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The scientific portrayal of decriminalization models for psychoactive substances: A scoping review

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THE SCIENTIFIC PORTRAYAL OF DECRIMINALIZATION MODELS FOR PSYCHOACTIVE SUBSTANCES: A SCOPING REVIEW

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Resumo

Ainda que o quadro político relativo às substâncias psicoativas prevalente seja proibicionista, a pesquisa científica e os indicadores socioeconómicos expõe, maioritariamente, consequências negativas. Uma política alternativa ao proibicionismo é a descriminalização. Contudo, embora já aplicada em alguns países, esta continua a ser uma estratégia desacreditada, com contornos e efeitos relativamente desconhecidos.

Esta *scoping review* tem como objetivo analisar os estudos existentes, mapear os objetivos, métodos utilizados e conclusões dos mesmos, e destacar eventuais *research gaps*. Para tal, foi seguida uma metodologia tripartida: Estágio um - pesquisa inicial, incluindo uma análise de títulos, resumos e palavras-chave usados pelos investigadores, criando uma listagem dos termos por estes comummente usados para se referir à descriminalização; Etapa dois - essa lista foi usada como uma ferramenta para aperfeiçoar a pesquisa em várias bases de dados, selecionando artigos que cumpriam os critérios de inclusão pré-estabelecidos; Etapa três - triagem do texto completo dos artigos selecionados, sendo as incertezas resolvidas por um segundo revisor. Em seguida, foi criada uma ferramenta para extrair dados e a síntese dos mesmos foi baseada nas metodologias de Arksey e O'Malley e Joanna Briggs Scoping Review.

Os resultados permitem-nos caracterizar a produção científica neste campo (p.e., origem e enfoque dos estudos), percebendo como os investigadores abordam e definem a descriminalização e que indicadores usam para estudar o *design*, implementação e avaliação das políticas de descriminalização. Permite, também, uma análise de eventuais fatores que impeçam a reforma política e uma proposta de possíveis investigações futuras e mudanças políticas.

Palavras-chave: Descriminalização; Política de Drogas; Reforma Política; Liberalização

Abstract

Although the main political framework concerning psychoactive substances is a prohibitionist one, scientific research and socioeconomic/sociodemographic indicators have exposed its negative consequences. An alternative policy is decriminalization. Although already applied in some countries, it remains a discredited strategy with relatively unknown contours and effects.

This scoping review aims to analyse existing studies in the field, mapping their objectives, methods used and conclusions, and highlighting eventual research gaps. For such, a three-stage design was performed by an independent reviewer: Stage one - initial search including an analysis of titles, abstracts and index terms used by researchers, creating a list of common terms/keywords used to refer to decriminalization; Stage two - this list was used as a tool to refine the search on various databases for papers that met the pre-established inclusion criteria; Stage three - screening of the selected articles' full-text (doubts were solve by consensus with a second reviewer). A tool was created to extract data and synthesis was based on the Arksey and O`Malley and Joanna Briggs Scoping Review methodologies.

The results enable us to produce an instrument for the characterization of all scientific production in this field (e.g. where it comes from and what does it focus on), depicting how researchers approach decriminalization and what indicators they use to study the design, implementation and evaluation of decriminalization policies. It also allows for an analysis on what has been hindering policy reform and for a comprehensive appraisal of what could be the pathways for future research and policy reform.

Keywords: Decriminalization; Drug Policy; Policy Reform; Liberalization

Introduction

Since 1971, President Nixon's fabled "War on Drugs" has been the strategy under which most countries legislate, control and punish individuals who either use, sell or manufacture drugs, whether they have developed an addiction or not, whether they are healthy or not, whether they lead socially adapted lives, or not. Prohibition of psychoactive substances has thus become the main policy to address what is considered an ever growing 'evil', that pollutes our society and deems individuals 'lost causes' (Transform, 2009).

Albeit its status as the most applied framework, both scientific research and the analysis of socioeconomic and sociodemographic indicators have showed us that there are far more dangers coming from the implementation of prohibitionist regimes than there are of drug use itself (Hall, 2017; Boyd & Macpherson, 2018).

Over the decades we stood watch to an increase in the number of incarcerated and homeless people [approx. 18% of the global prison population consists of people convicted for drug related crimes (GCDP, 2016; UNODC, 2016); most of which are, in the European Union, related to possession or supply of Cannabis – with 1.5 million drug law offences reported in 2016; EMCDDA, 2018a], due to a social reaction to drug use (i.e., less job opportunities and decreasing educational qualifications which, in turn, lead to poverty and, perhaps, to even more crime); a boom in gang and cartel-related violence associated with the illegal drug markets that have arisen [some being worth US$320 billion/year (GCDP, 2016); with retail drug sales estimated at 18 billion Euros, in 2015, for 21 EU countries, and US$109 billion, in 2010, in the USA (UNODC, 2017c)]; the dismembering of families (e.g., due to incarceration, poverty and health issues); the emergence of new psychoactive substances (NPS) ["by the end of 2017, (in Europe), the EMCDDA was monitoring more than 670 NPSs (…). These substances are not covered by international drug controls and make up a broad range of drugs (…). In most cases they are marketed as 'legal' replacements for illicit drugs"; EMCDDA, 2018a, p.32]; the widespread of epidemics such as HIV/AIDS, hepatitis C and tuberculosis [of the 12 million people worldwide who inject drugs (PWID), 1.6 million are living with HIV and 6.1 million are living with hepatitis C; also, "the prevalence of tuberculosis among PWID is estimated at approximately 8 per cent, which compares with less than 0.2 per cent in the general population"; UNODC, 2017b, p.9; see also GCDP, 2016]; and an ever growing number of drug-related deaths ["Globally, UNODC estimates that there were 190900 drug-related deaths in 2015, or 39.6 deaths per million people aged

15-64 years (...) based on the reporting of drug-related deaths by 86 countries"; UNODC, 2017b, p.27; see also GCDP, 2016].

Additionally, the amount of people who use drugs (PUD) appears to be rising in most countries [with estimates of around 255 million people worldwide, aged 15-64 years, in 2015 (of which only 29.5 million present a drug use disorder – approx. 11.6%), compared to about 208 million users in 2006; UNODC, 2017b; see also EMCDDA, 2018a], proving that a prohibitionist regime is, thus, failing its theoretical main goal.

Nevertheless, these negative outcomes are not propelling change, creating a political paradox that seems deeply rooted in morality and in a stereotypical and discriminating view of PUD.

For example, scientific research has systematically shown that only 10 to 20% of PUD develop an addiction and, usually, these people already live in an adverse situation (e.g., financial difficulties, physical/mental-health problems – infectious diseases, depression, anxiety, … –, isolation and lack of social support, ...), which leads them to find solace in drug taking (i.e., they opt to use drugs because there aren't many other positive reinforcers in their lives; Hart, 2013; Luty, 2016). This implies that many people are, for example, suffering legal charges for minor possessions and sporadic usage (approx. 83% worldwide; Release, 2016; GCDP, 2016), awarding them with a criminal record that might lead to unemployment and, consequently, to the loss of financial stability, meaning they and their families have to fight harder for the opportunities they've lost, hence, being more exposed to how reinforcing drugs can be (e.g., in the US "felony convictions for drugs (…) can lead to: exclusion from juries; voter disenfranchisement (…); eviction or exclusion from public housing; refusal of financial aid for higher education; revocation or suspension of a driver's license; deportation and in some cases permanent separation from their families of those considered 'non-citizens'; exclusion from certain jobs, and denial of welfare"; GCDP, 2016, p.17).

Thus, it isn't the abundance of drug addicts that makes it imperative for drugs to be illegal. Likewise, according to scientific research, it isn't a matter of toxicity or dangerousness of the various substances because most of them, when taken safely, don't pose a life threat (Hart, 2013; Luty, 2016).

Some authors believe it is merely a cultural/moral question and a way of social control (Boyd & Macpherson, 2018), which can be inferred by the way ethnic minorities are targeted despite not having higher rates of consumption (e.g., in the UK, "black people are six times more likely to be stopped and searched for drugs than white people, and Asians

twice as likely despite the fact that drug consumption is higher among white people"; GCDP, 2016, p.17; see also, Release, 2013; Hart, 2013).

So, what makes decriminalization an alternative framework? Decriminalization isn't a new model, per se. It has been applied in some countries for as long as the war on drugs has gone on. Although, it wasn't until recently that both the political sphere and the public began weighing its benefits and deeming it a viable option (Release, 2016; Drug Policy Alliance, 2017).

Currently, there are countries where some psychoactive substances have been either decriminalized[1] (e.g., Portugal, the Netherlands, Switzerland and Czech Republic), legalized or legalized for medical purposes (e.g., some states within the U.S.A. and Canada; Transform, 2016; Release, 2016). This was generally accompanied by a significant investment in health measures, such as prevention, treatment and harm reduction programs (*id*.)

Decriminalization, when coupled with harm reduction programs and educational plans for both professionals (such as psychologists, clinicians, pharmacists, social workers, teachers, law enforcement officers, etc.) and the public, may be a way to successfully help users of all ages consume safely and to promote access to treatment for people who wish to cease their consumption, thus, improving PUD's health, well-being and quality of life. It can also be an efficient way to start addressing issues such as illegal markets, gang violence, international trafficking and NPS, leading to an overall reduction of the criminal justice costs and working to prevent epidemics, hence, positively improving public health (GCDP, 2016; Drug Policy Alliance, 2017; EMCDDA, 2018a).

There are differences between countries concerning the implementation of such measures (e.g., if they are administered by criminal justice or health professionals or the actual threshold amounts used to determine the user/supplier distinction) and the legal structure in existence (e.g., different definitions of civil and criminal offences, as well as different non-criminal sanctions applied - fines, warnings, treatment referrals, confiscation of passports or driving licenses, etc.). Nonetheless, the overall outcome of such policies has been a positive one (Transform, 2016).

[1] Either *de jure* decriminalization, meaning the reform of policies and legal frameworks, or *de facto* decriminalization, concerning the non-enforcement of criminal laws that are, technically, still in existence (for example, the deprioritisation of drug related crimes by establishing thresholds for possession below which police intervention is minimal or non-existent).

For example, since the implementation of a decriminalization policy in 2000, Portugal has witnessed a "reduction in drug use among certain vulnerable populations; increases in the numbers accessing treatment services; significant decreases in HIV transmission rates and new cases of AIDS among PUD (85 percent and 91 percent, respectively, over a 13-year period); and a significant reduction in drug-related deaths" (GCDP, 2016, p.20). This country as also "saved 18 percent in social costs" (p.21). "These savings were related to maintained income and productivity as a result of individuals avoiding imprisonment for drug possession", "indirect health costs such as the reduction of drug-related deaths and HIV rates" and "direct savings to the criminal justice system" (p.21). Furthermore, there was a "decline in the number of criminal drug offenses from approximately 14,000 per year in 2000 to an average of 5,000-5,500 per year after decriminalization, and the number of people incarcerated for low-level drug offending fell from 44 percent of all prisoners in 1999 to 24 percent by 2013, resulting in a substantial reduction in prison overcrowding" (p.21; see also EMCDDA, 2018b).

Decriminalization isn't the perfect strategy, but it has been proving itself to be a less harmful one. Moreover, decriminalisation ought to be part of a "wider policy reorientation (and resource reallocation), away from harmful punitive enforcement, and towards evidence-based health interventions that target at-risk populations, particularly young people and people who are dependent on or inject drugs" (Transform, 2016, p.149). Therefore, we find it important to collect data that will help inform decision makers in the future, so that eventual drug policy reforms can be rooted on scientific evidence.

Following the UNODC (2017a) suggestion to strengthen "the knowledge base of the drug problem by improving data, analysis and dissemination at the national, regional and international levels, including on the links between drugs and other issues" (p.31), this review aims to present and characterize the existing scientific research in the field and to identify possible research gaps. We also intend to draw attention to the factors that might underline the resistance to change.

In the end, we intend to answer the following:

- What studies exist that either focus on or mention decriminalization?
- How do researchers conceptually define decriminalization?
- What are researchers interested in when studying decriminalization policies (its characteristics, advantages/disadvantages, …)?
- What is underlining the resistance to drug policy change?
- What are the research gaps?

Even though a few systematic reviews already exist on topics surrounding decriminalization (e.g., side effects of decriminalization, advantages/disadvantages of medical decriminalization, relation between drug policies and violence/crime/poverty/epidemics/etc., the need for harm-reduction interventions and its outcomes, and so on), no systematic nor scoping review was found that aimed to map the existing studies and analyse the current research on decriminalization models. We believe such a comprehensive study is lacking. Granted that, for example, the 2016 RELEASE report on decriminalisation covers some ground by cataloguing the decriminalisation models in existence and their characteristics, as well as mentioning some important issues when designing drug policies, we argue that it fails to highlight research tendencies and gaps. Reports give us an important overview of drug policy, but our aim is to highlight what has been researched, debated and considered at the local level, given that's where policy begins.

Methodology

1.1. Search Strategy

As a search strategy we followed a three-stage design:

Stage one – Search using the MEDLINE and Criminal Justice Abstracts databases followed by an analysis of the titles, abstracts and index terms used to describe the article, so that a list of common terms and keywords used to refer to decriminalization policies could be made.

Stage two – The aforementioned list was used (along with the input from the research team) as a tool to refine the subsequent search made for papers that met the inclusion criteria.

Stage three – For this search, the following databases were consulted: MEDLINE with Full Text; Criminal Justice Abstracts; Historical Abstracts; Psychology and Behavioral Sciences Collection; CINAHL; Cochrane Library; PsycARTICLES; PsycINFO; Scopus; Google Scholar; American Doctoral Dissertations; BAES; b-on; Open Grey; ProQuest Dissertations and Thesis; Grey Literature Report and Web of Science Conference Proceedings.

A targeted search of the grey literature in local, national and international organisations' websites wasn't conducted, given our space/time restrictions. Nonetheless, such documents will be included on future studies.

1.2. Inclusion and exclusion criteria

The main research question of this scoping review, framed according to the PCC mnemonic - participants, context and concept - endorsed by the Joanna Briggs Institute, is "How are decriminalization models portrayed on peer reviewed and grey literature?", which makes our population the scientific research that either focuses on or mentions decriminalization models and our context the world, i.e., all the countries who have produced scientific research on decriminalization policies, with these studies being our concept.

Therefore, studies were included if they:

- Used quantitative, qualitative or mixed-methods research;
- Were policy documents, expert opinion pieces or otherwise qualified as a relevant grey literature element;
- Were published after 1970 (given that the war on drugs was declared in 1971);
- Referenced decriminalization policies of drug use for recreational purposes; or
- Referenced deprioritizing drug use as a criminal offense;
- Either referred to psychoactive substances in general or to a subgroup of psychoactive substances (e.g., cannabis); and, lastly,
- Since our aim is to map the existing research about decriminalization policies worldwide, studies concerning all territories were included.

Studies were excluded when they:

- Were solely about legalization or prohibition, because they explored a different framework than the one we are interested in;
- Simply recounted the historical progress of decriminalization policies, without making any impact assessment, commentary or analyses relevant to our research questions;
- Were about pharmaceutical drugs (e.g. antibiotics);
- Were about the medical use of illicit substances with a focus on treatment or the underlying diseases (e.g. the use of cannabis on cancer patients), without referencing the policy itself;

- Regarded the decriminalization of abortion, sex work, euthanasia, homosexuality or other phenomena.

1.3. Study selection

The relevance of the articles found in the third stage was screened by an independent reviewer based on an analysis of their title and abstract, using DistillerSR. Subsequently, the full text of the studies selected was screened, using Endnote, and the article kept whenever the inclusion criteria was met. Uncertainty about whether or not to include given article was solved by consensus with a second independent reviewer. The full methodology was not simultaneously performed by two independent reviewers given time and resources restrictions.

1.4. Data Extraction

To extract data, a tool was created, and synthesis was based on the Arksey and O`Malley and the Joanna Briggs' Scoping Review methodologies.

Author(s)	**Title**	**Source**	**Year**	**Peer-reviewed** (yes/no)	**Type of study**	**Research Question(s)/ Aim**	**Method(s) Used**	**Psychoactive substances**	**Origin**	**Territories**	**Conceptual definition of decriminalization**	**Conceptual definition of decriminalization** (when not given)	**Type of decriminalization** (de jure/de facto/both)	**Usage** (medical/ recreational/ both)	**Mentions Harm Reduction** (yes/no)	**Indicators**	**Outcomes/ Key findings**	**Recommendations**

Figure 1. Table for data extraction during the full-text screening of the studies included

1.5. Other considerations

Since this was to be a scoping review, no individual quality assessment of studies was made. EndNote and DistillerSR were used to manage and eliminate duplicates amongst the selected studies.

Results

The initial database search produced 2390 articles, of which 386 were duplicates. After the initial title and abstract screening, 351 articles were included for full-text screening. Of these, 282 articles were excluded for reasons such as: exclusive focus on the medical applicability of psychoactive substances; focus on the historical evolution of policies; focus on the epistemological factors behind policy design; focus on licit drugs (e.g. alcohol) with only a brief mention of illicit drugs; focus solely on harm reduction services or treatment; and focus on the health-risks of using drugs from a clinical standpoint. Other documents were excluded because they were newspaper articles, responses to other authors of which the original articles weren't found or were commentaries/summaries of books.

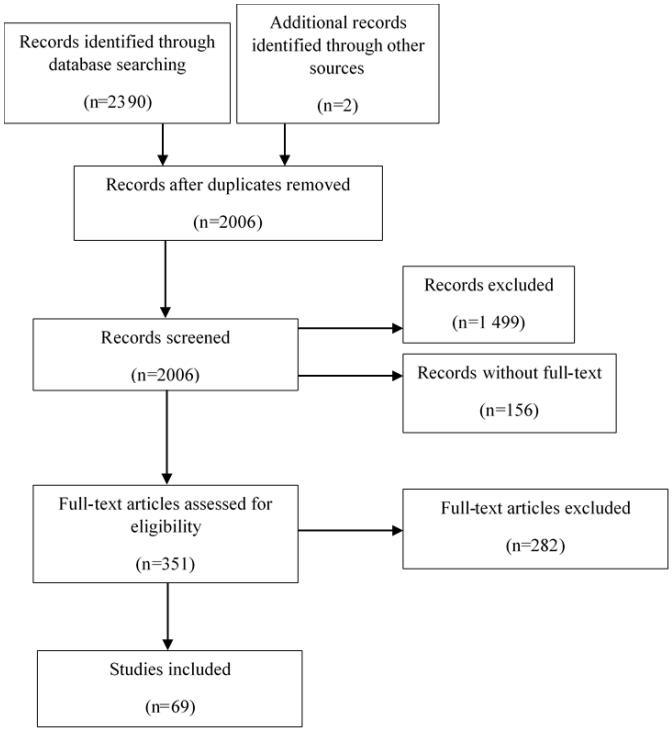

Figure 2. PRISMA flow diagram

The other 2 articles included were a report given to us by a member of CASO (the Portuguese association of drug users) and an article by Greenwald (2009), which we searched for afterwards, since it was repeatedly mentioned on other articles included (see Attachment A).

Findings/Discussion

3.1. Origins and Territories

The majority of articles comes from the United States of America (30; 3 of them in conjunction with other countries), followed by the United Kingdom (10; 2 of them with other

countries), Australia (8; 3 of them with other countries), Portugal (6) and Canada (6). The remaining articles come from countries such as The Netherlands, France, Switzerland, Norway, New Zealand, Mexico, Slovakia, Singapura, Italy, Malaysia, Belgium, Czech Republic and Ecuador.

14 of the articles focus solely on drug policies applied in the USA, with this country being directly mentioned in 11 other studies; 11 papers focus exclusively on the Portuguese model, with this country being mentioned in 7 other studies (mostly, comparative ones); Australia's political framework is the main focus on 3 articles and it's mentioned directly on 7; Canadian laws are the sole focus on 4 articles and mentioned on yet another 4; and the UK is featured exclusively on 3 articles and mentioned on another 2. 15 articles have a broader scope, mentioning various countries.

Other researched countries were: The Netherlands, Uruguay, Italy, Switzerland, France, Germany, Spain, Czech Republic, Poland, Slovakia, Hungary, Singapura, Mexico and New Zealand. Asian and South African countries, although mentioned on some articles, were not studied in a comprehensive way.

Hence, the origin and the focus of research are mainly occidental countries. This might be due to other countries not being interested in or not having the resources to study their own drug policy, or, their scientific production not being written in English or being indexed in smaller databases, making it less visible to researchers. Either way, this creates a bias, since most scientific evidence on decriminalization has a similar cultural, political, economic and religious background, and, therefore, generalizations might be abusive.

3.2. Substances and Type of Use

Out of all the articles included, 31 refer only to laws on cannabis, 1 refers only to heroin and 1 refers to opiates as a group (meaning, heroin, morphine, fentanyl, ...). 4 refer cannabis along with other substances, that is: one mentions cannabis, heroin and cocaine; one is on cannabis, cocaine and alcohol and another one is about cannabis and alcohol; with a fourth one mentioning cannabis and various other substances. Lastly, 1 article focuses on opiates and cocaine. From this, we gathered that the scientific interest on cannabis is stronger and stouter than on any other substance.

Finally, 6 articles were deemed to be about various substances, as they mentioned various drugs and laws as examples to sustain their arguments. And 25 articles were

considered to be unspecified, because they spoke about policies in a broader sense, i.e., they focused on policy models and policy change as a whole.

Hallucinogens (e.g., LSD) and empathogens (e.g., MDMA) were not mentioned in any of the papers reviewed.

Moreover, 55 articles focus on Recreational Use and 14 mention both Recreational and Medical Use.

3.3. How do researchers conceptually define Decriminalization?

Of all the articles reviewed, 12 focus on *de facto* decriminalization, 34 on *de jure* decriminalization and 23 mention both.

A conceptual definition of decriminalization is presented on 50 articles. This definition usually mentions the removal, reduction or nonenforcement of criminal penalties for personal use and possession and their substitution by civil/administrative penalties (e.g., misdemeanour, infractions or fines).

Depending on what countries' model they referred to, some articles emphasize the connection between decriminalization and the paradigm change that allows drug addiction to be conceptualized as a health issue rather than a criminal one (e.g., the ones about the Portuguese model), with PUD being considered as in need of treatment and medical care, and not as felons in need of prosecution. In this setting, harm reduction was also cited (on 27 articles).

Depending on their focus, some papers mention medical marijuana laws and the possibility of a regulated market for recreational use alongside the reduction or removal of criminal sentences. Amongst the ones focusing on cannabis, some mention the removal of criminal penalties for possessing cannabis plants for personal use. Production and distribution (i.e., traffic and sale) are always left out of the definition, as they remain illegal activities punishable with criminal charges.

A few articles use the expression "depenalization", "reclassification"/ "downgrading" (i.e., the change of the legal status of the drug itself), "deprioritization" (i.e., PUD/drug use are no longer prioritised by law enforcement officers) and "liberalization" interchangeably with "decriminalization". This influences the reader's interpretation of these papers, since depenalization means that PUD are still criminals, therefore, it's conceptually different from decriminalization; liberalization isn't a political stance but an implicit moral

appraisal of a decriminalized framework; and the other terms refer to possible characteristics of *de facto* decriminalization. It's also possible these papers get 'buried' in the databases, because the public might not find them by using "decriminalization" as a keyword.

The articles that don't present a structured definition have a tendency to use the term decriminalization in the same way as the ones who did, so, we believe it is safe to say that, amongst the scientific community, there is a general agreement on what decriminalization is as a concept and a construct.

3.4. What are researchers interested in when studying decriminalization policies?

The reviewed articles tend to focus on different aspects of the model. 30 papers refer to the impact/consequences/outcomes of given decriminalization model; 18 articles refer to how laws and policies are developed and how policy change/reform occurs; 7 studies shed a light on public opinion, mainly by interviewing and surveying various social groups (users, law enforcement agents, lawyers, physicians, college students, etc.); 6 studies compare between models (advantages and disadvantages, efficacy and political and social background) and 5 papers make propositions for the future of drug policy.

Additionally, 2 articles are case-studies: one focuses on the Portuguese model, its creation, implementation and impact, and compares the opinion of two other authors on the subject; and one is an extensive analysis of the 5-year-period, between 1973 and 1978, when 11 states of the USA decriminalized the possession of small amounts of marijuana.

Moreover, 2 other articles have what might be described as a mixed-purpose, with one study using the Portuguese model as a reference for what should and shouldn't be implemented in the USA (so, it is a comparative study that outlines a path for change) and a thesis that presents the impacts of some decriminalization laws, but also a comprehensive set of changes that could be implemented in the future.

In general, most of the studies reviewed are based on literature reviews (mainly built upon public reports), qualitative comparisons, commentaries/opinion pieces, public surveys and statistical analyses (although only 6 articles use formal quantitative methods). 9 articles rely on interviews (with one complementing this with long-term participant observation) and 1 is a systematic review. The case-study on the american decriminalization of marijuana in the seventies also contains a content analysis of newspapers' articles from the epoch.

From this, we might question whether the current articles aiming to study decriminalization are empirical enough, given that we found a limited number of quantitative studies and most research is based on 'unsystematic' reviews and personal opinions.

3.5. What are the common indicators?

Upon reviewing the articles, we observed that there were common themes, that is, there were certain elements that were referenced by authors, independent of their work being an opinion piece, a comparative study, an impact analysis or a list of factors that might expedite or hinder future change. These common denominators are an indication of what preoccupies researchers and policy actors when it comes to conceiving, penning, implementing and evaluating drug policies, therefore, they might become valuable pointers for future policy design.

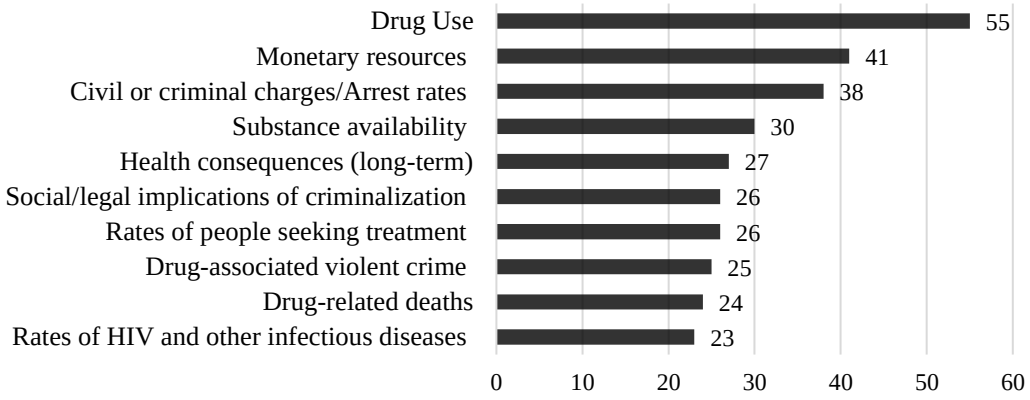

Figure 3. Top ten indicators of the impact of decriminalization

The identified indicators are:

- Drug use (encompassing prevalence of drug use, trends/substance use over time and patterns of use; 55 articles), with some articles also referencing poly drug use (4 articles), "user profile" (age, class, ethnicity, etc.; 17 articles), age of onset (11 articles) and age at the start of the period of maximum use (1 article);
- Rates of HIV and other infectious diseases (such as Hepatitis C and Tuberculosis; 23 articles);

- Short-term physical or behavioural effects of substance use (7 articles) and Long-term effects/health consequences (either perceived by the user or according to national health indicators; 27 articles);
- Rates of people seeking treatment for substance use disorders (26 articles) and Rates of dependence (7 articles);
- Rates of intoxication (4 articles) and Emergency department admissions (1 article);
- Drug-related deaths (overdose, infectious diseases or other long-term health consequences; 24 articles);
- Rates of drug-associated violent crime (such as thefts, homicides and cartel-related crimes; 25 articles) and Intoxicated driving (usually pointed out as a separate issue; 5 articles);
- Civil or criminal charges and arrest rates (38 articles);
- Prison population for drug-related crimes (12 articles);
- Illegal trade and cultivation (both from international traffic and, in the case of cannabis, for personal consumption as well; 15 articles);
- Number of seizures by law enforcement agencies (and quantities seized; 6 articles);
- Market size (6 articles), Substance availability (30 articles) and Price (18 articles);
- Monetary resources (on one side, health costs for treating PUD with diseases such as HIV and Hep C, public health costs for preventing and decreasing the incidence of such diseases, and costs from the criminal justice system, i.e., detention, prosecution and imprisonment of people for drug-related crimes; and, on the other side, savings on all the aforementioned fronts with the implementation of decriminalization policies and, possibly, the future revenue originated from taxes with the hypothetical creation of a regulated market; 41 articles);
- Criminal justice burden, encompassing court-congestion, i.e., the amount of time it takes to prosecute drug-related cases, and time and resources spent with and by law enforcement agencies (21 articles);
- Police action and net-widening (e.g., contacts with the police by the user or number of citations issued, and, in the Portuguese case, the number of referrals to Dissuasion Commissions; 7 articles);
- Social and legal implications of criminalization for the offender (register, years in prison, low employment opportunities, deterioration of interpersonal relationships with a decline of social support, discrimination, etc.; 26 articles);

- Public opinion (for or against the policy in question; 22 articles);
- Attitudes towards the morality of drug use (11 articles) and Stigma derived from being a drug user (12 articles);
- Impact on family members (2 articles) and Peer approval/disapproval (1 article);
- One's own self-concept as a user (1 article);
- Price sensitivity (user perceptions of the effects of price - and potency - on consumption; 2 articles) and Engagement with drug markets, including the perceived risk of arrest and drug accessibility (1 article) and the so-called "drug tourism" (2 articles);
- Knowledge of the policy environment (7 articles);
- Positive outcomes of harm-reduction approaches (safe injection facilities, opioid substitution therapy, low-threshold services, etc.; 7 articles).

Other more specific indicators sporadically mentioned were: Number of reports of children with toxic ingestions; Impact of marijuana use on adolescent brain development; Potential impact of medical marijuana laws on adolescent use of recreational marijuana; Rates of perception of riskiness of drug use; Lack of communication between services and health care providers; Rates of sharing injection material; Barriers for accessing healthcare, state provision and harm reduction services imposed on PUD; and Environmental damage from drug production.

When it comes to drug policy reform, a few topics came up: Compliance with International Treaties; Political tension between neighbouring countries with different policy frameworks; Political Survivability, as in, the fear of the consequences that might fall on the political figures who fight for drug policy reform; and, lastly, American Influence, as in the heavy influence that the USA have on other countries' politics, on scientific production and on public opinion (e.g., South American countries who produce and export the majority of illicit drugs that are sold on USA's black market have their policies greatly conditioned by this country's political agenda).

Lack of research, evidence-based methods and systematic evaluations of the various policy environments, and lack of research on the characteristics, effects, benefits and drawbacks of the psychoactive substances themselves are also mentioned on 3 articles.

3.6. What is underlining the resistance to drug policy change?

Of our universe of studies, 21 talk about what delays policy reform. Drug policy wasn't the main focus on all of them, and the following was used to fundament epistemological, philosophical and political arguments. Therefore, we don't mean to present this as validated facts, just as examples of what could be the factors hindering policy reform, according to these studies.

First of all, policy is built by politicians, relevant professional groups, researchers and civil society. What studies show (e.g., Stevens and Zampini, 2018) is that, sometimes, some groups and policy actors have a stronger say on what policy is/should be, because they detain more power and influence than other groups (that might even be more affected by the current policy). Explicitly, ethnic minorities, women, youth and the actual drug users rarely have a say on what drug policy looks like.

Besides, the general public is usually misinformed about what psychoactive substances are, has misconceptions about drug use and drug users, and has little knowledge of what decriminalization means/implies for their country and society (e.g., Reuter, 2013), with the media usually presenting an unfavourable view of this community and this phenomenon. Additionally, medical and legal actors typically aren't activists for change and politicians fear that support for decriminalization will be interpreted by the public as approval of drug use (e.g. Vicknasingam, Narayanan, Singh, & Chawarski, 2018). This qualifies as an obstacle since authors (e.g., Hughes, 2006) state that support from the medical community, law enforcement and political lobbying groups is essential for policy reform.

Thus, lack of knowledge of the policy environment, lack of activism, lack of social support, fear of compromising a position of power and moral stances and myths are part of what constantly obstructs progress.

According to Hughes (2006), another important factor is how policy change is framed. For example, in Portugal, decriminalization wasn't framed as an end on itself. It was a means of increasing access to harm reduction, education, treatment and social reintegration. This health approach was important in convincing more resistant groups that the strategy was not there to promote drug use but, instead, was a way to help people improve their lives. For Banbury, Lusher and Guedelha (2018), the emphasis on the feasibility of the proposed policy was also important: it had realistic goals and it was evidence-based, pragmatic, comprehensive and cost-saving. Portugal's proposal was doable and that offset many counterarguments and backlashes.

According to Hughes (2006) and Reuter (2013), other factors are the lack of a "policy window" (i.e., an opportunity, usually created by a crisis) and the general policy inertia (i.e. the absence of change), respectively. These authors state that, in Portugal, decriminalization was triggered by an ever-rising number of HIV, Hep C and tuberculosis infections, drug-related deaths and rising homelessness, which caused a *moral panic*[2] that pressured politicians into doing something reformative. In most countries, prohibition leads to the same negative consequences it has always led, and the problem is not aggravating, it's just stale. Crime, deaths, individual/public health risks, black markets, prison over-crowding, etc., exist, as they have for years, and are perceived in the same way they have always been, like a consequence of drug use and not of drug policy. For Reuter (2013), this stasis might be fought off as other countries take small reformative steps with positive outcomes, or it might only end with a new generation of policy actors or when a new epidemic emerges.

For example, in Canada, decriminalization of marijuana was proposed and discussed for years before policy actors came to a consensus (e.g. Hyshka, 2009). In their case, both *policy framing* and *policy window* were the key factors for reform, with this country finally adopting a new strategy and, at the time this study was written, legalizing, rather than decriminalizing, cannabis, and being in the midst of developing a proposition for a regulatory model of all psychoactive substances. Hence, the way reform is 'sold' to other policy actors plays an important role on whether or not it moves forward.

Furthermore, international drug control treaties are frequently mentioned as a major obstacle to any government attempting to decriminalize drug use. However, the authors of these studies denote that some countries have already decriminalized or legalized various psychoactive substances without disrespecting the international drug treaties nor compromising their affiliation with the United Nations. For example, for Portugal, replacing criminalization with administrative regulations sustained the international obligation to establish, in domestic law, a prohibition of drug use, so decriminalization was seen as the only alternative to maintain drug use as a criminal offense without going against the international conventions currently in effect (e.g., Greenwald, 2009; Chatwin, 2017).

Regarding this matter, Stambøl (2012) affirms that both decriminalization and harm reduction have proven to be effective, so, international drug treaties are somewhat outdated and should be reviewed. Stambøl proposes that drug policy reform must start at the local level [as Wakeman (2014) enounces, "careful incremental experimentation with alternative

[2] See Cohen, S. (1972/2002). *Folk Devils and Moral Panics: The creation of the Mods and Rockers*. New York, NY: Routledge.

methods is required to move drug policy forward before any radical revision of international conventions or national legislature" (p.62)], but there's only so much a country can do when it designs its policy in fear of creating international disagreements with its neighbours and with members of the UN. Thus, step-by-step, everything should be re-evaluated, debated and reformed.

One last factor, that is mentioned by some authors as the reason why drug policy reform does not move forward, is political corruption and the major grip the USA has on so many countries, worldwide. Russoniello (2012) states that drug trafficking can be seen as nothing but a multibillion-dollar industry (with a lot of money flowing in between "criminals", "law enforcement", "governments", etc.) and that ending the war on drugs won't be profitable and might even serve as an excuse for armed conflict. This could be something that hangs over the head of many governments, chiefly constricting reform.

3.7. What can we do next?

From the universe of articles analysed, 31 make recommendations for the future of evidence-based drug policies. Amongst these recommendations, there is an emphasis on the need to couple decriminalization with drug education and evidence-based prevention, social support, access to healthcare and treatment (meaning formal treatment as a pathway to cease drug use, and harm reduction strategies, such as Needle and Syringe Programs and Opioid Substitution Therapy; 12 articles).

The idea is that there's a need for a paradigm shift in the way we see and interpret drug use, i.e., it's preferable that legislators and society as a whole see it as a health issue rather than a criminal one. Notwithstanding, the authors insist we keep in mind that not all drug use is a problematic use and that a medical label is still a label, so we must be careful not to use this change as a way to continue stigmatizing PUD. Furthermore, both the law and the implemented services and interventions should be adaptable, given that a one-size-fits-all approach isn't an effective response (e.g. Coelho, 2015; Jesseman & Payer, 2018).

When it comes to outlining, implementing and evaluating policies, some authors point out that feasible goals and valid indicators should be established from the beginning. Once again, policy reform should be evidenced-based and there's already a large body of literature to draw upon, as well as multiple examples of decriminalization implemented across the world. Therefore, authors recommend that policy actors analyse what worked and

what failed, in their own country and elsewhere, before enacting a reform. This preparation should be done in light of a comprehensive understanding of the social/political context and of people's needs.

Jesseman and Payer (2018), state:

> *Decision makers will need to determine whether adaptations to existing models are required to better reflect their own context and objectives. Identifying a goal and clarifying objectives are preliminary steps in determining appropriate policy and practice. These steps include defining the problem to be solved and what progress will look like. Different objectives require different responses. (...) Rigorous data collection is needed to evaluate the success of decriminalization approaches.* (p.12)

Throughout this process, researchers explain the uselessness of over-complicating our discourse, i.e., all data and propositions should be presented in a substantiated and clear way, understandable by all (e.g. Massin, Carrieri, & Roux, 2013; Vicknasingam, Narayanan, Singh, & Chawarski, 2018).

Also, a few studies point out that there is usually a gap between legislation and implementation (e.g. Arredondo *et al.*, 2018), and that this gap can be reduced – ideally, eliminated – by educating/training law enforcement, health and legal professionals, ..., and by reviewing policies, at least when a policy actor identifies legislative barriers and loopholes. Communication and coordination between structures, as well as systematic evaluations are, therefore, essential.

As Hughes (2006) points out:

> *Pragmatic reforms emerge through political venues, as a consequence of better use of evidence, or greater receptivity to evidence. Expert input and solutions can be facilitated through strategic use of evidence: more expansive definitions of evidence; use of other forms of persuasion, most notably values; and the generation of public or expert support. In particular, strategic venue shifts are most likely to facilitate effective reform if they capitalise upon shifts in community or expert beliefs and attitudes. Failure to generate community or expert support will inevitably reduce the potential for pragmatic reform*. (p.273)

Furthermore, authors recall that policy reform starts at the national level, but it is a worldwide endeavour (as it can be illustrated by the UN conventions). For that reason, they believe nations should communicate, share experiences/knowledge and adapt. Only when a coordinated approach is implemented can we effectively mitigate drug-related harms across the world (e.g. Nicholson, 1992; Hughes, 2006; Chatwin, 2017).

As Chatwin (2017) puts it:

> *Rather than seeking to decide which strategies are successful itself, any international evaluatory system should build evaluation into the development of any new drug policy and make the resulting data available to all so individual governments or local authorities can make their own judgements about effectiveness based on local needs. (…) Therefore, a major part of any discussions about reform of the global drug policy regime should be that an important – perhaps the most important – role of international institutions involved in responding to illicit drugs should be concerned with the evaluation of different strategies and the disseminating of that information*. (p.84)

Finally, there appears to be a general consensus that drug trafficking and dealing ought to still be seen as a criminal offense, in spite of drug use/possession decriminalization. Regardless, some authors (e.g. Nicholson, 1992; Maris, 1999; Palamar, 2014; Ogrodnik, Kopp, Bongaerts, & Tecco, 2015; Guttmannova, *et al*., 2016; INPUD, 2018) defend that decriminalization should be seen as a step towards legalization and not as the finish line for drug reform.

Conclusion

As a closing remark, when looking at the summary of results expressed above (and considering the data collected on the impact of decriminalization to be included on future studies), it becomes clear that most researchers consider the same factors and come to the same conclusions. In our opinion, research on decriminalization policies might be stressed and maybe new pathways could be followed.

For example, one of the research tendencies we identified is researchers' excessive focus on cannabis. Cannabis has a valid medical applicability and its recreational use has been rather normalized in today's culture (Fernandes, 2009), so, it is understandable that researchers thought it necessary to produce knowledge regarding this substance. However, from what we gathered by reviewing these articles, studies on cannabis policy are not highlighting new information and other psychoactive substances are lacking the same scientific interest. We think it could be valuable to increase research on, but not limited to: opiates, especially because they are usually behind problematic and chronic drug use; NPSs, given that little is known about these substances, they evade law enforcement and market monitoring and they are slowly dominating drug consumption on recreational settings; and hallucinogens, because the use of such substances is also prevalent, they, too, seem to have clinical/medical applicability and they are often relegated since they aren't regarded as street drugs nor are associated with addiction or overdose (EMCDDA, 2018a).

We also denote that the majority of articles come from Europe and North America, and a few from Australia. South America, Africa and Asia have drug use as well and a widely different cultural, ethnic, political and religious background, so it would be beneficial to have more information on how drug policy is designed, implemented and evaluated in these countries. For example, we think the existence of indigenous tribes who use hallucinogens in their religious practices (Bonson, 2012) or the cultivation of coca leaves (UNODC, 2017d), are two factors that give psychoactive substances a very specific symbolic value and drug use a distinct meaning.

When it comes to policy development, at the beginning of this study we hoped to find a few guidelines on how to design a decriminalization model. That wasn't the case. The majority of articles don't make recommendations for future research and, when they do, they are usually not policy related. We believe it could be valuable for countries, who might be contemplating policy reform, to have something that can help them decide, for example, on what thresholds they should set for drug possession, what administrative penalties are preferable, what health and social services should be implemented, how they can build a cooperative network out of these services that better suffices the needs of PUD, etc. (e.g. Russoniello, 2012). International and activists' organizations usually make a few of these recommendations on their reports, but it would be a great addition to have the inside look on each model that only a local policy actor can provide.

We also think that, most times, the input of policy actors on policy design and evaluation is dimmed. Only a few studies mentioned interviews and surveys with law

enforcement officers, judges, medical doctors, psychologists, politicians, the general public and PUD themselves, and we think this community involvement - that is crucial for efficient policy design and implementation - is lacking. People's voices should be heard, because these policies tend to dictate their lives (Menezes, 2010).

Along these lines, we think that a systematic instrument should be developed for evaluating policy impact. We have found that researchers are consistent in the way they define decriminalization and the indicators they look for when evaluating its outcomes, but until there is a more standard (and by standard we don't mean static nor inflexible) way of assessing and comparing impacts from different settings and different policy frameworks, there isn't a way of accurately knowing what is or isn't working (e.g. Hughes & Stevens, 2010; Chatwin, 2017).

Accordingly, we believe drug use, drug-related deaths, infectious diseases, arrest rates, and so on, although important, are not the only indicators of impact that matter (e.g. Reuter, 2013; Wakeman, 2014), both because some old needs and factors were never addressed (e.g. socioeconomic reinsertion, citizenship, social status, self-perceived wellbeing, housing situation, inequality in the access to the general health system, etc.; Pinto, 2019) and because new needs and new factors have arisen (e.g. NPS and nightlife). The change of paradigm to a health-based approach that most decriminalization models present is noteworthy, nonetheless, it might be time to start shifting some of the focus to a human-rights-based approach (GCDP, 2014; Pinto, 2019). The development of both an evaluative instrument and guidelines for future policy design could be a way of addressing this issue.

Lastly, we believe that once decriminalization is implemented, policy is disregarded once again (e.g. Arredondo *et al*., 2018). This is very visible in the case of Portugal. Decriminalization was implemented, roughly, 20 years ago, and, in that time, there wasn't much progress. The model ought to be periodically evaluated and redesigned to better fit this country's evolving context and its people's needs, and to accommodate new scientific evidence. Reality has, certainly, changed in two decades and needs ought to be reassessed. Also, there are still things left to implement in Portugal which are accounted for by the legislation, namely, drug consumption rooms, take-home naloxone programs and wide-ranging drug checking services (e.g., INPUD, 2018; Pinto, 2019). Furthermore, possession thresholds still lead to criminalization of use, harm-reduction services and users' organizations are still underbudgeted and harm reduction and treatment services are still gender-neutral (i.e., are not tailored for women's specific needs; *id*.). These gaps and others that might now appear, can, and should, be addressed.

Limitations

As limitations of the present scoping review we note:

- The database search for this review was done in October of 2018. Since then, policies have changed in some countries (e.g., Canada and South Africa have legalized cannabis, Portugal has implemented medical marijuana laws, Norway is looking to decriminalize drug use, etc.) and new research was probably produced in between; Similarly,
- Some of the studies included in the first screening of this review were excluded because we couldn't access their full text (either because access was only available when paid or because authors did not grant access or didn't respond); Likewise,
- There might have been relevant studies that were not written nor indexed in English, and, therefore, got lost in the initial search; and
- Unfortunately, we couldn't manage to get access to ProQuest, so this database wasn't used. Given its scope, and even though we did use a comprehensive number of databases, we believe some important articles might have been lost here, as well. Thus, these four factors portend that the scope of this review isn't as broad as we envisioned it to be; Lastly,
- A lot of data was gathered from the studies reviewed, namely, about the impact of decriminalization models, according to the indicators mentioned above. This information was not included here due to space restrictions and because it surpassed the goal of this review. However, we believe such information is vital for future policy design and evaluation, so, we will try to publish it elsewhere.

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Attachment A: List of the reviewed articles

Author(s)	Title	Source	Year	Peer-reviewed
Abel, S.	Cannabis policy in Australia and New Zealand	Drug and alcohol review	1997	Yes
Ammerman, S., Ryan, S., & Adelman, W.	The Impact of Marijuana Policies on Youth: Clinical, Research, and Legal Update	American Academy of Pediatrics	2015	Yes
Arredondo, J. *et al*.	The law on the streets: Evaluating the impact of Mexico's drug decriminalization reform on drug possession arrests in Tijuana, Mexico	International Journal of Drug Policy	2018	Yes
Austen, L.	Police and crime commissioners: emerging “drug policy actors”?	Safer Communities	2016	Yes
Banbury, S., Lusher, J., & Guedelha, F.	Portugal's 2001 Drugs Liberalisation Policy: A UK Service Provider's Perspective on the Psychoactive Substances Act (2016)	Journal of Alcohol & Drug Education	2018	Yes
Beckett, K. & Herbert, S.	The consequences and costs of marijuana prohibition	_____	n.d.	No
Buchanan, J.	Ending drug prohibition with a hangover?	British Journal of Community Justice	2015	Yes
Caulkins, J. & Kilmer, B.	Considering marijuana legalization carefully: insights for other jurisdictions from analysis for Vermont	Addiction	2016	Yes
Čecho, R., Baška, T., Švihrová, V., & Hudečková, H.	Legislative Norms to Control Cannabis Use in the Light of Its Prevalence in Czech Republic, Poland, Slovakia, and Hungary	Central European Journal of Public Health	2017	Yes
Červený, j., Chomynová, P., Mravčík, V., & van Ours, J.	Cannabis decriminalization and the age of onset of cannabis use	The International journal on drug policy	2017	Yes
Cevallos, D.	¿Por qué no se despenalizan las drogas? Razones de la vigencia de una política fallida	URVIO - Revista Latinoamericana de Seguridad Ciudadana	2013	Yes
Chambliss, W.	Why the U.S. Government is not contributing to the resolution of the nation's drug problem	International journal of health services: planning, administration, evaluation	1994	Yes

Chatwin, C.	UNGASS 2016: Insights from Europe on the development of global cannabis policy and the need for reform of the global drug policy regime	International Journal of Drug Policy	2017	Yes
Coelho, M.	Drugs: The Portuguese fallacy and the absurd medicalization of Europe	Motricidade (Edições Desafio Singular)	2015	Yes
DiChiara, A. & Galliher, J.	Dissonance and Contradictions in the Origins of Marihuana Decriminalization	Law & Society Review	1994	Yes
Donnelly, N., Hall, W., & Christie, P.	The effects of the Cannabis Expiation Notice system on the prevalence of cannabis use in South Australia: evidence from the National Drug Strategy Household Surveys 1985-95	Drug & Alcohol Review	2000	Yes
Félix, S. & Portugal, P.	Drug decriminalization and the price of illicit drugs	The International journal on drug policy	2017	Yes
Fischer, B., Ialomiteanu, A., Russell, C., Rehm, J., & Mann, R.	Public Opinion towards Cannabis Control in Ontario: Strong but Diversified Support for Reforming Control of Both Use and Supply	Canadian Journal of Criminology & Criminal Justice	2016	Yes
Fischer, B., Kuganesan, S., & Room, R.	Medical Marijuana programs: Implications for cannabis control policy - Observations from Canada	International Journal of Drug Policy	2015	Yes
Gonçalves, R., Lourenço, A., & Silva, S.	A social cost perspective in the wake of the Portuguese strategy for the fight against drugs	International Journal of Drug Policy	2015	Yes
Greenwald, G.	Drug Decriminalization in Portugal: Lessons for crating fair and successful drug policies	CATO Institute	2009	___
Grucza, R. A. *et al*.	Cannabis decriminalization: A study of recent policy change in five U.S. states	The International journal on drug policy	2018	Yes
Guttmannova, K. *et al*.	Impacts of Changing Marijuana Policies on Alcohol Use in the United States	Alcoholism, clinical and experimental research	2016	Yes
Huffman, S.	Immigration and illicit drugs: Two case studies and their connection with select European countries, and potential implications for american policy	_____	2011	No
Hughes, C.	Overcoming obstacles to reform? Making and shaping drug policy in contemporary Portugal and Australia	_____	2006	No
Hughes, C. & Stevens, A.	What Can We Learn From The Portuguese Decriminalization of Illicit Drugs?	British Journal of Criminology	2010	Yes

Hughes, C. E., & Stevens, A.	A resounding success or a disastrous failure: Re-examining the interpretation of evidence on the Portuguese decriminalisation of illicit drugs	Drug & Alcohol Review	2012	Yes
Husak, D.	Drug Legalization	Criminal Justice Ethics	2003	Yes
Hyshka, E.	The Saga Continues: Canadian Legislative Attempts to Reform Cannabis Law in the Twenty-First Century	Canadian Journal of Criminology & Criminal Justice	2009	Yes
Hyshka, E.	Turning failure into success: what does the case of Western Australia tell us about Canadian cannabis policymaking?	Policy Studies	2009	Yes
INPUD	Is Decriminalisation Enough? Drug User Community Voices from Portugal	_____	2018	No
Jesseman, R. & Payer, D.	Decriminalization: Options and Evidence	Canadian Centre on Substance Use and Addiction	2018	No
Joffe, A. & Yancy, W.	Legalization of Marijuana: Potential Impact on Youth	American Academy of Pediatrics	2004	Yes
Katz, R., Magee, C., & Hudson, R.	Attitudes about decriminalization of drug use	Journal of psychoactive drugs	1991	Yes
Korf, D.	Dutch coffee shops and trends in cannabis use	Addictive Behaviors	2002	Yes
Lameira, C.	A descriminalização: uma visão dos consumidores	_____	2014	No
Laqueur, H.	Uses and Abuses of Drug Decriminalization in Portugal	Law & Social Inquiry	2015	Yes
Maag, V.	Decriminalisation of cannabis use in Switzerland from an international perspective—European, American and Australian experiences	International Journal of Drug Policy	2003	Yes
MacCoun, R.	Drugs and the law: a psychological analysis of drug prohibition	Psychological bulletin	1993	Yes
Maier, S., Mannes, S., & Koppenhofer, E.	The Implications of Marijuana Decriminalization and Legalization on Crime in the United States	Contemporary Drug Problems	2017	Yes
Maris, C.	The disasters of war: American repression vs Dutch tolerance in drug policy	Journal of Drug Issues	1999	Yes
Massin, S., Carrieri, M., & Roux, P.	De jure decriminalisation of cannabis use matters: some recent trends from France	International Journal of Drug Policy	2013	Yes

McGeorge, J., & Aitken, C.	Effects of cannabis decriminalization in the Australian capital territory on university students' patterns of use	Journal of Drug Issues	1007	Yes
Miech, R. *et al*.	Trends in use of marijuana and attitudes toward marijuana among youth before and after decriminalization: the case of California 2007-2013	The International journal on drug policy	2015	Yes
Millhorn, M. *et al*.	North Americans' Attitudes Toward Illegal Drugs	Journal of Human Behaviour in the Social Environment	2009	Yes
Neto, M.	A descriminalização do consumo de droga em Portugal: Quinze anos depois	_____	2016	No
Nicholson, T.	The primary prevention of illicit drug problems: An argument for decriminalization and legalization	The journal of primary prevention	1992	Yes
Ogrodnik, M., Kopp, P., Bongaerts, X., & Tecco, J.	An economic analysis of different cannabis decriminalization scenarios	Psychiatria Danubina	2015	Yes
Pacula, R. & Smart, R.	Medical Marijuana and Marijuana Legalization	Annual review of clinical psychology	2017	Yes
Pacula, R. *et al*.	What does it mean to decriminalize marijuana? A cross-national empirical examination	Advances in health economics and health services research	2005	Yes
Palamar, J.	An examination of opinions toward marijuana policies among high school seniors in the United States	Journal of Psychoactive Drugs	2014	Yes
Reinarman, C.	Cannabis policies and user practices: market separation, price, potency, and accessibility in Amsterdam and San Francisco	International Journal of Drug Policy	2009	Yes
Reuter, P.	Why Has US Drug Policy Changed So Little over 30 Years?	Crime & Justice	2013	Yes
Reuter, P.	Ten years after the United Nations General Assembly Special Session (UNGASS): assessing drug problems, policies and reform proposals	Addiction	2009	Yes
Russoniello, K.	The devil (and drugs) in the details: Portugal's focus on public health as a model for decriminalization of drugs in Mexico	Yale journal of health policy, law, and ethics	2012	Yes
Shi, Y., Lenzi, M., & Na, R.	Cannabis Liberalization and Adolescent Cannabis Use: A Cross-National Study in 38 Countries	PloS one (Public Library of Science)	2015	Yes

Single, E.	The impact of marijuana decriminalization: an update	Journal of public health policy	1989	Yes
Soares, M., Carvalho, M., Valmbom, M., & Rodrigues, T.	Tackling Harm Reduction, Human Rights and Drug Uses on Recreational Environments: Tensions, Potentialities and Learnings from the Kosmicare Project (Portugal)	Revista Crítica de Ciências Sociais	2017	Yes
Stambøl, E.	Amending the Global Discourse on Narcotic Drugs: An inquiry of the transnational drug policy reform movement	_____	2012	No
Stevens, A. & Zampini, G.	Drug policy constellations: A Habermasian approach for understanding English drug policy	International Journal of Drug Policy	2018	Yes
Swensen, G.	Reform of Minor Cannabis Laws in Western Australia, the United Kingdom and New Zealand	_____	2006	No
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