Less THC, more public health?

by Peter Cohen

In June 2011 the Dutch committee of experts appointed to study and advise on problems in the Schedules drawn up under the Opium Act (Expertcommissie Lijstenproblematiek Opiumwet; ELO) issued a report dealing with a range of topics[1]. I shall focus solely on the chapter on "Marijuana and hashish," which recommends placing marijuana products with a THC content of 15 per cent or more on Schedule I of the Opium Act, which means defining them as "hard drugs." According to the report, this would be beneficial to public health. In the following paragraphs, I look at each of the six main arguments that the authors put forward for this hypothesis and add my own critical comments.

Argument 1

"Epidemiological research has demonstrated that cannabis use during adolescence increases the risk of developing schizophrenia in later years. Cannabis with a high THC content appears to pose a higher risk in this respect than cannabis with a low THC content."
(p. 46. This section draws on Di Forti et al., 2009 [1], a publication I shall discuss below).

Comments

Let us accept the Committee's premise, for the moment, that the use of cannabis during adolescence makes it likelier that someone will develop symptoms associated with schizophrenia in later years [2]. This premise leaves open the question of whether this increased risk has anything to do with the strength of the cannabis consumed. To put it slightly differently: does this increased risk − in the case of those who are susceptible to it − apply to a greater extent, or indeed apply exclusively, to the consumption of "strong" cannabis? Could such susceptibility surface after the consumption of any cannabis, even that of fairly "low strength"?

Di Forti tried to address this question in a survey of people in London who had been admitted to hospital following a diagnosis of schizophrenia. She asked the patients what kind of cannabis they preferred, and discovered that 78 per cent of these patients had a preference for skunk. Di Forti et

[1] Drugs in Lijsten.Rapport Expertcommissie Lijstensystematiek Opiumwet. June 2011. Ministry of Health, The Hague. pages 1-68.

al. did not themselves measure the strength of the skunk these people consumed, but estimates have been published of the skunk available in London. According to Di Forti, this strength is estimated to range between 12 and 18 per cent THC. They conclude that "strong" marijuana increases the risk of schizophrenia in comparison to lower strengths.

There are numerous problems of validity surrounding this issue: the fact that the patients have a preference for skunk does not tell us much, since the cannabis they used has not been studied. How frequently did they actually find skunk, and what is the precise definition of "skunk" in the British context [3]? Another, more important, question is how we should interpret these patients' consumption of stronger marijuana. Is their preference for stronger marijuana a consequence of their medical problems, or could it be (to some extent) vice versa? Di Forti et al. assume a causal relationship in one direction only: the consumption of stronger marijuana increases the risk of a person developing schizophrenia. But this conclusion is presented without any convincing evidence.

In other words, even assuming the possible existence of a connection between the consumption of marijuana and schizophrenia – in itself a dubious assumption – we are none the wiser about which comes first. Nor do we know anything about whether the use of cannabis (of whatever strength) is a central determining factor or if cannabis is only one element of a cluster of determinants. Since scarcely any theory has been developed on the etiology of schizophrenia, and since this disorder is notoriously difficult to define [4], it remains extremely difficult to find out whether cannabis plays a role, and if so, whether this is role is significant or subordinate, and whether this role applies equally to all patients.

The finding of Di Forti et al. that people diagnosed with schizophrenia more frequently express a preference for strong marijuana than a "normal" control group may at first sight appear significant, but in fact it is not. For it is hard to say to what extent the control group of people from the same districts of London assembled by Di Forti's team, using advertisements in newspapers and on the internet, was representative of local "cannabis users." One can easily appreciate that compiling truly representative national or local random surveys is extremely expensive and therefore often impossible. Still, this means that the use of so-called control groups is a dubious territory, since one cannot know to what extent the results obtained could be duplicated. In short, presenting an *ad hoc* control group seems to carry more weight than it really does.

In any case, the current state of knowledge regarding the possible existence of a relationship between cannabis use and "schizophrenia" is far too flimsy to constitute a basis for the proposed "15 per cent" policy. Fortunately, the Committee concedes this itself, although without adding any of the explanatory comments given here.

MDMA analogy

Some Dutch observers may recall the wave of publications that appeared in journals of pharmacology and neurology in the late 1980s regarding the extreme neurotoxicity of MDMA (Ecstasy). Thirty years later, these assertions have been largely discredited, and Ecstasy is now believed to be a low-risk substance. Still, in response to those alarmist publications, a far more stringent policy on Ecstasy was introduced in the Netherlands and its use was criminalized. Did these measures produce the anticipated results? They certainly had the effect of boosting the numbers and powers of police units set up to curb Ecstasy production. On the basis of *ad hoc* arguments relating to public health, the anti-Ecstasy machine within the justice department has grown enormously, and Ecstasy, which used to be of very high quality in the Netherlands, has since gone through several phases of significant toxic contamination. Consumers know how to protect themselves from these contaminants, but it remains bizarre that the government's measures pose a far greater hazard to consumers than the substance itself.

Argument 2

The report states that "it can no longer be assumed that cannabis with a high THC content does not pose any unacceptable risks. There has also been a substantial increase in the damage that cannabis causes to society, which is clear in part from the scale on which Nederwiet [Dutch-grown marijuana] is now being cultivated. It may be added that the Netherlands has become the European centre for the production of marijuana with a high THC content." (p. 47)

Comments

"It can no longer be assumed that cannabis with a high THC content does not pose any unacceptable risks"? The Committee bases itself on work such as the study carried out by Di Forti et al., research seeking to ascertain the relationship, if any, between cannabis − or strong cannabis − and the development of schizophrenia. As we noted above, the Committee judged the scientific evidence to be insufficient, but this does not, apparently, prevent its use to justify a radical change of policy.

The adverse impact on society in terms of crime − or its seriousness – that the Committee refers to here cannot be resolved by drawing a distinction between strong and less strong marijuana. The best way forward in tackling this kind of occasional crime would be for the government to appoint a committee that would finally look at the supply side. To be more specific, the only way of eradicating the crime referred to by the Committee would be to legalize the production of recreational marijuana; the legalization of Dutch cultivation of medicinal marijuana could serve as an example.

Since the Committee insisted on drawing a distinction between strong and less strong marijuana, it was compelled to advance arguments that were not based on scientific evidence.

Argument 3

"However, in view of the aforementioned *indications* of its damaging effects, the Committee considers that it would be irresponsible to wait for the results [of research]. On the basis of the precautionary principle, the Committee therefore recommends setting a limit that it expects to lead, on the level of the population as a whole, to *less damage to health* [italics mine]."
(p. 48)

Comments

The report refers to "indications," and let us assume, for the sake of argument, that these are valid. What effect would we expect to ensue from a measure that prohibits strong marijuana? Less damage to health at the level of the population as a whole. But how great is this damage at present? The Committee does not know, but it has "indications." So would it be possible, then, to measure the effect of the change in policy? Or would it be possible to say what data would be needed in order to determine these effects?

The Committee does not address these questions, probably because they are hard to answer. However, it would be reasonable to expect a more cogent line of reasoning from a national advisory committee set up by the government.

Argument 4

"The Committee expects that the introduction of the aforementioned distinction will help to reduce the consumption of marijuana and hashish with a high THC content."

(p. 48)

Comments

After the "indications" comes an "expectation." Expectations are all well and good, but where are the figures and arguments to back them up? How much strong marijuana is being consumed at present? What form does this consumption take, and what damage does it cause? And how much? What changes are expected to ensue after the proposed measures have been introduced, why, and to what extent? What is this expectation based on? The Committee steers clear of all such specific questions. And yet it proposes a measure it deems necessary for the benefit of public health. When it comes to the hows and whys of the issue, the Committee makes no attempt to provide convincing arguments.

Argument 5

"For the rest, the Committee expects this change to lead to a reduction in the illegal production of Nederwiet and in cannabis exports, and that . . . "

Argument 6

"the demand-led market for cannabis products, with a view to stocking coffee shops, will be able to switch to the production of Nederwiet that fulfils these criteria."
(p. 49)

Comments

More expectations. But the arguments advanced by the Committee by way of justification remain unimpressive. In fact, the Committee not only fails to make its "expectations" plausible, it simply fails to give any basis for them at all. A proposal based on such weak premises arouses the suggestion that a hidden agenda is operating here. Just as in the case of the policy change on Ecstasy, some years ago, the aim may be to prepare for tougher criminal sanctions under the guise of a public health measure. And linked to this, there may be an intention to strengthen the apparatus set up to tackle cannabis offences by reclassifying its efforts under the heading of the fight against "hard drugs" [5].

The Committee's confidence in the market for illegal marijuana is quite touching. It expects this market to develop in the direction it desires, in spite of the greatly increased criminal sanctions it proposes! Would the prospect of much stiffer sentences for those who cultivated strong marijuana

influence the market and lead to less strong marijuana being grown? Do any examples exist of cases in which tougher criminal sanctions have had a beneficial effect on public health and have enhanced respect for the policy preferences of committees?

It makes more sense to expect that the market for cannabis, and certainly its cultivation, will become more dependent on criminals who can deal with the tougher sentences attached to marijuana with a THC content of over 15 per cent. Marijuana growers will increasingly become pawns in a network controlled by heavyweight criminals, in which these pawns can count on protection from the world of wealthy organized crime.

A vicious circle

Perhaps another committee will be appointed in the not too distant future, which will propose even harsher sanctions in response to the "serious increase in crime" linked to the cultivation of cannabis and the "alarming increase in the cultivation of strong marijuana." The same old story, welcome news for certain police units and their budgets and for politicians whose careers depend on policies that lead nowhere. But introducing ever harsher criminal sanctions for the cultivation of cannabis is not good news for the Dutch population. On the contrary, it does not affect public health, but it does foster the spread of violence and corruption.

Harsher sanctions on growing marijuana do not induce cannabis consumers to smoke fewer joints or to decrease their use of strong marijuana, which will remain just as easily available as before – outside coffee shops – exactly as it is in other parts of the world. What is more, the marijuana trade will become an even more lucrative business, both in the Netherlands and elsewhere, since the risks are higher. The proposal of this government-appointed committee, which claims to be seeking to reduce the supposed risks associated with strong marijuana, in fact amounts to the promotion of crime.

Smoking and THC

Finally, I would like to recall that there are major advantages attached to the smoking of psychotropic substances, as opposed to consuming them in other ways. Smoking maximizes the speed with which the active ingredients are absorbed into the bloodstream. A consumer who smokes a substance knows almost immediately what its effects are, and whether these effects are

sufficient for him or her, or whether more would be desirable. The extreme subtlety of dosages that is made possible by smoking prevents numerous mistakes in dosages. If cannabis is eaten (for instance in the form of "space cake") it takes so long to make itself felt that inexperienced consumers may easily eat more cake in the mistaken belief that it is not having, or will not have, any effect. In the case of tourists, in particular, this sometimes leads to unpleasant surprises.

In the Netherlands, marijuana is generally smoked in joints made from a mixture of tobacco and cannabis. The stronger the cannabis, the less of it consumers will use, since the information on its effects is conveyed immediately. In practice, consumers are highly adept at varying the quantity of cannabis they use, attuning it to the "high" they aim to achieve (Reinarman et al. 2004, Böcker et al. 2009 [6]) According to Grinspoon, the same applies to patients seeking to achieve a particular medical effect (In the Netherlands, various kinds of medicinal marijuana are supplied through the Ministry of Public Health [7])

Since the active ingredient in marijuana is smoked, it is extremely easy for recreational and medical users to adapt the dose taken and to attune it to the desired medical effect, or to their acquired preference for a certain "high" corresponding to a particular situation. This ease of measurement compensates for the absence of instructions or information on the small bags of marijuana. It would be helpful if the cannabis sold in shops displayed labels, including information on strength and origins etc., to prevent misunderstandings. But as long as it remains forbidden to display such labels, the considerable accuracy of dosage that can be achieved by smoking marijuana is itself a useful barrier that helps to prevent unpleasant mistakes in dosages.

Conclusion

A proposal to distinguish between strong and less strong types of marijuana and to attach a certain significance to this quite arbitrary distinction is a device arising from preferences in criminal law, and has nothing to do with public health or consumer protection.

Notes

1] Marta Di Forti et al., "High potency cannabis and the risk of psychosis," *The British Journal of Psychiatry* (2009) 195, 488-491.

2] Personally I doubt whether cannabis is really a risk factor, since the phenomenon of schizophrenia did not increase with increased cannabis use. See the detailed argument presented by Frisher M., Crome I., Martino O. and Croft P., 2009: "Assessing the impact of cannabis use on trends in diagnosed schizophrenia in the United Kingdom from 1996 to 2005," *Schizophrenia Research*, vol. 113(2-3), 123-128.

Frisher (School of Pharmacy, Keele University, UK), who estimates the incidence of schizophrenia in the British population to be 0.4%, classifies the assertions postulating a link between schizophrenia and cannabis under the heading of political statements rather than science. See Martin Frisher "The science and politics of cannabis, drugs and schizophrenia. Commentary on: 'Cannabis causes schizophrenia? So does nicotine.'" Addiction Research and Theory. December 2010, 18 (6) 1-3

3] According to Maalsté (*Highlife* 2011), the English use the term "skunk" for all marijuana that has been grown indoors.

4] And which therefore consists of a very wide range of symptoms and types of behavior.

5] This conclusion may possibly be inferred from the Committee's composition. The Committee included, aside from representatives of the police service, the former director of the research branch of the Ministry of Justice (WODC), Professor Henk van de Bunt. This criminologist is a fierce opponent of the policy of "tolerating" cannabis use and a passionate advocate of the repressive views on cannabis held by the Christian Democrat Party (CDA, which is also the party to which the current Minister of Justice belongs). I have had the pleasure of crossing swords with him on this issue on several occasions.

6] Reinarman et al. 2004, "The limited relevance of drug policy," *American Journal of Public Health*, vol. 94/5. Böcker et al. 2009, "Cannabis modulations," *Journal of Cognitive Neuroscience* X-Y 1-11, quoted in Maalsté, "Blowen op Commando," in *Highlife*, vol. 19, 1, 2010, 44-47.

7] According to the manufacturer Bedrocan Inc. in Groningen, in strengths ranging from 6 to 19 per cent THC.

AXEL THE FOLLOWING PARAGRAPH WAS INSERTED BY THE PUBLISHER OF THE DUTCH VERSION, I LEAVE IT TO YOU TO INCLUDE IT OR NOT.

[kader]

Peter Cohen

Dr Peter Cohen (born in Haarlem, 1942) studied experimental social psychology and sociology at the University of Amsterdam (UvA) in the 1960s. From 1980 onwards he specialized in drugs and drug policy. He has carried out numerous research projects and served as director of the Amsterdam Drug Research Program at the UvA, and later of the UvA Centre for Drug Research (CEDRO). Cohen is still in frequent demand as a speaker at conferences on drug use and drug policy all over the world. Since his retirement in 2007 he has lived part of the year in France, and part of the year in West Amsterdam. For more information, see www.cedro-uva.org/cohen