Forum: decriminalization of cannabis

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Introduction

This paper discusses the case for decriminalization of cannabis use, based on a careful weighting of the currently available evidence regarding advantages and risks of such a policy change. The issue of decriminalization is a response to the widespread use of cannabis in spite of its current illegal status; that is, as a consequence of the perceived ineffectiveness of the traditional prohibition of cannabis use in most Western societies [1]. Hardcore prohibition, such as arrests for the possession and use of cannabis followed by felony convictions and incarcerations, has become exceptional in many Western societies, including most European countries, North America and Australia, and a process of de-facto decriminalization has taken place during recent decades with a tendency towards lesser sanctions for cases of use and possession of small quantities of cannabis for personal use [2]. The objective of this paper is, therefore, to provide science-based arguments for a further development in the direction of de-jure decriminalization or legalization of cannabis, including public regulations such as quality control, taxation, age limits, sales restrictions or a ban on advertisement.

In discussing this topic, it is taken for granted that the state should respect personal choice as much as possible and refrain from unnecessary infringements on individual liberty, even if this is not always in the best interest of the person involved. At the same time it is acknowledged that the state has a clear responsibility to promote the health of its citizens and to protect them from unnecessary health risks, especially for minors who deserve our protection. To do so, the state can promulgate laws and regulations with the obligation to enforce them in a similar way on all citizens. In the development and enforcement of these laws and regulations, the state should always act in a similar way to similar situations.

This paper does not encourage or promote the use of cannabis. It recognizes that the most effective way to avoid cannabis-related harm is not to use cannabis and to seek immediate treatment where its use has become a problem. It is recognized that cannabis is not a harmless and fully safe product that can be used by everyone at all ages in all concentrations without any risks or problems in the short or the long term. At the same time, this paper acknowledges that the vast majority of people who use cannabis do so for a limited period of time with few or no negative consequences, that the negative effects associated with cannabis use are small compared with the negative effects associated with other pleasure drugs such as nicotine, alcohol, and cocaine, and that prohibition and criminalization is not very likely to lead to different consumption rates or less risky drug-use patterns, whereas it may lead to increased contacts of its users with the criminal scene and the legal system leading to negative effects on their future development. The paper does not promote free availability of cannabis for everyone, but proposes the replacement of prohibition of cannabis use and criminalization of cannabis users by a system of regulations similar to those used for other drugs of pleasure such as alcohol and tobacco, with better possibilities for quality control, prevention through education, pricing and restrictions regarding availability, and finally free accessible treatment for the few who develop problems with their use of cannabis.

In the following paragraphs, a summary of the available scientific data will be presented to justify my support for decriminalization of cannabis use as the preferred policy. The following issues will be discussed: the addictive potential of cannabis; the role of cannabis as a gateway drug; the mental and physical risks of cannabis use; the effect of prohibition and decriminalization on cannabis consumption rates; and the side effects of prohibition and criminalization. The paper ends with a short conclusion and some recommendations.

Addictive potential of cannabis

There is very little doubt that cannabis is an addictive substance and that cannabis dependence is a possible outcome of experimentation and recreational use. However, the probability of becoming dependent after ever using cannabis is much smaller than with other substances: cannabis 8–10%; alcohol 15%; cocaine 17%; opiates 23%; and nicotine 32% [3]. This empirical finding was recently supported by an expert panel in which cannabis ranked eleventh with regard to its dependence potential after heroin, cocaine, tobacco, street methadone, barbiturates, alcohol, benzodiazepines, amphetamines, buprenophine, and ketamine [4]. Twin studies have shown that recreational use of cannabis is mainly determined by environmental factors, whereas cannabis

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abuse and dependence are almost entirely determined by genetic factors with heritabilities up to 80% [5–8]. It should be noted, however, that the risk of becoming dependent on cannabis has increased during the last decade, especially in deprived groups [9]. This increase has been attributed to increasing tetrahydrocannabinol (THC) concentrations in many countries, prohibitionist (USA) and liberal (the Netherlands), but the specific increase in deprived groups seems to point to sociocultural factors as the main cause, and therefore these factors should be addressed to curb this development [9]. Further criminalization of cannabis use is not very likely to be very effective in this respect, because cannabis arrests are already concentrated in these deprived groups [10].

Role of cannabis as a gateway drug

Despite the strong correlations between cannabis use and the initiation, use and abuse of other illicit drugs and despite extensive research regarding the role of cannabis as a gateway drug for the use of other illicit substances, no final conclusions can be drawn on this complicated issue and gateway explanations are generally regarded to be no more plausible than different variations of the common factor model [11–14].

More important for the current debate, however, is that it has been observed that in some prohibitionist countries the probability of cocaine use in subjects who have ever used cannabis is higher (USA, 33%) than in some countries with a liberal cannabis policy (the Netherlands, 22%) [15]. Decriminalization and separation of the markets for cannabis and other illicit drugs could, therefore, be a successful strategy to reduce the risk of cannabis users entering the hard-drugs arena [16].

Mental and physical risk of cannabis use

Extensive literature is available regarding possible health risks of cannabis. In their excellent 1999 review, Kalant *et al.* [17] enumerate the health risks associated with chronic cannabis use as being development of cannabis dependence, schizophrenia in vulnerable subjects, motor vehicle accidents, chronic bronchitis, respiratory cancer, and low birth weight of babies born from mothers using cannabis during pregnancy. They conclude that 'cannabis appears to pose a much less serious public health problem than is currently posed by alcohol and tobacco in Western societies' ([17] p. 495). This conclusion is supported by an expert consensus rating of the physical and social harms of cannabis compared with other licit and illicit drugs where cannabis ranks 16 and 10 out of 20 substances for physical and social harm respectively [4]. In an update of the literature since 1996, Kalant in 2004 [18] states that recent studies do not alter their earlier conclusions in a major way. Two exceptions are that in this update more attention is given to the risks of *heavy* cannabis use at *very early* ages (higher risks of cannabis dependence, chronic psychosis, depression and negative social outcomes) and cannabis use during pregnancy (subtle but persistent cognitive problems in offspring) (see also [19]).

The most debated of all risks seems to be the association between cannabis use and schizophrenia. Although many authors now seem to firmly believe that cannabis is a component cause in the development of schizophrenia in vulnerable subjects (e.g. [20–22]), some others still feel that the observed association between cannabis and schizophrenia could be explained by confounders such as the illegal status of cannabis in many jurisdictions (e.g. [23]). If that were true, criminalization of cannabis use would definitely not be the best way to prevent schizophrenia in cannabis users.

Effect of prohibition and decriminalization on cannabis consumption rates

The effects of decriminalization have been examined in various studies using cross-sectional comparisons of cannabis consumption rates between different countries or states with different cannabis policies and longitudinal studies comparing cannabis consumption rates before and after decriminalization. The interpretation of these comparisons, however, is often limited by differences in the definition of cannabis consumption, differences in the target populations, and differences in the extent to which prohibition and decriminalization are implemented. For example, in 2000 in the USA, 734 000 cannabis arrests were recorded, but 94% of these arrests were dismissed or adjudicated as a misdemeanour, whereas 'only' 6% (45 000) resulted in a felony conviction, and 'only' one-third of these convictions (2%, 15 000) resulted in a prison sentence [24]. One may question whether these figures are really indicative of 'hardcore' prohibition and criminalization or whether some kind of partial decriminalization has taken place in the USA, a country known for its strict prohibitionist cannabis policy. However, even before discussing the results of the scientific data on this issue, one can conclude that prohibition and criminalization of cannabis has not been a widespread and overwhelming success. For example, life-time cannabis consumption rates of 35–40% in the USA clearly show that prohibition did not always lead to the intended goal of low experimentation and consumption rates.

Several cross-sectional studies have been performed comparing cannabis consumption rates of countries with repressive and more liberal cannabis policies. Based on data from the European monitoring centre [2], in 2002 the Canadian Senate Special Committee on Illegal Drugs

[25] provided an overview of cross-national cannabis lifetime prevalence rates (ages 15–69) indicating that national drug policies have little influence on cannabis consumption rates (prohibitionist countries: Sweden 13%, Canada 15%, USA 34%; liberal countries: the Netherlands 19%, Spain 20%, Australia 38%). In a similar attempt, but with more methodological rigor, MacCoun and Reuter [15,26] showed that cannabis consumption rates in the Netherlands, with its liberal policy, were somewhat lower than in the USA and somewhat higher than in some (Denmark, Germany, Finland, France), but not all (UK), neighbouring countries with a prohibitionist drug policy. According to these authors, the fact that Italy and Spain, which have decriminalized possession for all psychoactive drugs, have cannabis consumption rates comparable with those of neighbouring countries provides further support for the conclusion that national cannabis policy has little influence on cannabis consumption rates.

Moreover, Kilmer [27] showed that the risk of cannabis arrests was very similar in countries with a relatively high consumption rate (e.g. UK, arrest rate 2.1–2.9%) and countries with a relatively low consumption rate (e.g. Sweden, arrest rate 2.4%), indicating that the absence of a relation between decriminalization and consumption rates cannot be fully attributed to the lack of de-facto enforcement of prohibitionist policies.

Finally, Reinarman *et al.* [28] compared two representative samples of experienced cannabis users (life time >25 episodes) from San Francisco (USA; prohibitionist) and Amsterdam (the Netherlands; liberal) and found that – with the exception of a higher prevalence rate of cannabis consumption in San Francisco – there were very few differences between the two cities in age of onset of cannabis use, age of first regular use, age of maximum use, and mean duration of regular cannabis use.

In addition to these cross-sectional studies, several longitudinal studies examining the effect of decriminalization have been conducted. In a study about the effects of decriminalization of cannabis in the Netherlands, MacCoun and Reuter [15,26] concluded that decriminalization as such (1976–1984) had hardly any effect on cannabis consumption rates (see above), but that commercial promotion and sales of cannabis (through coffee shops) gave rise to a dramatic increase in cannabis consumption between 1984 and 1996. However, the authors qualify this conclusion with the observation that, similar to the situation in the Netherlands, cannabis consumption increased steeply in Finland between 1988 and 1992 and in the USA, Canada, and the UK between 1992 and 1996. In an attempt to further explore and explain these changes in cannabis consumption over time in the Netherlands, Korf [29] also studied trends in cannabis consumption in the USA and two European countries (UK, Germany) and concluded that drug-policy changes in the Netherlands were indeed associated with changes in cannabis availability and cannabis consumption rates, but that similar changes in cannabis consumption rates occurred in countries without policy changes towards decriminalization. The author therefore concludes that regulating the cannabis market through law enforcement has only a marginal, if any, effect on the level of cannabis consumption.

Longitudinal studies have also been performed in the USA and Australia to monitor changes in cannabis consumption following decriminalization in certain states, and these studies were often combined with cross-sectional comparisons of consumption rates between states with and without a change in drug policy. Although the studies differ in methodology and outcome, most authors seem to agree that the effect of decriminalization on cannabis use consumption is rather small (e.g. [30–33]), not significant [33], not present at all (e.g. [34–36]) or at least not present for last month's use [31,33] or for youngsters [37,38].

Almost all previous reviews on this issue reach the same conclusion: decriminalization of cannabis does not lead to a substantial increase in cannabis consumption rates [27,39–41]. One of the many possible explanations for this finding might be that decriminalization is not associated with reduced prices as indicated by the fact that cannabis prices in the Netherlands and the USA are very similar [42]. An additional possibility is that adolescents and young adults are not sensitive to the threat of arrests, fines and convictions for possession and use [38,43].

Side effects of prohibition

Prohibition inevitably leads to large numbers of arrests for possession and use of cannabis: in 2000 in the USA this resulted in 743 000 arrests (88% possession only); in 2001 Canada registered 71 624 cannabis-related offences (70% for possession only), and in New Zealand in 2001 a total of 21 604 people were arrested for a cannabis offence (80% for possession only). However, in most Western countries with a prohibitionist policy towards cannabis use, such arrests rarely result in a felony conviction or imprisonment. In 2000 in the USA only 6% of the cannabis arrests resulted in a felony conviction and only 2% ended in imprisonment [24]. Similarly, in 1999 only 2% of the 76 769 cannabis arrestees in England and Wales were incarcerated [44], and in the same year in New Zealand only 52 of the 9399 cannabis prosecutions ended in custodial sentences [45]. Prohibition, therefore, seems to result in considerable work for the police and the judicial system and in massive expenses, with a net result of many criminal records and relatively few prison sentences. For example, in 2000 in the USA an estimated

US$4 billion was spent on the arrest, prosecution and incarceration of cannabis offenders; money that could have been spent on other, more relevant, activities [24]. Similar high figures are available for the UK (2001, £38 million) [44], Australia (1991–1992, AUS$329 million) [46] and New Zealand (2000–2002, NZ$19 million) [45]. It should be noted, however, that even an arrest without incarceration can have negative consequences, such as losing one's driver's licence, or negative influences on obtaining student aid, employment, housing and relationships due to having a criminal record [47,48].

Finally, criminalization of cannabis use can affect the relationship between police officers and the public. It influences the legitimacy of law enforcement in two ways. First, a portion of the public regards punishment for cannabis use as unfair, which negatively influences respect for law enforcement [44]. Second, cannabis laws can be selectively enforced by police officers who single out certain groups for cannabis control [10,44,49,50].

Conclusion

This paper has shown that cannabis use is not without risks, that criminalization is an expensive strategy involving considerable policing, prosecution and a fair amount of incarceration, that decriminalization does not result in lower prices and higher consumption rates, nor in more severe patterns of cannabis use, that prohibition and criminalization are associated with social harms to the cannabis user, that decriminalization may reduce the association between cannabis use and schizophrenia and between cannabis use and the use of other illicit drugs, and that criminalization may reduce the legitimacy of the judicial system. What are the implications of these conclusions for the debate on criminalization versus decriminalization? Evaluation of prevention strategies, including national drug policies, should be subject to the normal conventions of health technology assessment; that is, it should be evidence-based, cost-effective, acceptable to the public receiving it and not generate substantial collateral harms [51]. It seems not very likely that a more vigorous criminal-jusitice-based approach would fulfil these criteria [23,52]. A further decriminalization combined with quality control, price measures including taxation, primary and secondary prevention of use and harm reduction through age restrictions and limitations of the number of cannabis retail outlets may postpone early onset of cannabis use and stabilize or even reduce cannabis consumption rates. Finally, low-threshold and free-of-charge treatment facilities are needed for those who – despite preventive actions – develop physical or mental health problems. Given the available scientific data, existing repressive, expensive and unsuccessful criminal justice policies should be replaced by humane, effective and more efficient health policies such as those currently implemented in many of the European countries, including the Netherlands, Switzerland, Spain and many others.

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