The Relationship between the legal status of drug possession and the criminalization of marginalized drug users: A literature review

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ABSTRACT

The longstanding association between addiction, crime, and mortality has become increasingly severe in Canada, affecting larger numbers of individuals and communities. Diverse and irreconcilable courses of action have been proposed involving the decriminalization of drug possession, expanded resources to promote recovery from addiction, or both. The current review used the PICOTS method to identify peer-reviewed publications that reported outcomes of reducing the criminal consequences of drug possession and the specific relationship between law reform and the well-being of people who are at greatest risk for poisoning. We separately included notable reports and grey literature discussing outcomes associated with the Portuguese National Drug Strategy. Over 2,500 articles were retrieved from three databases, with six meeting all inclusion/exclusion criteria. An additional five manuscripts were retrieved specific to Portugal. The evidence reviewed indicates that drug decriminalization alone is associated with potential harms to drug users and their communities, and that potential benefits may be realized when law reform is closely coordinated with the provision of evidence-based resources that promote recovery from addiction. The evidence summarized in this review supports careful consideration of the factors necessary to promote social reintegration among people who are at highest risk for drug-related harms, including repeated criminal offending and death.

Key Words Decriminalization, addiction, recovery, poisoning, repeat offending.

INTRODUCTION

People who experience drug addictions are overrepresented in Canada's criminal justice sector. Rezansoff and colleagues (2013, p. 1) investigated criminal recidivism among 31,014 people sentenced to provincial corrections, observing that "nearly 50% of repeat offenders had a physician-diagnosed substance use disorder" prior to sentencing. A body of research discusses the harmful effects of incarceration on housing, income, and mortality among people who use drugs (PWUD). Reviewing the failure of the War on Drugs over 30 years ago, Alexander and Somers (1990) concluded that "punitive measures directed at [drug] users are not only ineffective, but counter-productive" (p. 272).

More recently, the association between addiction, crime, and mortality has stimulated proposed changes to Canada's criminal code regarding the simple possession of illicit drugs, popularly described as the "decriminalization of drug use" (e.g., Kolla et al., 2022, p. 1194). The current review examines scientific and scholarly evidence addressing the outcomes

of legal reforms concerning the possession of illicit drugs. The review begins by summarizing conflicting recommendations of recent reports addressing the crises of addiction and drug poisoning in Canada, which provide a framework for the current study.

Recent Reports Addressing Decriminalization of Drug Possession in Canada

In 2020, the Canadian Association of Chiefs of Police (CACP) released a report acknowledging that "[a]n understanding of decriminalization starts by recognizing that it is not a single approach, but a spectrum of principles, policies and practices that can be implemented in various ways" (Special Purpose Committee on the Decriminalization of Illicit Drugs, 2020, p. 4). This spectrum includes actions that are specific to the criminal justice sector as well as actions undertaken elsewhere in society that prevent addictions and promote recovery from them.

Following their review of international and Canadian evidence, the CACP advised that: "It will be key in a Canadian

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context that treatment facilities are established and operational ahead of decriminalization and have the capacity to take in individuals diverted through police contact" (p. 12).

An analysis by the BC Association of Police Chiefs (BCAPC, 2021) reached similar overall conclusions to those of the CACP: "The BCAPC suggests that decriminalization must be accompanied by a framework of diversion program options to provide front line police with established pathways to refer PWUD to health, rehabilitation, and recovery support" (p. 12), noting that "[a]t present, nearly two thirds (64%) of RCMP detachments in the province report that the communities they serve do not have drug rehabilitation or treatment programs available" (p. 13).

British Columbia's Provincial Health Officer (PHO) issued a report titled "Stopping the Harm: Decriminalization of People Who Use Drugs in BC" (Office of the Provincial Health Officer, n.d.). The overview states: "This PHO Special Report examines the criminalization of people who use drugs in BC, Canada, and beyond, and based on existing evidence, offers a single recommendation: decriminalization of people who use drugs in BC" (p. 3). The PHO's report emphasizes the current poisoning crisis as a catalyst for action, and attributes harms including stigma and mortality to prohibition-based drug laws. In response to the current crises, the report states that "[i]deally, decriminalization would involve changes to the federal Controlled Drugs and Substances Act" (p. 37). It also suggests that decriminalizing simple drug possession would enable the "redirection of police resources away from the low-level, typically victimless offence of simple possession" while serving "to improve access to harm reduction and health services by limiting the fear and stigma that people who use drugs face" (p. 37). The report does not call for concurrent actions addressing the treatment or prevention of addiction but specifies that "provision of pharmaceutical alternatives to street drugs" must be scaled up (p. 38).

The Stanford-Lancet Commission (Humphreys et al., 2022) completed a comprehensive analysis of the opioid crisis in Canada and the United States. The Commission proposed that incarceration should not be used as a punishment for drug possession but did not recommend decriminalizing the possession of illicit drugs, summarizing evidence that: "Very broadly speaking, one would expect that when a supply of drugs is present, they would be consumed more by individuals with more environmental stressors and fewer alternative rewards than by those with fewer stressors and more rewards, and that of all people who use drugs, those in stressful environments with few alternative rewards available would be most likely to develop addictions" (p. 585).

The Commission's recommendations place emphasis on evidence-based interventions that reduce demand for drugs and address the role of the criminal justice sector. Their report observed that "[c]ontrary to some popular narratives, contact between the criminal justice system and people who use addictive and intoxicating substances will be prevalent whether drugs are legal or illegal" (Humphreys et al., 2022, p. 583). Notably, alcohol is legally available to adults and is associated with more violence and crime than any other drug. The Commission's recommendations directly conflict with some of the BC PHO's recommendations: "Policies that should attract scepticism include the dispensing of hydromorphone from vending machines and prescribing a range of potent

opioids and other drugs (e.g., benzodiazepines, stimulants) to individuals with opioid use disorder (OUD) in hopes of creating a safe addictive-drug supply" (p. 12).

A Quadrant of Options

The foregoing reports recommended distinct approaches involving: decriminalization of drug possession; expanded resources to promote recovery from addiction; or both (see Figure 1), and differ with respect to the order in which reforms should be implemented.

The BC PHO report advised that there are potential benefits to removing penalties for drug possession alone, including increased engagement with existing health services. In relation to Figure 1, the PHO report reflects quadrant C by recommending immediate changes to Canada's criminal code without any necessary preconditions.

Both police-led reports emphasized the primary need for substantial increases in community-based services to divert people with addictions from lifestyles that involve frequent drug-related crimes, including theft, break and enter, and robbery: "The current lack of substance use treatment options and diversion programs means that often individuals are arrested for their drug-related crime but are subsequently released to re-commit the same crimes, placing a strain on police resources, and ultimately not improving the individual health and safety outcomes" (Special Purpose Committee on the Decriminalization of Illicit Drugs, 2020, p. 12). By emphasizing the implementation of addiction recovery resources *prior to* law reform, both police-led reports represent quadrant A in Figure 1.

The Stanford-Lancet Commission focused on the gap between evidence-based practices that promote recovery from addiction and their availability to members of the public. The Commission emphasized the implementation of these practices, but did not recommend changes to drug possession laws, consistent with quadrant B.

The core question for the current review is: Does the decriminalization of drug possession for personal use contribute to the goals of reduced harms and improved well-being among people who use illicit drugs addictively? We examined peer-reviewed publications that reported outcomes of reducing the criminal consequences of drug possession. Results are discussed in relation to the well-being of drug users, diversion from the criminal justice sector, and whether reforms were concurrent with or preceded by investments addressing addiction recovery.

METHODS

A formal search strategy was implemented using the PICOTS method (Samson & Schoelles, 2012) as detailed in Table I. The

	Decriminalize Personal Drug Possession?		
Expand Resources for Addiction Recovery?		Yes	No
	Yes	Α	В
	No	С	-

FIGURE 1 Models of reducing harm: Decriminalize drug possession, promote recovery, or both

domains of Population, Comparator, Timeframe and Setting were unspecified to maximize inclusion of potentially relevant manuscripts. Key terms were specified for Intervention and Outcome, which represent the focus of this review. Searches were conducted using three databases to ensure inclusion of relevant publications (APA PsycInfo, CINAHL, Criminal Justice Abstracts).

Identified publications were reviewed by at least two members of the project team for relevance and inclusion in the review. Disagreements between reviewers were resolved by including a third project team member and making a consensus decision among all three reviewers. Citations of selected articles were reviewed to identify additional potentially relevant publications, and identified papers were assessed for inclusion using the same review method described previously (i.e., two independent reviewers, disagreements resolved by consensus with a third reviewer).

The decriminalization of illicit drug possession in Portugal is frequently cited in policy discussions. As a secondary objective we sought peer-reviewed as well as high-profile grey literature discussing decriminalization in Portugal, and we present these works separately.

Our review examined studies reporting health and social effects of reforms addressing the possession of illicit drugs in amounts consistent with personal use. We focused on studies that addressed the forms of illicit drugs that are most responsible for poisonings and mortality, including opioids and stimulants. We included studies that reported outcomes associated with cannabis alongside other illicit drugs. However, we excluded publications that focused exclusively on cannabis legalization or decriminalization. The reasons for this exclusion were: first, cannabis use is not associated with a high risk of mortality or disability compared with other illicit drugs; and second, the large number of studies addressing cannabis legalization alone would dilute the focus of the current review.

RESULTS

A total of 3,208 articles were identified by combining the results from all three databases, which was reduced to 2,518 after eliminating duplicates (see Table I).

Six manuscripts satisfied our inclusion criteria and are listed in Table II followed by summaries relevant to the current review.

Vicknasingam et al., 2018

In 2016, the United Nations General Assembly Special Session on the World Drug Problem signaled a shift in policy by recognizing that drug dependence has "social causes and consequences that can be prevented and treated" (United Nations Office on Drugs and Crime (UNODC), 2016, p. 6). The self-described purpose of this systematic review was "[T]o review the literature on decriminalization of drug use from 2016 to 2017 and suggest the way forward" (Vicknasingam et al., 2018, p. 300). The review notes that surveys of physicians in the United States and Ireland reported a lack of support for the legalization of cannabis, citing concerns regarding mental and physical risks. Of the articles identified through the review, "almost all of them discussed the legalization of cannabis in the United States" (p. 302). One exception was an article

based in Portugal, which reported that the decriminalization of illicit drugs did not affect the market price of cocaine and opiates. The review concluded that "studies reporting on the positive outcomes of decriminalization remain scarce" and that evidence needs to be more widespread in order to support the case of decriminalization" (p. 300).

TABLE I Decriminalization of simple drug possession rapid review: Search parameters & results

Search using PICOTS method	Query/Key words	Results
Population	Open/unspecified	
Intervention	depenalization OR decriminalization OR drug possession OR drug offenses OR drug legalization OR drug control policy	
Comparator	Open/unspecified	
Outcome	harm reduction OR overdose OR poisoning OR mortality OR quality of life OR wellbeing OR diversion OR arrests OR remand OR jail OR incarceration OR crim* OR criminal justice OR emergency OR accidents OR deaths OR injuries	
Timeframe and Setting	Open/unspecified	
Combined search (intervention and outcome)	Three databases (retrieved records): Criminal Justice Abstracts with Full Text (n=1585) APA PsycInfo (n=1201) CINAHL Complete (n=422) Limiters – Scholarly (Peer-Reviewed) Journals; Academic Journal; Language: English	3,208
	Time duration: up to April 29, 2022 Retrieved records with duplicates removed	2,010

TABLE II Selected articles satisfying review criteria (n=6)

Authors	Article Title
Vicknasingam et al., 2018	Decriminalization of drug use
Stevens et al., 2022	Depenalization, diversion and decriminalization: A realist review and programme theory of alternatives to criminalization for simple drug possession
Bird et al., 2020	Impact of defelonizing drug possession on recidivism
Hughes & Stevens, 2010	What can we learn from the Portuguese decriminalization of illicit drugs?
Félix & Portugal, 2017	Drug decriminalization and the price of illicit drugs
Scheim et al., 2020	Impact evaluations of drug decriminalization and legal regulation on drug use, health and social harms: a systematic review

Stevens et al., 2022

This review reports a systematic search spanning nine countries "for information on alternative measures in three categories: depenalization; diversion; and decriminalization" (p. 30). The reviewers developed their methodology in consultation with a working group convened by the Irish government. "Our discussions with this group focused the review on the following questions: How can alternative measures for dealing with simple drug possession (a) avoid giving people who use drugs a conviction and criminal record for drug possession in a way that: (b) avoids increasing the health harms of drug use; (c) does not increase the scale and violence of organized criminal involvement in drug supply; (d) maintains the possibility to intervene in public drug use; (e) diverts people who need it into treatment (without swamping the treatment system with people who do not need treatment); and (f) is cost-effective?" (p. 32).

The review describes a pragmatic and policy-oriented approach that acknowledges interactions between alternative drug policies and the broader social context: "[S]tructural and cultural properties of social systems influence the institutional contexts in which alternative measures operate. The implementation of alternative measures in these contexts triggers mechanisms in three causal pathways (normative, criminal justice, and health and social services). These alternatives work through complex combinations of contexts and mechanisms to produce differing outcomes. These outcomes then go on to affect the conditions and institutional contexts within which measures in response to drug possession operate" (p. 47). The review recommends that effective policy requires "careful design of the choice of reform, achieving awareness and support from the public, police and prosecutors for reform, simultaneous investment in treatment and social services, and funding and use of research and evaluation" (p. 47).

Bird et al., 2020

In 2014, the State of California implemented measures to reduce the severity of criminal sentences associated with drug possession and selected property crimes (Proposition 47). This 2020 publication reports results generated by examining rearrest and conviction data spanning nine California counties; it found that "people who received drug possession convictions after Prop 47 had lower overall rearrest and reconviction rates than people with comparable convictions and criminal histories released prior to the proposition" (p. 591). Not all of the researchers' findings were similarly positive, however. Declines in nonviolent recidivism were accompanied by an increase in rearrests and reconvictions for crimes against persons, primarily comprised of assaults and domestic violence. Interpreting these findings, the researchers wrote: "[W]e are concerned that lessoning [sic] of sanctioning for drug possession means a small segment of those who would previously have been rearrested for drug possession and are now left without a criminal justice intervention experience an escalation of their problems and wind up in a physical altercation" (p. 604).

Hughes and Stevens, 2010

The current paper was published roughly eight years following the implementation of drug policy reforms in Portugal, including the decriminalization of drug possession for personal use. The researchers examined the criminal and health

impacts of Portugal's reforms in comparison with evidence from Spain and Italy during the same period and observed that, "[b]etween 2001 and 2007, lifetime and last-year use was reported to have increased in Portugal for almost all illicit substances" (p. 1006). Increased use was evident in all age groups above 19 years, and similar increases were concurrently observed in both Spain and Italy. Impacts on crime appear to have been mixed: "[T]he number of crimes strongly linked to drugs—that is theft, robberies, public assaults and certain types of fraud—increased by 9 per cent between 1995–99 and 2000–04" (p. 1009). Street robberies increased 60% between the two time periods reported. At the same time, thefts from post offices, homes, and businesses all declined. Additional findings included reductions in the numbers of people incarcerated for crimes associated with drug possession and substantial increases in participation in drug treatment oriented towards social reintegration and recovery.

Due to the multiple elements of Portugal's reforms, the researchers conclude that "it is impossible to state that any of these changes were the direct result of the decriminalization policy" (p. 1017). Summarizing the advice provided by key informants in Portuguese policy roles, they add: "They contend that such reform, while not a swift or total solution, holds numerous benefits, principally of increased opportunity to integrate drug users and to address the causes and damages of drug use" (p. 1018).

Félix and Portugal, 2017

This research paper focused on the specific effects of Portugal's national strategy on the prices of illicit drugs. The researchers compared changes in drug prices in Portugal with those of 15 other European Union countries plus Norway and concluded that "[t]he results suggest that the prices of opiates and cocaine in the post-treatment period did not decrease in the sequence of the policy change" (p. 121).

Scheim et al., 2020

This systematic review concluded that "peer-reviewed longitudinal evaluations of drug decriminalization and legal regulation are overwhelmingly geographically concentrated in the US and focused on cannabis legalization" (p. 7). The authors report that, to the best of their knowledge, their review is the first to assess outcomes of drug decriminalization or regulation. Fully 96% of the studies they identified were focused on cannabis and 91% were conducted in the United States. The prevalence and frequency of drug use were the most commonly reported outcomes across the identified studies, with most studies reporting little change in measures of drug use.

A comparatively small number of studies included any measures associated with drug poisoning as an outcome following cannabis decriminalization or legalization. These studies either examined the effects on poisonings involving cannabis itself (e.g., consumption by infants or young children) or on classes of drugs other than cannabis. Seven measures examined poisonings directly related to cannabis and were consistent: "[I]n all cases an increase in calls to poison control centres or unintentional paediatric exposures was reported" (p. 7). With respect to poisonings involving other drugs, four measures suggested a decrease following cannabis decriminalization, while an additional three measures suggested mixed or no effects.

The authors discussed the compelling need for highquality research to provide guidance to policy makers. They observed that "there was a lack of alignment between the stated policy objectives of drug law reform and the metrics used to assess its impact in the scientific literature" and concluded: "The findings of this review indicate a need for a broadening of the metrics used to assess the impacts of drug decriminalization and legal regulation" (p. 8).

Additional Articles and Reports Addressing the Situation in Portugal

In addition to peer-reviewed studies presenting original research, publications were retrieved that present details of the decriminalization of drugs in Portugal. Selected documents include widely cited reports and scholarly analyses, including a Portuguese physician's essay on the relationship between law reforms and impacts on the lives of drug users.

Documents specific to Portugal are listed in Table III, followed by summaries.

Hughes and Stevens, 2007

This Briefing Paper was developed by the Beckley Foundation and aimed to present "perceptions of key stakeholders regarding the major impacts, successes, and challenges" associated with Portugal's introduction of Commissions for the Dissuasion of Drug Addiction and legal reforms affecting the possession of drugs for personal use (p. 1). The report concluded that all interviewees agreed that the Commissions had positively impacted the lives of drug users by facilitating treatment and social reintegration. Summarizing their learnings from key stakeholders, the authors concluded: "The Portuguese experience cannot provide a definitive guide to the effects of decriminalization of drugs, but only indications of the results of decriminalization in the specific Portuguese context. It is not possible to tell the extent to which changes were caused by decriminalization or the wider drug strategy" (p. 9). The authors emphasized that the success of reforms to drug policies "depends upon the existence of a well operating system" that integrates education, treatment,

TABLE III Selected literature specific to Portugal (n=5)

Authors	Title	Document Type
Hughes & Stevens, 2007	The effects of the decriminalization of drug use in Portugal	Discussion Paper
Greenwald, 2009	Drug decriminalization in Portugal – lessons for creating fair and successful drug policies	Report
Hughes & Stevens, 2012	A resounding success or a disastrous failure: Re-examining the interpretation of evidence on the Portuguese decriminalisation of illicit drugs	Journal article
Coelho, 2015	Drugs: The Portuguese fallacy and the absurd medicalization of Europe	Letter to editor
Mendes et al., 2019	Literature review on the implications of decriminalization for the care of drug users in Portugal and Brazil	Literature review

media, police, and legislators. Despite the successes observed in Portugal, the authors also noted that the "implementation of decriminalization has been affected by a lack of strong collaboration, of adequate resources, of a good media campaign on the meaning of the reform and evidence-based studies and evaluation" (p. 9).

Greenwald, CATO Institute, 2009

The CATO Institute developed this report focused on "drug-related trends in Portugal both pre- and post-decriminalization" and concluded that "judged by virtually every metric, the Portuguese decriminalization framework has been a resounding success" (p. 1). The report examines rates of drug-related crime, prevalence of drug use, drug-related mortality, and HIV incidence rates and, where possible, compares these over time and with rates in other countries. The report's sole author does not consider the impact of Portugal's substantial investments in new services implemented as part of their national strategy and does not discuss the importance of coordination spanning multiple sectors working concertedly.

Hughes and Stevens, 2012

This academic commentary synthesizes disparate perspectives on the consequences of Portugal's national drug policy reforms. The authors observe that the conclusions reached by previous commentators have ranged from "resounding success" to "disastrous failure." Through an analysis of available reviews, including the methods and sources of data they employ, the authors conclude that "divergent policy conclusions were derived from selective use of the evidence base that belie the nuanced, albeit largely positive, implications from this reform" and caution that "for proponents of reform, that is, those challenging the status quo, deliberate misinterpretation of evidence is a high-risk game" (p. 111).

Coelho, 2015

The author of this detailed 14-page letter is a Portuguese M.D. and Ph.D. specialized in addiction (Coelho, 2015). A wide variety of evidence is presented from sources within Portugal that mitigate the magnitude of positive effects reported by previous reviewers, including evidence of increased drug-related deaths and homicides, increased prevalence of adult drug use, and indicators that, within the European community, "Portugal remains the country with the highest incidence of related intra-venous use drugs with AIDS and it is the only country recording a recent increase" (p. 7).

Reflecting fatigue with the persistent framing of addiction as either a moral failing or a disease, the author recommends: "In contrast to the suggestion that we should place health at the centre of drug policy there is a strong case instead for placing well-being at the centre of policy" (p. 11). Coelho reviews evidence that people who experience addictions "need psychological help, not medical: while doctors prescribe medicines, psychologists 'prescribe' psychotherapy. Psychologists are essential in this process" (p. 12). The author concludes by arguing that the prevention of addiction and promotion of recovery are fundamental to international commitments to human rights, including the Declaration of the Rights of the Child, and also reflect reciprocal responsibilities between individuals and their societies, a basic premise of democratic governments.

Mendes et al., 2019

This "integrative review" examined scientific literature addressing the effects of "drug legalization change for the care of drug users in Brazil and Portugal" (p. 3395). The authors reviewed studies spanning several decades and concluded that the relatively weak quality and low number of available studies precludes drawing clear inferences. "The scarce scientific production on the subject in the two countries shows the need to increase knowledge through research that effectively identifies the implications of changes in the legislation on care" (p. 3403). Despite their observations concerning the limitations of extant research regarding the care of drug users (i.e., selected or indicated prevention), the authors report that evidence regarding the importance of universal prevention is relatively clear: "[W]hat is described in literature suggests that it is necessary to advance the prevention of the use of alcohol and other drugs in both countries. Such actions must be planned for the medium-and long-term and cannot be performed to achieve immediate results, despite demand from management, professionals and population for instant responses" (p. 3403).

DISCUSSION

Our results replicate the findings of recent systematic reviewers (Scheim et al., 2020; Vicknasingam et al., 2018), who concluded that evidence addressing drug decriminalization is overwhelmingly specific to cannabis in the United States. Evidence concerning the decriminalization of other drugs is substantially based on studies conducted in Portugal, followed by California and Brazil. Overall, results indicate that the decriminalization of drugs is associated with potential harms as well as potential benefits. Beneficial outcomes among drug users are primarily attributable to the introduction of evidence-based resources that promote recovery from addiction, consistent with the United Nations General Assembly Special Session on the World Drug Problem, which stated that drug dependence has "social causes and consequences that can be prevented and treated" (United Nations Office on Drugs and Crime (UNODC), 2016, p. 6).

The available evidence indicates that drug decriminalization is associated with increases in drug consumption as well as associated harms among drug users and other community members (e.g., poisonings among infants and young children), a conclusion that was also reached by the Stanford-Lancet Commission (Humphreys et al., 2022). The opportunity to offset these harms appears to be dependent on the extent to which jurisdictions implement targeted measures to reduce the prevalence of addiction, which is achieved by both preventing addiction and promoting recovery. A thorough review of the first decade of Portugal's reforms concluded:

Internationally, Portugal has gone furthest in emphasizing treatment as an alternative to prosecution. Portuguese political leaders and professionals have by and large determined that they have made the right policy choice and that this is an experiment worth continuing. Portuguese policy makers suggest that adoption of such a reform requires time to develop the infrastructure and the necessary collaboration between the criminal justice and health systems. They contend that such reform, while

not a swift or total solution, holds numerous benefits, principally of increased opportunity to integrate drug users and to address the causes and damages of drug use (Hughes & Stevens, 2010, p. 1018).

Evidence collected from Portuguese key informants found universal agreement that community-based Commissions for the Dissuasion of Drug Addiction had positively impacted the lives of drug users by facilitating treatment and social reintegration (Hughes & Stevens, 2007). The Portuguese National Drug Strategy unambiguously described the goal of addiction treatment: "Strictly speaking, there is no such thing as treatment without social reintegration" (Portuguese Government, 1999, p. 82). The Strategy also affirmed the ongoing need to curtail the availability of drugs: "[C]onsidering that the Committee does not propose the decriminalization of the sale of drugs, which would continue to be a crime, the scenarios of liberalization and regulation of the drug trade are obviously excluded" (p. 32).

The importance of reducing the overall prevalence of addiction was emphasized throughout the manuscripts included in this review. Mendes and colleagues (2019) discussed the importance of medium- and long-term actions that include alcohol as well as illicit drugs, recognizing that addictions often involve multiple substances, particularly among those most at risk for harm. Coelho (2015) suggested that the concept of "well-being" should be the core organizing feature of policies addressing addiction, led by neither the criminal justice nor healthcare sectors. The very recent review by Stevens and colleagues (2022) concluded that reforms to reduce drug-related harms require "awareness and support from the public, police and prosecutors for reform, simultaneous investment in treatment and social services, and funding and use of research and evaluation" (p. 47). Reviewers described unintended harms associated with reductions in criminal sanctions when unaccompanied by investments in addiction recovery. Describing California's experience with drug decriminalization, researchers concluded: "[A] small segment of those who would previously have been rearrested for drug possession and are now left without a criminal justice intervention experience, an escalation of their problems and wind up in a physical altercation" (Bird et al., 2020, p. 604). Further evidence of harms associated with decriminalized drug use is illustrated by the long-term impact of medical cannabis: "[S]tates with medical cannabis laws had higher than expected mortality from opioid overdoses between 1999 and 2017, even after the restrictiveness of cannabis laws was controlled for" (Humphreys et al., 2022, p. 13).

Taken collectively, the results of this review support the effectiveness of policy interventions that aim to reintegrate people who experience harmful addictions into society, and indicate that reforms to the criminal justice sector can facilitate that goal. This evidence is most consistent with models A and B in Figure 1.

A considerable body of evidence characterizes unmet needs among people who experience poisonings and addictions in British Columbia, where the decriminalization of simple possession has been approved by Canada's federal government. Two-thirds of the people who experienced drug poisonings in BC between 2014 and 2016 earned no employment income in the year preceding their deaths, and

the remainder earned as little as \$500 (Carrière et al., 2021). Between 2009 and 2017, the rate of involuntary hospitalizations attributed to substance use disorders (SUDs) in British Columbia increased from 1,887 to 4,536 (Vigo et al., 2019). During the same period the percentage of British Columbia's custody population that had been diagnosed with SUDs prior to custody increased from 42% to 55% (Somers et al., 2021). An earlier study indicates that, among people diagnosed with SUDs and sentenced for crimes in British Columbia, fully 70% had also been diagnosed with additional forms of mental illness such as schizophrenia or bipolar disorder (Rezansoff et al., 2013). Those at highest risk for repeated convictions in British Columbia are individuals with SUDs alongside concurrent mental illness and poverty: "[T]he relationship between SUD and recidivism may be associated with the disproportionate clustering of various social disadvantages among this subset of offenders" (Rezansoff et al., 2013, p. 8).

Russolillo and colleagues linked healthcare and corrections data to examine criminal convictions among 14,530 people in British Columbia who had been diagnosed with opiate use disorder. Members of the cohort were convicted an average of 5 times per person, totaling 67,824 offences. Drug possession accounted for only 3.8% of their offences, eclipsed by the prevalence of property crimes (50.1%) and substantially less common than violent offences (9.6%) (Russolillo et al., 2018, Supplementary Tables S2 & S3). About one-third of the sample had also been diagnosed with either schizophrenia or bipolar disorder, confirming the very high prevalence of severe mental illness among people in British Columbia who struggle with addiction and who are repeatedly exposed to the criminal justice sector. Reinforcing these facts, a Vancouverfocused study included 107 people who had 19.4 criminal sentences and received \$246,899 in public services over a 5-year period (Somers et al., 2015). Every member of the cohort had been diagnosed with either a SUD or another mental disorder, and 88% had been diagnosed with both a SUD and another mental disorder.

These results indicate that the criminalization of drug users extends well beyond the offence of personal drug possession and implicates needs related to unemployment, untreated mental illness, and support for recovery and wellness. Similar actions were recommended by Canada's National Inquiry into Missing and Murdered Indigenous Women and Girls (2019), which detailed the significance of addiction among both the perpetrators and victims of violence and called for action to promote recovery and healing in the context of Reconciliation. The Inquiry's Final Report "reframes challenges such as substance use, addiction, or suicidal thoughts, which are often seen as personal failings, as understandable responses to the trauma of colonial violence" (National Inquiry into Missing and Murdered Women and Girls, 2019, p. 112) and describes "the need to foster recovery and reintegration" (p. 497).

Canada has critical gaps in resources that promote recovery from both addiction and mental illness. Following a pan-Canadian series of consultations, a Senate Committee (the Kirby Commission) published its vision for a reformed system of care addressing addiction and overall mental health: "At the core of this vision is a recovery-oriented, primarily community-based, integrated continuum of care" (The Standing Senate Committee on Social Affairs, Science and Technology, 2006, p. 91). The Committee observed that among

Canadians who are homeless "20–25% are living with concurrent disorders, that is, with both mental health problems and addictions" (p. 118). The Committee stated plainly that "[t]his report focuses on facilitating the recovery of people living with mental illness and addiction" (p. 42) and emphasized the urgent need to address "factors such as income, access to adequate housing and employment, and participation in a social network of family and friends" (p. 41).

Removing penalties for the possession of drugs for personal use would enable the pharmaceutical industry to expand the "provision of pharmaceutical alternatives to street drugs," as recommended by British Columbia's Provincial Health Officer (Office of the Provincial Health Officer, n.d., p. 38). However, it is unclear how much improvement in the lives of vulnerable Canadians would be achieved by removing a criminal penalty that is associated with less than 4% of their criminal convictions, while failing to prioritize, or even mention, indicated evidence-based interventions.

Limitations of the current review include a reliance on English language publications and the use of three search engines as the basis for identifying manuscripts. These limitations are mitigated by the agreement between our major findings and those reached by previous systematic reviewers.

The evidence summarized in this review supports careful consideration of the factors necessary to promote social reintegration among Canadians at highest risk for drug-related harms, including repeated criminal offending and death. Interrogation of those factors implicates needs that can be effectively addressed through evidence-based housing, supported employment, and treatment for addiction and mental illness. It also implicates the urgency of addressing addiction in the context of Reconciliation with First Peoples, recognizing that culture and community exert potent influences on recovery as well as prevention. In the absence of robust action addressing the determinants of addiction, measures that increase the availability and legality of addictive drugs are contraindicated.

CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

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