether the possession threshold impacted drug use patterns, we sought to understand participants' perceptions of overdose risk as another critical component of our study. Since one of the policy's primary goals is to reduce overdose deaths, it is important to understand participants' perceived level of overdose risk and assess whether, and to what extent, the policy has influenced this perception. Participants shared observations and experiences regarding the increase in toxicity of the drug supply, with some participants likening this to the emergence of new low-level sellers in the market since decriminalization, which they felt increased their overdose risk. Consequently, participants recommended that decriminalization incorporate some form of drug regulation. Participants felt that regulation, whether that was in the form of drug legalization or the provision of safe supply, would be beneficial in reducing overdose risks.

While participants discussed concerns regarding the drug quality and the emergence of low-level sellers, most participants suggested that their concerns related to personal overdose risk had not changed since

decriminalization. This was in part due to participants continuing to obtain their drugs from a trusted source to minimize the likelihood of encountering a tainted drug supply [38]. Many participants explained that by acquiring their drugs from a trusted seller, they felt more confident about the safety of the drugs they purchased. However, due to the current possession threshold limit, sellers who carry above this threshold may be at greater risk of criminalization. Although the policy targets simple drug possession, leaving sellers who carry more than the 2.5 g at risk of continued criminalization has implications for people who use drugs. If an individual's seller is arrested due to carrying above the threshold, people who use drugs may have trouble accessing the supply they need from a source that they trust. This may force people who use drugs to resort to accessing drugs from low-level sellers, or from individuals they do not have a relationship with, potentially exposing them to a contaminated supply, and increasing their risk of overdose [39]. As such, the risk mitigation strategy of purchasing from a trusted source may no longer be feasible, ultimately countering the goals of decriminalization aimed at reducing overdose deaths [39, 40]. Therefore, it is crucial to monitor the impact of the policy on sellers, as any impact on these individuals can affect people who use drugs' access to a safe, unadulterated, and trusted drug supply.

Notably, some participants indicated that the policy shift might have also led to an increase in the visibility of public drug use, raising concerns about its societal impacts. Participants suggested that decriminalization might have fostered an environment where people who use drugs feel more comfortable to use drugs openly. This observation may suggest a shift in social norms and attitudes towards drug use, whereby people who use drugs may no longer feel stigmatized for using drugs openly [41]. This feeling may mitigate risks associated with use, as it may prompt people who use drugs who typically use alone or in private settings to engage in use practices with others [42]. However, increased public consumption can counter the policy's goals of reducing stigma against people who use drugs as some community members may feel as though their safety is compromised. This has consequently led the BC government to expand laws prohibiting public drug consumption, which carries significant implications for people who use drugs [35]. While it may increase feelings of public safety and reduce the visibility of drug use, potentially reducing stigma, it also raises concerns. These laws could add confusion among people who use drugs regarding the legal landscape and their rights under the policy [35]. Moreover, they may reinforce stigmatizing views, suggesting drug use is a criminal act and not a public health issue. Criminalizing public drug use, even when under the threshold, undermines the goals of decriminalization and leaves people who use

drugs at risk for arrest and overdose, especially when these laws are not paired with increased access to harm reduction and housing services, where people who use drugs have safe places to consume their drugs [36].

Overall, participants expressed support for the policy, acknowledging both benefits and drawbacks. Participants recognized the potential for decriminalization to reduce criminalization and the associated risks of overdose, as evidenced by a minority of participants' strategic changes in drug use patterns. Furthermore, participants acknowledged feeling safer under decriminalization, with a substantial reduction in fear of arrest. However, they also raised concerns about the policy's unintended consequences such as increased public consumption and potential drug use initiation, as well the rise of low-level dealers. These concerns warrant the need for decision makers to consider the policy implications and suggestions from people who use drugs' on how to improve the policy.

Strengths and limitations

This study explores the real-world impacts of the decriminalization policy in BC, focusing on the knowledge, perspectives, and experiences of people with lived experience of drug. While we made concerted efforts to include participants from diverse backgrounds, locations, and drug use experiences, we acknowledge that people who use drugs are a heterogeneous and diverse population. To reach those less connected to drug advocacy and harm reduction services, we employed snowball sampling, recognizing that many participants were already well-integrated into these networks. However, the results of this study are not generalizable beyond the specific context and populations from which they were drawn. Specifically, our study was also limited in capturing the experiences of more marginalized, non-White groups within the population, particularly Indigenous and Black populations. In addition, we did not examine participants' experiences with the criminal justice system, limiting our ability to fully analyze how decriminalization impacts populations at higher risk of criminalization (e.g. Indigenous people, people experiencing homelessness). Other limitations of the current study include the potential for sampling, recall, and response bias. For instance, not all participants were asked the exact same questions in the same ways, and some responses were emphasized over others. Further, participants' responses may have been recalled inaccurately, or details may have been omitted, which may impact the conclusions drawn from our analyses.

Conclusion

Overall, the implications of the decriminalization policy on drug use and risk perception are multifaceted. On the one hand, the policy has resulted in a reduced fear of arrest, leading to a perceived sense of safety among people who use drugs. Regardless, participants emphasized that the policy has had minimal impact on their overdose risk. Furthermore, knowledge of the policy appears to be directly related to participants' drug use and purchasing patterns as some participants strategically changed their behaviour to carry less. However, most people who use drugs exhibited no changes to their drug patterns, which may stem from personal decisions related to finances, substance use habits, convenience, or a lack of awareness and education surrounding the policy. These results highlight the importance of increasing education and awareness efforts surrounding the policy, as well as ongoing policy evaluation to better understand changes to drug use experiences and their underlying motivations over time. By continuously assessing and adapting policies based on real-world outcomes and experiences, decision makers can better address the complex needs of people who use drugs and revise the decriminalization policy to better reflect their realities.

Supplementary Information

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Supplementary Material 1

Supplementary Material 2

Supplementary Material 3

Author contributions

F.A. contributed to the article's conceptualization, data collection, data analysis and funding acquisition. C.R. contributed to the article's conceptualization, data collection, and data analysis. M.L. and M.B. assisted in data analysis. F.A., C.R., and M.L. wrote the original draft, and reviewed and edited subsequent drafts. G.B., M.B., E.H., and J.B. contributed to reviewing and editing the article, and J.R. contributed to supervision, funding acquisition, and reviewing and editing the article.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Consent for publication

Informed consent was obtained from all individual participants in this study.

Competing interests

The authors declare no competing interests.

Conflict of interest

None to declare.

Ethics approval

The study was approved by the Centre for Addiction and Mental Health (CAMH) Research Ethics Board (#2023/088).

Consent to participate

Informed consent was obtained from all individual participants in this study.

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References

1. Government of Canada. Exemption from controlled drugs and substances Act: personal possession of small amounts of certain illegal drugs in British Columbia (January 31, 2023 to January 31, 2026). Ottawa, Ontario: Government of Canada; 2022.
2. Government of Canada. Subsection 56(1) class exemption for adults in the province of British Columbia to possess small amounts of opioids, cocaine, methamphetamine and MDMA Ottawa, Ontario: Government of Canada; 2022. [<https://www.canada.ca/en/health-canada/services/health-concerns/controlled-substances-precursor-chemicals/policy-regulations/policy-documents/exemption-personal-possession-small-amounts-certain-illegal-drugs-british-columbia/subsection-56-1-class-exemption-adults-18-years-age-older.html>]
3. British Columbia Ministry of Mental Health and Addictions (MMHA). Decriminalization in BC: S 56(1) Exemption: Request for an exemption to Health Canada from the Controlled Drugs and Substances Act (CDSA) pursuant to Sect. 56(1) to decriminalize personal possession of illicit substances in the Province of British Columbia. Vancouver, BC: British Columbia Ministry of Mental Health and Addictions (MMHA); 2021.
4. Canadian Drug Policy Coalition. To End A Crisis: Vision for BC Drug Policy Reform. Canadian Drug Policy Coalition; 2024.
5. Lindsay B. B.C. decriminalization plan won't do much to stop toxic drug deaths, says chief coroner: CBC News; 2022. [<https://www.cbc.ca/news/canada/british-columbia/b-c-decriminalization-toxic-drug-deaths-chief-coroner-1.6473060>]
6. Professionals for Ethical Engagement of Peers (PEEP). Decriminalization of possession of illegal drugs in British Columbia. B.C. Centres for Disease Control (BCCDC); 2023.
7. Tobias S, Grant CJ, Laing R, Arredondo J, Lysyshyn M, Buxton J, et al. Time-Series Analysis of Fentanyl Concentration in the unregulated opioid drug supply in a Canadian setting. *Am J Epidemiol*. 2021;191(2):241–7.

8. BC Centre for Disease Control. Unregulated Drug Poisoning Emergency Dashboard 2024. [<http://www.bccdc.ca/health-professionals/data-reports/substance-use-harm-reduction-dashboard>]
9. Russell C, Law J, Bonn M, Rehm J, Ali F. The increase in benzodiazepine-laced drugs and related risks in Canada: the urgent need for effective and sustainable solutions. *Int J Drug Policy*. 2023;111:103933.
10. Friedman J, Montero F, Bourgois P, Wahbi R, Dye D, Goodman-Meza D, et al. Xylazine spreads across the US: a growing component of the increasingly synthetic and polysubstance overdose crisis. *Drug Alcohol Depend*. 2022;233:109380.
11. Ali F, Russell C, Greer A, Bonn M, Werb D, Rehm J. 2.5 g, I could do that before noon: a qualitative study on people who use drugs' perspectives on the impacts of British Columbia's decriminalization of illegal drugs threshold limit. *Subst Abuse Treat Prev Policy*. 2023;18(1):1–12.
12. Xavier JC, McDermid J, Buxton J, Henderson I, Streukens A, Lamb J, et al. People who use drugs' prioritization of regulation amid decriminalization reforms in British Columbia, Canada: a qualitative study. *Int J Drug Policy*. 2024;125:104354.
13. The Lancet. Drug decriminalisation: grounding policy in evidence. *Lancet*. 2023;402(10416):1941.
14. B.C. Moves to ban drug use in public spaces, taking more steps to keep people safe [press release]. *BC Gov News*; 2024.
15. Ali F, Russell C, Nafeh F, Rehm J, LeBlanc S, Elton-Marshall T. Changes in substance supply and use characteristics among people who use drugs (PWUD) during the COVID-19 global pandemic: a national qualitative assessment in Canada. *Int J Drug Policy*. 2021;93:103237.
16. Charmaz K. *Constructing grounded theory: a practical guide through qualitative analysis*. Thousand Oaks, Calif: Sage; 2006.
17. Strauss A, Corbin J. *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park, Calif.: Sage; 1990. pp. 1–270.
18. Chun Tie Y, Birks M, Francis K. *Grounded theory research: a design framework for novice researchers*. *SAGE Open Med*. 2019;7:2050312118822927.
19. CRISM Ontario. Ontario CRISM Node Team 2024. [<http://crismonario.ca/about/ontario-crismonode-team>]
20. Harris P, Taylor R, Minor B, Elliott V, Fernandez M, O'Neal L et al. The REDCap consortium: building an international community of software partners. *J Biomed Inf*. 2019.
21. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inf*. 2009;42(2):377–81.
22. BC Centre for Disease Control. *Peer Payment Standards for Short-Term Engagements*. 2018.
23. CRISM Ontario. *People with Lived and Living Experience (PWLLE) with Drug Use Compensation Guidelines*. 2023.
24. Touesnard N, Patten S, McCrindle J, Nurse M, Vanderschaeghe S, Noel W et al. Hear us, see us, respect us: respecting the expertise of people who use drugs. *Zenodo*. 2021.
25. SPSS Inc. *IBM SPSS statistics 27*. Chicago: SPSS Inc; 2022.
26. Erlingsson C, Brysiewicz P. A hands-on guide to doing content analysis. *Afr J Emerg Med*. 2017;7(3):93–9.
27. QSR International Pty Ltd. *NVivo qualitative data analysis software: Version 12*. 2018.
28. Hai-Jew S. *Creating Inheritable Digital Codebooks for Qualitative Research Data Analysis*. In: Hai-Jew S, editor. *Data analytics in Digital Humanities*. Cham: Springer International Publishing; 2017. pp. 251–71.
29. Chi MTH. *Quantifying qualitative analyses of verbal data: a practical guide*. *J Learn Sci*. 1997;6(3):271–315.
30. Kilonzo SM, Ojebode A. *Research methods for Public Policy*. In: Aiyede ER, Muganda B, editors. *Public Policy and Research in Africa*. Cham: Springer International Publishing; 2023. pp. 63–85.
31. Maxwell JA. *The value of qualitative inquiry for Public Policy*. *Qualitative Inq*. 2020;26(2):177–86.
32. Neale J, Miller P, West R. *Reporting quantitative information in qualitative research: guidance for authors and reviewers*. *Addiction*. 2014;109(2):175–6.
33. Sellick S, Katya Drozdova and Kurt Taylor Gaubatz. (2017). *Quantifying the Qualitative: Information Theory for Comparative Case Analysis*. *Canadian Journal of Program Evaluation*. 2016;31(2):268–70.
34. Bengtsson M. *How to plan and perform a qualitative study using content analysis*. *NursingPlus Open*. 2016;2:8–14.
35. Ali F, Law J, Russell C, Crépault J-F, Goulão JC-B, Lock K, et al. Navigating the nexus between British Columbia's public consumption and decriminalization policies of illegal drugs. *Health Res Policy Syst*. 2024;22(1):60.
36. Greer A, Xavier J, Loewen OK, Kinniburgh B, Crabtree A. *Awareness and knowledge of drug decriminalization among people who use drugs in British Columbia: a multi-method pre-implementation study*. *BMC Public Health*. 2024;24(1):407.
37. Greer A, Xavier J, Wood B, McDermid J, Zakimi N. *DRUG DECRIMINALIZATION IN BRITISH COLUMBIA: A PRE-IMPLEMENTATION QUALITATIVE STUDY WITH PEOPLE WHO USE DRUGS*. 2023.
38. Ivsins A, Boyd J, Beletsky L, McNeil R. *Tackling the overdose crisis: the role of safe supply*. *Int J Drug Policy*. 2020;80:102769.
39. Carroll JJ, Rich JD, Green TC. *The protective effect of trusted dealers against opioid overdose in the U.S.* *Int J Drug Policy*. 2020;78:102695.
40. Roberts JR. *Focus: complications from adulterants in Street drugs*. *Emerg Med News*. 2021;43(9):16–7.
41. Gibson S, Patterson N, Naples MI, Mitchell MB, Bates DC, Bowen D, et al. *Multidisciplinary argument for the decriminalization of drugs*. *J Addictions Offender Couns*. 2024;45(1):70–97.
42. Deo VS, Bhullar MK, Gilson TP, Flannery DJ, Fulton SE. *The need to Rethink Harm reduction for people using drugs alone to reduce overdose fatalities*. *Subst Use Misuse*. 2024;59(3):450–8.

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