The case for MDMA (ecstasy) regulation

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Drug-related harm is the most rational means of determining a substance’s legal status. The available evidence suggests that compared to other drugs, 3,4-methylenedioxy-N-methamphetamine (MDMA or “ecstasy”) poses a low level of harm to most individual users and causes negligible harm to society. There is no sound justification for criminalising the use of MDMA. The depenalisation model adopted in Australia does not have any benefits that cannot be achieved by removing minor MDMA offences from criminal law entirely. The current model also operates within a prohibition framework that is costly to society and increases harm to ecstasy users. These arguments support the proposal by David Penington in 2012 that MDMA should be regulated on a legal market. The supply of MDMA from pharmacies appears to be a practicable law reform option with the potential to reduce harm associated with ecstasy use, regardless of MDMA content.

INTRODUCTION

Commonly referred to as “ecstasy”, 3,4-methylenedioxy-N-methamphetamine (MDMA) is a recreational psychoactive drug that produces distinctive emotional and stimulant effects. In all jurisdictions in Australia, it is an offence to manufacture, traffic, possess or use MDMA. Tablets (pills) are the most common form of MDMA, and are usually taken orally. Ecstasy tablets available today may contain a variety of other drugs, harmful adulterants and no MDMA at all.

In 2012, Emeritus Professor David Penington AC proposed that ecstasy use and possession be decriminalised, and the drug be made available for purchase on a regulated legal market, most likely from a pharmacy. Penington’s reference to “ecstasy” is to the compound most traditionally known as ecstasy, which is MDMA. However, in this article, “ecstasy” refers to any product sold as the recreational drug ecstasy, regardless of MDMA content.

1 BPharm LLB (Hons). The author thanks La Trobe University for the guidance and support provided during research conducted in 2013.

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2 Drugs Poisons and Controlled Substances Act 1981 (Vic), Sch 11, ss 4, 70, 71, 71AA, 71AB, 71AC, 71A, 71B, 73, 75; Drug Misuse and Trafficking Act 1985 (NSW), Sch 1, ss 3, 5, 7, 10, 12, 24, 25, 25A, 29; Misuse of Drugs Act 2001 (Tas), Sch 1, ss 3, 6, 12, 14, 21, 24, 26, 27A; Controlled Substances Act 1984 (SA), ss 4, 32, 33, 33I, 33G, 33L, 33L1; Misuse of Drugs Act 1981 (WA), ss 3, 4, 6, 12-17; Poisons Act 1964 (WA), App A, s 5; Poisons Standard 2013 (Cth), Sch 9; Misuse of Drugs Act 1990 (NT), Sch 2, ss 3, 5, 8, 9, 13; Drugs Misuse Act 1986 (Qld), ss 4-6, 8, 9; Drugs Misuse Regulation 1987 (Qld), Sch 1; Drugs of Dependence Act 1989 (ACT), Dictionary, ss 164, 171; Medicines, Poisons and Therapeutic Goods Act 2008 (ACT), Dictionary, ss 33, 37(2); Drugs of Dependence Regulation 2005 (ACT), s 5; Criminal Code Regulation 2005 (ACT), Sch 1, Pt 1.2.


6 Douglas, Wodak and McDonald, n 5, p 5.
The term “drug legalisation” can sometimes be interpreted to mean free-market availability of a drug, such as caffeine.7 Alcoholic drinks and cigarettes contain recreational drugs and are often referred to as legal, although can only be taken in certain circumstances.8 In this article, the word “regulation” is used to describe a strictly controlled legal market model, or “drug legalisation subject to restrictions”.9 While Penington uses the terminology “decriminalised” and “legal regulated market”, this model can be characterised as regulation.

The term “decriminalisation” is typically used to describe a model whereby the offences of use and possession of small quantities of drugs are eliminated from the sphere of criminal law, and are often punishable by fine instead.10 Different forms of decriminalisation include de jure decriminalisation, where specific laws are amended to remove minor drug offences from the area of criminal law, or de facto decriminalisation, which involves an administrative decision not to prosecute minor offenders despite the fact that a criminal offence does still exist. A “depenalisation” regime involves the “relaxation of the penal sanction provided by law”11 although the offence remains criminal and will be enforced in certain circumstances.12 It is outside the scope of this article to examine each of the models in detail, although limitations of these models that can only be overcome by implementing regulation are mentioned.

Several scholars have made compelling arguments against drug prohibition with limited emphasis on the harms of specific drugs.13 There is also a significant amount of scientific literature about MDMA that has not been integrated with the law.14 The only critique of the prohibition of MDMA in Australia specifically is that offered by Timothy Webb in 2002.15 There is now more information available with respect to the harms of MDMA to the individual and society,16 as well as new proposals for law reform to consider.

This article argues that Penington’s proposal for a regulation model has considerable merit for two main reasons. First, there is no convincing reason why MDMA use should be illegal. The harm that MDMA use causes to the individual and the harm that MDMA use causes to others are negligible. This supports the proposition that the offences of use and possession of small amounts of MDMA be removed from the sphere of criminal law.

Secondly, the control regime for MDMA is ineffective and counterproductive. There is little evidence that Australia’s “prohibition with cautioning and diversion” or “depenalisation” model has any benefits in relation to MDMA use that could not be achieved by a regulation model. The
manufacture and distribution of MDMA are strictly prohibited under the current model, which causes damage to society and puts ecstasy users at greater risk of harm. Finally, expanding on the Penington proposal, this article explores how MDMA regulation may be implemented in practice.

**BACKGROUND**

MDMA is chemically related to both the amphetamine and phenylethylamine classes of compounds. The drug is known to create feelings of empathy and intimacy between individuals, emotional openness, increased energy, reduced anxiety and happiness. The emotional effects of MDMA are predominantly caused by the release of serotonin in the brain. The stimulant effects of MDMA (increased energy) are thought to reflect the release of dopamine.

The United Nations classes MDMA in the “ecstasy group”, which includes the analogues MDA (3,4-methylenedioxyamphetamine) and MDEA (3,4-methylenedioxyethyl-amphetamine). It is estimated that 0.4% of the population between the age of 15-64 use ecstasy, which amounts to approximately 19 million people worldwide. Australia’s reported rates of ecstasy use are among the highest in the world. Ecstasy is the second most commonly used illegal recreational drug in Australia behind cannabis.

**History and legal status**

Merck Pharmaceuticals first synthesised MDMA in 1912 before patenting the compound as a precursor agent in 1914. Alexander Shulgin re-synthesised the substance in 1965 and published the first human study on MDMA in 1978. Although unregulated at the time, the drug gained popularity in the United States among psychiatrists in the 1970s and early 1980s for enhancing patient communication and allowing patients to achieve “insights about their problems”.

MDMA was first discovered in the United Kingdom in the late 1970s during a raid on a clandestine laboratory. In 1977, the British government prohibited all phenylethylamine analogues under the Misuse of Drugs Act 1971 (UK), including MDMA, despite no use of the drug being

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17 Green et al, n 1 at 465; Bernschneider-Reif, Oxler and Freudemann, n 1 at 966.
20 Advisory Council on the Misuse of Drugs, n 14 at [2.7]; Nutt, n 18, p 13.
26 Bernschneider-Reif, Oxler and Freudemann, n 1 at 971.
27 Ramo, Grov and Parsons, n 18, p 712.
28 Green et al, n 1 at 464; Ramo, Grov and Parsons, n 18, p 712.
Nicholas Saunders suggests that this happened because the United Kingdom had a history of being “more prohibitive than other countries” and the government was attempting to “forestall” a drug problem.\(^\text{31}\)

At this time, MDMA remained unregulated in the United States and by 1984 it was being legally marketed and sold as ecstasy over-the-counter at bars and clubs in Texas.\(^\text{32}\) The same year, Texas Senator Lloyd Bentsen wrote to the Drug Enforcement Agency (DEA),\(^\text{33}\) requesting that MDMA be placed in Sch I of the *Controlled Substances Act*, which includes drugs of high-abuse potential with no recognised medical use.\(^\text{34}\) In 1985, despite opposition from psychiatrists, psychologists and researchers, the DEA invoked its emergency powers and temporarily placed MDMA in Sch I for one year.\(^\text{35}\) The decision was primarily based on evidence that MDA, a related compound to MDMA, induced serotonergic nerve terminal degeneration in rat brains at frequent high doses.\(^\text{36}\)

In early 1986, reportedly under pressure from the United States, the World Health Organization (WHO) recommended that MDMA be placed in Sch I of the United Nations *Convention on Psychotropic Substances* (COPS).\(^\text{37}\) Substances in Sch I are prohibited, except for limited scientific and medical purposes.\(^\text{38}\) The deciding WHO committee advised countries to conduct further research on MDMA.\(^\text{39}\) The committee chairman disagreed with the ultimate decision, believing that MDMA demonstrated therapeutic usefulness and should not be subject to international control.\(^\text{40}\)

In the same year, the administrative law judge presiding over the DEA hearings in the United States made a non-binding recommendation for MDMA to be placed in Sch III of the *Controlled Substances Act*, which would allow for continued research and the prescribing of MDMA by physicians.\(^\text{41}\) The DEA acted against this recommendation and extended the emergency scheduling period before permanently placing MDMA in Sch I.\(^\text{42}\) The decision to prohibit MDMA in the United States can be criticised on the basis that too much weight was attributed to limited research on MDA, not MDMA, and little consideration was given to potential medical benefits of the drug.\(^\text{43}\)

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\(^{31}\) Saunders, n 30, Ch 7.


\(^{33}\) Holland, n 25, p 13; Rosenbaum and Doblin, n 32.


\(^{37}\) *Convention on Psychotropic Substances*, opened for signature 21 February 1971, 1019 UNTS 175 (entered into force 16 August 1976); Saunders, n 30, Ch 3 (History of Ecstasy); Webb, n 15, p 13.

\(^{38}\) *Convention on Psychotropic Substances*, Art 7.

\(^{39}\) Saunders, n 30, Ch 3 (History of Ecstasy); Webb, n 15, p 13.


\(^{42}\) Saunders, n 30, Ch 3; Rosenbaum and Doblin, n 32 at [4].

\(^{43}\) Beck, n 35; Saunders, n 30, Ch 7; Rosenbaum and Doblin, n 32; Webb, n 15.
In Australia, police in Sydney first seized MDMA in 1986. Shortly after, the National Drugs and Poisons Schedule Committee, which classified substances for inclusion into State legislation, recommended that all States prohibit MDMA. At this time, no drug problem with MDMA existed and no drug data was available. Ultimately, the Committee based its recommendation solely on the prior “dubious decisions” of the DEA and the WHO. The Committee was also under international pressure to conform to the COPS, which was ratified by Australia in 1982.

The States followed the Committee’s recommendation, although some acted faster than others. The Victorian Government amended Sch 11 of the Drugs, Poisons and Controlled Substances Act 1981 (Vic) in 1989, to include MDMA. Schedule 11 drugs are classed as “drugs of dependence”. The addition of MDMA into Sch 11 created criminal offences for use, possession and trafficking of MDMA. The penalties for MDMA-related offences are similar across Australian States. In Victoria, the maximum penalty for use or attempted use of MDMA is 30 penalty units and/or one-year imprisonment.

The amendment to include MDMA in Sch 11 of the Act occurred concurrently with the inclusion of other ecstasy analogues, and was made with the express objective to restrict and control the use of ecstasy and “related designer drugs”. Considering that the rate of ecstasy use has increased since prohibition, this amendment appears to have failed in achieving its objective. Furthermore, MDMA has the same legal status as other potentially more harmful drugs. An examination of the bases for criminalisation of MDMA use is therefore warranted.

CRIMINALISATION OF MDMA USE: HARM AND OTHER JUSTIFICATIONS

Criminal law theory

Criminal law is the most intrusive and coercive area of the law. It provides for penalties to punish those who commit crimes, and these penalties intrude on liberty. The possibility of punishment also coerces people into abiding by certain rules, which infringes upon freedom. Therefore, there must be very good reason to criminalise an act or behaviour.

Legal scholars agree that Australian drug laws were not made for any standalone reason or to address health risks. Rather, a number of factors may have played a role, including social fears, culture, economics and politics. While arguments focusing on drug harms might appear to neglect

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64 Webb, n 15, p 14.
66 Webb, n 15, p 14.
67 Webb, n 15, p 16.
69 Webb, n 15, pp 14-16.
70 Drugs, Poisons and Controlled Substances Rules 1989 (Vic), r 3(b).
71 Drugs Poisons and Controlled Substances Act 1981 (Vic), s 4.
72 Drugs Poisons and Controlled Substances Act 1981 (Vic), Sch 11, ss 4, 70, 71, 71AA, 71AB, 71AC, 71A, 71B, 73, 75.
73 See, for example, Drug Misuse and Trafficking Act 1985 (NSW), s 21; Misuse of Drugs Act 2001 (Tas), s 24.
74 Drugs Poisons and Controlled Substances Act 1981 (Vic), s 75(b).
75 Drugs, Poisons and Controlled Substances Rules 1989 (Vic), r (2).
77 Bandow, n 13, p 254.
78 Bandow, n 13, p 254.
80 Manderson, n 59, p 12; Bronitt and McSherry, n 59, pp 886-888.
these factors, there are several reasons why the harm caused by a drug should be considered the most important issue when determining legal status. Social fears, culture, morality and political acceptability are almost always influenced by the perceived harm of a drug in some way.

If a substance was believed to be completely benign, it could not justifiably be made illegal. Therefore the harm of MDMA, although ill-perceived, must have been at least a factor in the prohibition of this substance. As previously discussed, the prohibition of MDMA in Australia occurred largely as a result of international subservience. The only scientific evidence that appears to have been considered was the effect of a related compound, MDA, when administered frequently in rats at high doses. No government has prohibited MDMA on the basis of a credible scientific or social welfare assessment.

The most recent phase of the Australian Government’s National Drugs Campaign took place between December 2010 and June 2012, focusing heavily on sending a message to Australian youth about the harms and risks associated with ecstasy. The government released advertisements indicating that ecstasy use causes “insomnia, memory loss and psychological problems”, with an obvious focus on deterrence. Despite this, most of the harm ascribed to MDMA is actually unproven.

Misleading information manipulates public opinion, provoking uneducated views and fears about MDMA, which unduly influences future government decision-making and prevents pragmatic law reform from happening. Public opinion cannot be a reliable tool to determine whether any drug should be illegal, unless the public has a more truthful understanding about drugs.

In the absence of any drug data, it is reasonable to suggest that economical considerations had little impact on the decision to prohibit MDMA in Australia. Projecting the economic impact of removing prohibition is beyond the scope of this article. However, it would be very difficult to justify the prohibition of MDMA for economical reasons today. In fact, alternatives to prohibition are likely to be much more economically viable.

The enforcement of common morality, as advocated by Lord Patrick Devlin, will not be explored in detail in this article. Several authors have described why individuals morally object to drug use and argued that these objections are not a sound basis for criminalisation. Most often, moral arguments opposing drug use are mere projections of one’s own inner desires or inclinations and are rarely translated into rational arguments. Comparisons between illegal drug use and other legal activities that may be perceived as wrong, dangerous, addictive or mind-altering are persuasively used to dismiss moral arguments. For example, many people would consider adultery as immoral, yet it is not illegal.
Criminal law commentators have suggested that relying on harm to determine the legal status of a drug ignores other research, including the cultural and historical underpinnings of drug laws. However, the importance of research not concerning drug harms seems to be overestimated. The War on Drugs declared by President Richard Nixon in 1971 led to the prohibition of many psychoactive substances around the world, sparking international moral panic about almost all recreational drugs except alcohol and tobacco. Laws against drugs are also believed to have been enforced for reasons relating to racism. In certain jurisdictions, specific prohibition laws have discriminated against and targeted people of specific ethnicity. While these events are historically significant, they are hardly relevant to the question of whether MDMA should be illegal today.

It is difficult to form a rational justification for criminalising the use of any drug without considering the proven harm of that substance. John Stuart Mill argued that “the only purpose for which power can rightfully be exercised over a member of the civilised community against his will is to prevent harm to others”. The principle described by Mill is commonly referred to as “the harm principle”. Mill states that one’s “own good, either physical or moral, is not a sufficient warrant” for state intervention and believes that people have a right to “live as seems good to themselves”, so long as they do not violate the rights of others. This view conceives liberty and individual autonomy as being of utmost importance.

In terms of “harm to others”, Mill was referring primarily to “physical harm to other individuals”. Consistent with Mill’s idea of harm, the Oxford Dictionary defines harm as “physical injury, especially that which is deliberately inflicted”, including both “material damage” and “actual or potential ill effects or danger”. Commentators have asserted that harm to others must be serious, non-trivial, substantive, direct and sufficiently proximate to warrant criminality. Harm to others appears to be the fairest and most logical reason for prohibiting drug use, as long as it is proven. It could be argued that methamphetamine (ice) users might put others at risk of direct harm by acting unpredictably, therefore restricting individual freedom is justified. The same argument could also be made to prohibit alcohol use.

There may be moral, social, economic, environmental and political reasons for extending the harm principle to include indirect and non-physical harm. This would require broadening Mill’s narrow definition of harm to include other negative effects on society or public disutility that is not proximate to drug use itself, such as family adversities. As discussed below, the use of MDMA in fact causes negligible harm to others, both in terms of direct harm to non-users, or indirect non-physical harm to society.

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72 Bronitt and McSherry, n 59, pp 886-888.
74 Manderson, n 59; Drug Policy Alliance, n 73.
75 Mill JS, On Liberty (4th ed, Longman Roberts & Green, 1869) at [I.9].
77 Mill, n 75 at [I.9], [I.13].
78 Mill, n 75, p 104.
80 Bandow, n 13, p 255; Husak, n 13, p 190.
82 Husak and De Marneffe, n 10, p 71; Nutt, King and Phillips, n 16.
83 Bronitt and McSherry, n 59, p 58.

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HLA Hart denies that all liberals are strictly committed to Mill’s harm principle. In fact, Hart believes that harm to others is not the only rationale for criminal law and that “harm to self” may also justify criminalisation. An example of protecting people against themselves is disallowing consent of the victim as a defence for murder, which can be justified on paternalistic grounds.

Paternalism refers to the behaviour of the state, which limits or restricts the liberty and autonomy of a minority or an individual, for their own good, either morally or physically. The fact that recreational drugs are potentially harmful to the user is the most common explanation for drug prohibition laws. The basis of the paternalism argument is that the government has power to make laws to protect “vulnerable, heedless, ignorant and otherwise at-risk individuals” from self-harm. Since all drug use inevitably carries some degree of self-harm, it then follows that the government can make laws to prohibit drug use and reduce this harm. Hart explains that vulnerability can include being physically vulnerable, having limited resources or “limited understanding or strength of will”.

There are several problems with justifying MDMA prohibition on the basis of paternalism. First, the argument requires accepting that drug users are not aware of the harm that drug use causes, and even if they are aware of the risks, they do not have the capacity to consider these risks in order to make a deliberate choice. This reasoning may be applicable to many young children, although it is not the case with almost all adult MDMA users.

Secondly, there is no answer to the question of how harmful a drug must be to the user in order to justify making the use of that drug a crime. It can be said with reasonable certainty that some legal recreational drugs are more harmful to the user than some illegal drugs. If the principle of paternalism were applied consistently, tobacco and alcohol would be criminalised.

Thirdly, liberty and the right to self-determination are internationally recognised rights, encompassing the free pursuit of one’s own social and cultural development, and control or agency over one’s actions. The choice to use recreational drugs seems to fall squarely within these rights. It can be argued that laws prohibiting drug use infringe upon freedom because the majority makes the determination that drug use is wrong or harmful to the individual.
Despite significant flaws with criminalising drug use on the basis of paternalism, harm to the user is a relevant consideration if alternatives to prohibition are to be explored. If an individual is harmed as a result of their drug use, this can ultimately have other effects, such as costs to the public health-care system. In essence, “harm to the user” can contribute to “harm to others” if a broad interpretation of harm is applied. Therefore, this article discusses both the harm that MDMA use causes to the user and to others.

Harm of MDMA use to the individual

Like any drug, MDMA can cause several adverse acute effects, which are more commonly experienced with high doses. These include confusion, increased heart rate and blood pressure, nausea, sweating, tremor, blurred vision, jaw clenching and teeth grinding. In the comedown or subacute phase when the drug wears off, ecstasy users may report experiencing insomnia, lethargy, irritability and depressed mood. These effects, if experienced, are generally short-lived.

Other alleged harms often attributed to MDMA are more serious and controversial. Due to its variable content and presence of adulterants, ecstasy purchased on the street is potentially far more harmful than consuming a standard recreational dose of pure MDMA. Most research has been conducted on individuals taking illegal ecstasy pills.

Mortality

Information relating to MDMA fatalities in Australia is scarce. The Australian Bureau of Statistics does not distinguish MDMA from other amphetamine-related deaths. In 2005, the National Coronial Information System reported identifying 112 ecstasy-related deaths in 2001-2004, with MDMA deemed as a primary contributor in 51 cases. However, a number of other drugs are listed as primary contributors in MDMA-related fatalities. Just six deaths were recorded where MDMA was the only drug present. This equates to approximately 1.5 deaths per year recorded where MDMA was a primary contributor and the only drug identified. The available information suggests that deaths as a direct result of just MDMA consumption are very rare in Australia, especially considering the prevalence of ecstasy use.

MDMA fatalities have been reported to occur as a result of direct toxicity from high doses. While acute toxicity is rare, it can result in serious medical complications. Hyperthermia (raised body temperature) is one of the main symptoms of MDMA toxicity and can lead to several other fatal...
conditions. MDMA is often taken in nightclubs where the temperature is high, in situations where users may dance for prolonged periods with little water, leading to dehydration and exertional hyperthermia.

Death caused by hyponatraemia, or low blood sodium levels, has also been associated with MDMA or ecstasy use. Hyponatraemia occurs as a result of overconsumption of water. Providing cooler nightclub conditions and education with respect to MDMA dosing and appropriate fluid intake would reduce the risk of dehydration, hyperthermia and hyponatraemia.

Evidence indicates that MDMA may be cardio-toxic and that individuals with pre-existing cardiac disease or genetic susceptibility are likely to be more vulnerable than others. There is insufficient data to determine the exact frequency of cardiovascular-related fatalities caused by MDMA. Experts have suggested that the occurrence of these fatalities as a result of MDMA use would be similar to the occurrence of fatal allergic reactions to medicinal products, which are rare and also attributable to pre-existing susceptibility.

The fact that MDMA is prohibited must contribute to the number of fatalities that occur as a result of ecstasy use. Because the content of ecstasy is often unknown, users may unknowingly take an unsafe dose of MDMA or another drug. Although MDMA-related deaths are rare, they have been considered by some researchers to be clinically significant. This is one reason to implement harm reduction measures.

**Neurotoxicity and cognitive impairment**

In the brain, the chemical neurotransmitter serotonin is synthesised by serotonergic neurons (nerve cells). The results of MDMA studies in animals and neuro-imaging data in humans have been regarded as evidence that MDMA damages serotonergic neurons. It is suggested that damage to serotonergic neurons could result in potentially long-lasting effects including mood changes and memory problems. Some research has claimed that MDMA impairs memory and/or cognition.

Despite this research, the Advisory Council on the Misuse of Drugs in the United Kingdom concluded, in what was considered the most comprehensive review of the harms of MDMA, that “there is presently little evidence of longer-term harms to the brain in terms of either its structure or function” caused by MDMA. The Advisory Council recognised evidence of a small decline in

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111 Degenhardt and Hall, n 14, p 84.
112 Nutt, n 18, p 13.
113 Nutt, n 18, p 13; Advisory Council on the Misuse of Drugs, n 14 at [4.8]; Degenhardt and Hall, n 14, pp 216-217.
114 Kuhn, Swartzwelder and Wilson, n 4, p 86.
117 Nutt, n 18, p 14.
119 Degenhardt and Hall, n 14, p 48.
121 Degenhardt and Hall, n 14, p 58.
123 Advisory Council on the Misuse of Drugs, n 14 at [10.6].
verbal memory, although this was not considered clinically significant. In some measures of brain function, ecstasy users have performed better than the control group.

The Advisory Council’s conclusion is logical given the significant methodological flaws in research suggesting that MDMA harms the brain. The majority of MDMA or ecstasy studies are based on unreliable self-reporting data and do not take into account several confounding factors, such as polydrug use, which could also cause cognitive decline or nerve cell damage, creating biased results. Animal studies have been rightly criticised for administering doses much higher and more frequently than what would typically be taken recreationally. When human equivalent doses are used, detrimental effects have not been observed. Finally, concerns have been raised regarding the validity of the measuring procedures employed in neuro-imaging studies.

Defining an appropriate control group has been a recurring limitation of research. If only the effects of MDMA are to be examined, the control group should have a similar drug use and lifestyle history to the MDMA-taking group. A small study by Halpern et al excluded all individuals who reported significant lifetime exposure to drugs, tested for concurrent use of drugs, including alcohol, and required that each participant attend all-night dance parties. This research is still limited in that self-reporting data was relied on in regards to previous drug history and lifestyle. Nonetheless, the study found that no marked residual cognitive deficits were observed in the ecstasy group.

Most research in relation to ecstasy or MDMA is retrospective and not experimental in design, including Halpern et al. Retrospective research can never properly control how much exposure an individual has to MDMA. In retrospective studies, participants do not consume pure MDMA, but rather, illegal ecstasy pills. Investigators can test for MDMA use and other drugs by taking hair or urine samples, although the doses taken by participants will vary. Retrospective research is also unable to determine that the differences identified between users and controls did not already exist prior to taking the drug. Researchers have advised caution in attributing cognitive impairment to MDMA exposure.

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124 Advisory Council on the Misuse of Drugs, n 14 at [10.6].
127 Degenhardt and Hall, n 14, p 58.
131 Halpern et al, n 126 at 778.
133 Lyvers, n 130 at 269; Lyvers, n 126 at 787; Degenhardt and Hall, n 14, pp 143, 173.
134 Halpern et al, n 126 at 777.
135 Lyvers, n 130; Degenhardt and Hall, n 14, p 173.
136 Halpern et al, n 126 at 784.
Depression

It has also been claimed that MDMA use is associated with longer term depressive symptoms. However, some studies have found no evidence of increased depressive symptoms among ecstasy users. Most individual studies have failed to control for other drug use and known biological and psychosocial risk factors for depression. These factors could explain the findings of one review article and one meta-analysis, which suggest a clinically insignificant association between ecstasy use and depressed mood. Considering MDMA’s pharmacological profile and ability to lift mood, it could actually be a potential treatment for depression.

The only way to accurately determine the adverse effects of MDMA exposure is to conduct a controlled “before versus after” experiment in human volunteers. There is a lack of financial incentive for pharmaceutical companies to conduct this research because the patent for MDMA expired long ago. Combined with ethical restrictions, this has meant that there are limited examples of experimental studies, although those that have been conducted have not demonstrated any deficits to the user. Given that MDMA is now being administered to human patients to assess its efficacy as a treatment for post-traumatic stress disorder, ethical issues that have prevented experimental research in the past might be overcome.

Dependence and tolerance

There is little evidence of MDMA dependence occurring among ecstasy users. Tolerance to some of the psychological actions of MDMA has been reported in some heavy users, which may lead a person to take more doses to get the desired effect. Ecstasy users can also report concerns about their use, although there appears to be no real proof of physical dependence or drug craving in humans with MDMA. The available evidence suggests that regular users take ecstasy less than once a fortnight and are highly unlikely to be addicted or unable to stop taking ecstasy.

Harm to the user in perspective

Currently, there is little evidence that MDMA causes long-term ill effects to moderate or occasional users. Evidence of cognitive impairment or depression is weak at best. There is also insufficient

138 Degenhardt and Hall, n 14, p 142.
139 Degenhardt and Hall, n 14, p 142.
142 Lyvers, n 126 at 787.
143 Webb, n 15, p 22.
145 Mithoefer et al, n 128; Oehen et al, n 144; Bouso et al, n 141.
146 Lyvers, n 126 at 787.
149 Degenhardt, Bruno and Topp, n 148 at 1.
150 Advisory Council on the Misuse of Drugs, n 14 at [7.2].
151 Sindicich and Burns, n 147, p 166.
evidence to conclude that MDMA causes neurotoxicity. If specific damage does occur, the consequence of this is also unproven. It is difficult to rationally assign more weight to these possible harms than the overwhelming evidence of harm ascribed to cigarette smoking, which is a major contributing factor in the development of many illnesses and life-threatening diseases.\(^\text{152}\)

There are also several other risks of drug use that can result in harm coming to users. For example, someone who is drunk would be more likely to sustain a serious injury as a result of falling over, compared to someone under the influence of a stimulant. In 2010, the Independent Scientific Committee on Drugs (ISCD) in the United Kingdom applied a multi-criteria decision analysis to a range of drugs. Sixteen different harm criteria were established; nine relating to harm the drug produces to the individual and seven relating to harm to others.\(^\text{153}\) Of the 20 drugs analysed, MDMA ranked 15\textsuperscript{th} for harm to the user, well behind both tobacco (eighth) and alcohol (fourth).\(^\text{154}\) Professor Jake Najman of Queensland’s Alcohol and Drug Research Centre stated in 2008 that young adults would be safer taking ecstasy than binge drinking.\(^\text{155}\)

Supporters of prohibition might argue that we cannot conclusively say that MDMA does not cause the harms previously discussed and therefore prohibition is warranted. This argument is hypocritical and conflicts with the position that authorities must prove the harm that is to be avoided before criminalising an act.\(^\text{156}\) The fact that recreational tobacco smoking is proven to be harmful suggests that proof of safety is not a requirement for recreational drugs to avoid criminalisation, although safety may be relevant in determining whether a drug should be restricted in some way. There are also other activities that carry some degree of uncertainty regarding long-term harm, yet are not immediately prohibited. For example, there is uncertainty regarding the long-term effects of exposure to mobile phone radiation.\(^\text{157}\)

Furthermore, research relating to the benefits of recreational MDMA use is almost non-existent. Calculating both the positive and negative effects of drug use on the individual, ecstasy ranked as the highest scoring recreational drug for overall “net pleasure” in a rating scale produced from results of the 2013 Global Drug Survey.\(^\text{158}\) Considering the positive emotions experienced by MDMA users during the “high” period, it is likely that the drug has social benefits for many people and a positive effect on their quality of life.

The available evidence suggests that MDMA is not harmful enough to the individual to warrant criminalising users. This does not mean that the drug is completely harmless, or that it should not be subject to restrictions.

**Harm of MDMA use to others**

Robert MacCoun and Peter Reuter state that “it is likely that many if not most drug users never do wrongful harm to others as a result of their using careers”.\(^\text{159}\) There is very little information available to suggest that MDMA use has significant negative effects on society. As such, the discussion of harm to others as a result of MDMA use in this article is limited.

In the analysis carried out by the ISCD in 2010, the seven sub-criteria for harm to others included physical and psychological injury, crime, environmental damage, family adversities, international


\(^{153}\) Nutt, King and Phillips, n 16 at 1558 (fig 1).

\(^{154}\) Nutt, King and Phillips, n 16 at 1561 (fig 2).


\(^{156}\) Dworkin, n 88, pp 287-288.

\(^{157}\) Karinen A et al, “Mobile Phone Radiation Might Alter Protein Expression in Human Skin” (2008) 9 *BMC Genomics* 77.


damage, economic cost and community harm. The ISCD scale ranked MDMA as one of the lowest drugs (18th) for harm caused to others, scoring higher than lysergic acid diethylamide (LSD) (19th) and magic mushrooms (20th). Alcohol scored the highest of all drugs for harm to others, while tobacco was ranked fourth.

A considerable limitation of the ISCD research is that the illegal status of MDMA may distort the calculations of its harm score. This means that harms or detriment to society that result from the prohibition of MDMA, rather than from the direct result of its use, may in fact increase the harm score. Nonetheless, the ISCD scale clearly demonstrates that the consequences of MDMA use itself cause very little harm to society and non-users. The negative effects caused by MDMA prohibition laws are discussed later.

The ISCD calculations incorporate consequences of drug use that would not be considered harms according to Mill’s harm principle, but may constitute public disutility or detriment. An example of public disutility with respect to MDMA use could be reduction in job productivity on Monday due to residual effects of weekend consumption. Widening the concept of the harm principle might be expected to give the authorities more reasons to prohibit a drug. Despite this, MDMA use results in negligible harm to others even when adopting a broad view of what constitutes harm.

The overall harm score for MDMA, as calculated by the ISCD, represents the total of the subgroups of “harm to users” and “harm to others”. The ISCD results show that “physical and psychological injury” to others does not contribute to the “overall harm score” for MDMA. Therefore, when assessed according to Mill’s harm principle, that is, only the direct harm caused to persons other than the user, MDMA scores very low.

A common reason why drug use is considered harmful to others is that drug use impairs judgment, reduces inhibition and makes people more likely to commit acts of crime and violence. MDMA certainly does not predispose users to violence or aggression, and users do not present problems for police, even in large crowds. The drug mostly linked to violence and aggression is alcohol.

The use of ecstasy is most common among older adolescents and young adults who are likely to be university students or employed. Ecstasy users usually fund their drug purchases from their own income, and few engage in crime other than low-level drug dealing. Contrary to some older sources, MDMA is not actually a hallucinogen, nor is it known to cause “bad trips”. Those under the influence of MDMA maintain contact with reality and are generally well-behaved.

The cumulative amount of harm to the individual and harm to others might also warrant consideration. Of 20 drugs analysed in the ISCD study, MDMA ranked 18th for total overall harm.

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160 Nutt, King and Phillips, n 16 at 1559 (fig 1).
161 Nutt, King and Phillips, n 16 at 1561 (fig 2).
162 Nutt, King and Phillips, n 16.
163 Nutt, King and Phillips, n 16 at 1564.
164 Husak, n 13, p 162.
165 Nutt, King and Phillips, n 16 at 1563 (fig 4).
166 Bandow, n 13, p 256.
167 Nutt, n 18, p 10; Advisory Council on the Misuse of Drugs, n 14 at [5.1], [5.3].
169 Advisory Council on the Misuse of Drugs, n 14 at [4.16], [9.2].
170 Bonomo, n 168, p 120.
172 Advisory Council on the Misuse of Drugs, n 14 at [5.1].
with a score of nine out of a possible 100. Only the drugs buprenorphine, LSD and magic mushrooms scored lower than MDMA. Alcohol was by far the highest scoring drug for overall harm with a score of 72, followed by heroin (55). On the ISCD harm scale, if a drug has a score of 50, it should be half as harmful as a drug that scores 100. A simple division of figures suggests that alcohol is eight times more harmful than MDMA in terms of overall harm. Based on this result, it is difficult to justify prohibiting MDMA and adopting a regulation model for alcohol. Psychiatrist and ISCD chair David Nutt has also compared MDMA use with horse riding, finding that the activities are similarly harmful in terms of overall harm.

The 2010 ISCD research is supported by similar findings from the ISCD published in 2007. The Global Commission on Drug Policy, consisting of seven former presidents and other world leaders, endorsed these results in their 2011 report, highlighting a lack of consistency between the drug harm scores and the United Nations classifications of drugs. MDMA has been classed in the most dangerous category of these classifications since it was entered into the COPS in 1986. By contrast, alcohol, which scores much higher than MDMA on the ISCD harm scale, is not subject to international control.

The consumption of MDMA carries some potential harm to the user, although the degree of harm appears to be lower than many drugs, including legal drugs. Literature suggests that the harm caused to others by MDMA is negligible and the overall harm of MDMA is also quite low. This supports the proposition that the offence of using MDMA, and consequently the offence of possessing personal use quantities of MDMA, should at the very least be removed from criminal law.

**THE CURRENT MODEL**

**Prohibition with cautioning and diversion**

Australia adopts a model referred to as “prohibition with cautioning and diversion” in relation to the use and possession of small quantities of illegal drugs, including MDMA. Under this model, minor drug offenders are able to have their prosecution suspended if they complete an intervention specified by a caution. An intervention generally involves an education session, assessment or treatment. This approach is also referred to as “depenalisation”, since the offences remain criminal, but the penalties are not automatically enforced, at least for first-time offenders.
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Diversion strategies come in various forms and their implementation can differ between States.\(^\text{185}\) The two main forms of diversion are police diversion and court diversion.\(^\text{186}\) Police diversion generally involves police issuing a caution in conjunction with a referral to an intervention.\(^\text{187}\) Most States restrict access to diversion programs to users and offenders who are found in possession of drugs for personal use.\(^\text{188}\) Eligible offenders can possess a maximum of 0.5 to two grams of MDMA, depending on the jurisdiction.\(^\text{189}\) Court diversion schemes are generally designed to provide “assessment and short-term treatment for less serious offenders whose criminal behaviour is related to their illicit drug use”\(^\text{190}\).

While drug use and the possession of small amounts of drugs may be depenalised, they are still criminalised within a prohibition framework. To be eligible for the Victoria Drug Diversion Program, drug offence history is limited to one prior diversion.\(^\text{191}\) If individuals fail to complete an intervention they are subject to prosecution,\(^\text{192}\) although a criminal conviction will not always be recorded.\(^\text{193}\) The extent to which MDMA use is criminalised in reality is difficult to determine. Eligibility criteria for entry into diversion programs may not be strictly enforced in practice, and it is possible that some offenders receive an informal caution from police without being diverted.

The benefits of Australia’s depenalisation model include reducing costs in the criminal justice system, including court costs and police prosecuting, as well as negating the adverse consequences that criminal charges and convictions have on individuals and society.\(^\text{194}\) However, the health benefits of diversion are less clear.\(^\text{195}\) In relation to MDMA offences, the diversion model can be criticised on a number of grounds.

Prohibition with cautioning and diversion inherently accepts that an offender should remain criminal, yet the criminal sanctions are imposed only in certain circumstances. Merely implementing such a model casts serious doubt as to whether the act should be criminal in the first place. It could be argued that authorities have already accepted that it is better for society if use and possession of MDMA are not criminalised. Two primary aims of diversion, to reduce overall costs and avoid the adverse impact of criminal charges on individuals,\(^\text{196}\) would be more readily achieved if the offences of MDMA use and possession were removed from the sphere of criminal law entirely. It should also be noted that diversion programs themselves are still costly.\(^\text{197}\)

For ecstasy users specifically, there is no evidence that diversion programs have any health benefit. As previously discussed, ecstasy users are not dependent and most only take the drug occasionally. Furthermore, diversion schemes are forced upon the individual, focusing on deterring use due to the prospect of prosecution, as opposed to harm minimisation. Of relevance, therefore, is whether the model is an effective deterrent.

\(^{185}\) Hughes and Ritter, n 181.
\(^{187}\) Australian Institute of Health and Welfare, n 183, p x.
\(^{188}\) Hughes and Ritter, n 181, p 17.
\(^{189}\) Hughes and Ritter, n 181, p 17.
\(^{190}\) Wundersitz, n 181, p 2.
\(^{191}\) Hughes and Ritter, n 181, p 63.
\(^{192}\) Wundersitz, n 181, p 112.
\(^{196}\) Hughes, n 181; Vaughan, n 194.
\(^{197}\) Macintosh, n 195, pp 11, 102.
In a report published by the Australian Institute of Criminology, it was claimed that the Drug Diversion Program in Victoria reduced the likelihood of ecstasy users re-offending. However, the report relied on police arrest records, only showing that individuals were less likely to be found to have re-offended within 18 months. It is equally likely that the subjects of the report did re-offend without being apprehended.

**Counterproductive effects of prohibition**

Strictly criminalising and prohibiting the manufacture and supply of a drug is also intended to reduce drug use. The basic concept is that a prohibition regime reduces the availability and increases the price of drugs. Restricting availability is intended to prevent people from being able to obtain drugs, while an increased price is aimed at deterring people from purchasing drugs. Combined with the purported “deterrent” effect of criminalisation on the individual user, a prohibition framework should, in theory, reduce the overall consumption of drugs. While prohibition may have a deterring influence on certain individuals, overall it has been unsuccessful. The very fact that “prohibition with cautioning and diversion” is fundamentally premised on “prohibiting” MDMA, rather than allowing it to be manufactured for legal use, is an inherent shortfall of this model. Both depenalisation and decriminalisation models still operate within a prohibition framework, which serves as a foundation for an illegal ecstasy market.

There is no guarantee as to the content of illegally manufactured ecstasy pills. This increases harm to all users by making pills more dangerous due to variable strengths of MDMA and the presence of other more dangerous drugs and harmful adulterants. The presence of toxic chemicals in ecstasy pills, such as battery acid, has been a focus of the government’s “Ecstasy. Face Facts” campaign, despite the fact that this harm is largely created by prohibition.

The compound para-methoxyamphetamine (PMA) is an ecstasy substitute that is much more toxic at recreational doses than MDMA. PMA is more likely to cause life-threatening elevation of body temperature and cardiovascular function. While the number of deaths caused by PMA is small, it is alarming considering that it is not commonly used. Although chemically and pharmacologically unrelated to MDMA, gamma-hydroxybutyric acid (GHB) is a cheaper and more dangerous alternative to ecstasy that has gained popularity in recent years. It has been suggested that a decline in the purity of ecstasy pills has resulted in an increased in GHB use.

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199 Payne, Kwiatkowski and Wundersitz, n 198, p 17.
201 Macintosh, n 195, p 24.
203 Ross, n 4, p 37; Smith, n 13 at 241; Australian Crime Commission, n 3, p 26; Kuhn, Swartzwelder and Wilkie, n 4, p 82; Ministerial Council on Drug Strategy, n 105 at [2].
205 Kuhn, Swartzwelder and Wilkie, n 4, p 85.
206 Kuhn, Swartzwelder and Wilkie, n 4, p 85; Sindicich and Burns, n 147, p 79.

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Furthermore, new chemically engineered substances (synthetics) designed to mimic the effects of MDMA have been sold legally online, in adult stores and tobacconists at an increasing rate in recent years. — One of the most notable compounds that emerged in late 2008 was methylenedioxypyrovalerone (MDPV), which carries a high risk of dependency and psychosis. — Many new psychoactive substances, including MDPV, have now been banned, although lawmakers are constantly playing catch up. — It is likely that MDMA prohibition has contributed to the introduction of new and potentially more dangerous substances.

There is no doubt that large profits entice people to traffic ecstasy. The prohibition of MDMA must contribute to the prevalence of illegal organised crime. — Policing ecstasy users is also costly and difficult. — Ecstasy pills are easily concealed and discarded and users can discreetly take the drug without being apprehended by police. — Controlling the manufacture, importation, distribution and use of ecstasy is a continuous struggle for law enforcement, yet pills are reportedly easy to obtain. — A new control system for MDMA, as proposed by Penington, should therefore be considered.

HARM REDUCTION, THE PENINGTON PROPOSAL AND REGULATION OF MDMA

“The primary and overarching goal of illicit drug policy must be to reduce drug-related harm.” — The National Drug Strategy 2010-2015 primarily aims to achieve three goals, including demand reduction, supply reduction and harm reduction of both legal and illegal drugs. — Reports show that the government focuses primarily on law enforcement in attempting to reduce supply and demand, with little funds spent on harm reduction.

“Harm reduction attempts to reduce the adverse consequences of drug use among persons who continue to use drugs.” — The concept is premised on the idea that while drug use cannot be

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212 Bright, n 210, p 12; van Amsterdam J, Nutt DJ and van den Brink W, “Generic Legislation of New Psychoactive Drugs” 27(3) J Psychopharmacol 317 at 321.


214 Australian Crime Commission, n 3; Global Commission on Drug Policy, n 180, p 15; Smith, n 13 at 241; Rolles, n 7, p 33; McDonald, n 7, p 64.


216 Webb, n 15, p 36; Nutt, n 18, p 10.


219 Douglas, Wodak and McDonald, n 5, p 29.


221 Ritter, McLeod and Shanahan, n 218, p 1.

eliminated, the harm associated with drug use can be reduced. One of the associated harms of ecstasy use is that people who purchase ecstasy with the intention of taking MDMA can actually receive a variety of different drugs. Therefore, the associated harms of intended MDMA consumption can include the actual harms of more dangerous compounds, such as PMA. Dehydration, hyperthermia and hyponatraemia that may occur as a result of prolonged dancing with inappropriate hydration, are also associated harms. A regulation model that allows for the controlled production of a relatively safe formulation of MDMA focuses more on reducing associated harm than any other model.

The Global Commission on Drug Policy has encouraged governments to experiment with models of regulation. In 2012, Penington proposed a regulated legal market for cannabis and MDMA to the Australia21 Roundtable on Illicit Drugs. Medical and drug policy experts of the Roundtable concurred that this proposal deserves serious consideration. This model would allow Australians aged 16 and over to access MDMA from a pharmacy that would record the supply on a confidential electronic register.

Penington proposed that the manufacture of MDMA be licensed and contracted to a generic pharmaceutical company that would produce a dose form of MDMA identifiable by shape and colour, with guaranteed strength and purity. Issuing a licence to the cheapest manufacturer could prevent overly high costs to the end user and the emergence of a cheaper black market. The use of unique packaging would also make a legal product more easily distinguishable from other drugs, with a recommendation not to remove the dose from its original packaging until the time of use. Penington’s proposal provides a useful blueprint for a legal MDMA market but any fears and concerns about such a market would need to be addressed first.

One possible fear is that the use of MDMA would dramatically increase. This concern could only stem from the belief that prohibition is an effective deterrent and relaxing drug laws encourages drug use. History shows that despite being prohibited, the popularity of ecstasy has generally increased since its introduction, apart from a small decline in recent years. Furthermore, while it may not always contain MDMA, ecstasy is readily available despite being illegal. The development of a legal regulated market controlled by the government would be expected to cause a decline in the trafficking of ecstasy due to a reduction in demand for illegal pills. With fewer active drug dealers, ecstasy could become less accessible for minors. This view is based on the assumption that adult users would access legal MDMA instead of purchasing illegal ecstasy pills. Considering the demographic of ecstasy users and the uncertainty regarding the content of illegal pills, it is reasonable to believe that most individuals would desire a product of higher quality and lower risk, which regulation would provide.

There is also evidence that adopting more liberal drug laws and policies does not cause a significant increase in drug use or drug-related harms. The de facto legalisation of cannabis in the Netherlands is one example of a drug policy that is considered by many to be reasonably

223 Single, n 222 at 289.
224 Global Commission on Drug Policy, n 180, p 2.
225 Douglas, Wodak and McDonald, n 5, pp 5, 39.
226 Douglas, Wodak and McDonald, n 5, p 43.
227 Douglas, Wodak and McDonald, n 5, p 39; Penington, n 5.
228 Penington, n 5.
231 Sindicich and Burns, n 147, p 81.
successful.\textsuperscript{233} The use and possession, \textit{and} the sale and purchase of small amounts of cannabis (five grams) are tolerated in many coffee shops around the country.\textsuperscript{234} Some have referred to the Dutch model as de facto decriminalisation, not legalisation, because although selling small amounts of cannabis from the coffee shops is tolerated, cultivation is not.\textsuperscript{235} In order to supply cannabis, the coffee shops often deal with traffickers.\textsuperscript{236} Despite this unusual arrangement, the Netherlands boasts lower cannabis use rates than in Australia and the United Kingdom,\textsuperscript{237} and its model is widely supported by the Dutch public and government officials.\textsuperscript{238}

In the United States, regulated legal cannabis has been available for purchase in Colorado and Washington since January and July 2014 respectively.\textsuperscript{239} Robin Room suggests that the new cannabis schemes in the United States resemble present-day alcohol regulation, focusing more on private enterprise as opposed to public health.\textsuperscript{240} Uruguay has implemented cannabis regulation, creating government control and monopoly over the industry with a pharmacy-supply model.\textsuperscript{241} It is too early to determine the effects of these models in their respective jurisdictions. Furthermore, the success or failure of a policy model in one country may not predict outcomes in other countries, especially with different substances.

If the use of MDMA significantly increased under a regulation model, this does not necessarily equate to an increase in overall harm to society. In the United Kingdom, alcohol use was steadily increasing until there was a significant levelling out in consumption from the late 1980s until the mid-1990s, as many people switched to taking ecstasy.\textsuperscript{242} Because MDMA users are not known to be violent, an increase in MDMA use among persons who would otherwise drink alcohol would in theory have a dampening effect on alcohol-fuelled street violence. Users of other amphetamines and GHB might also switch to taking legal MDMA. The number of MDMA users provides little value unless considered in conjunction with harm to society and the use of recreational drugs overall.

Another criticism could be that while MDMA regulation might seem to be a sensible policy, the benefit to society would still be minimal. Excluding alcohol and tobacco, if MDMA was the only other recreational drug legally regulated, criminals involved in the ecstasy trade may simply convert to selling other substances. Police would still attempt to control illegal activity with respect to other

\begin{footnotesize}
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\item \textsuperscript{233} MacCoun RJ and Reuter P, “Interpreting Dutch Cannabis Policy: Reasoning by Analogy in the Legalization Debate” (1997) 278 (5335) Science 47 at 47.
\item \textsuperscript{234} Hughes C and Wodak A, A Background Paper For An Australia21 Roundtable, Melbourne, Friday 6th July 2012, Addressing the Question “What Can Australia Learn From Different Approaches to Drugs in Europe Including Especially Portugal, Switzerland, the Netherlands and Sweden?” (Australia21, 2012) p 12; Hall W and Fischer B “Harm Reduction Policies for Cannabis” in Rhodes T and Hedrich D. Harm Reduction: Evidence, Impacts, Challenges (Monograph No 10, European Monitoring Centre for Drugs and Addiction, 2010) p 243.
\item \textsuperscript{235} Hughes and Wodak, n 234, p 12; Hall and Fischer, n 234, p 243;
\item \textsuperscript{237} Hall and Fischer, n 234, p 236; Australian Institute of Health and Welfare, n 24, p 86.
\item \textsuperscript{238} Hall and Fischer, n 234, p 243; Hughes and Wodak, n 234, p 12.
\item \textsuperscript{242} Nutt, n 18, pp 16-17.
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drugs, expending almost the same resources and time. In fact, a more successful policy might involve the legalisation of a range of drugs, although a comprehensive analysis of such a model is beyond the scope of this article. Nevertheless, even under a regulation model for MDMA alone, the unnecessary criminal offences of use and possession of this substance would no longer exist. The cost of policing an illegal ecstasy market would be reduced and taking ecstasy would be safer. While not explored in this article, the potential tax benefits of MDMA regulation is also worth mentioning. Overall, society is more likely to significantly gain by regulating MDMA, rather than lose anything. A minority, that is ecstasy users, would certainly benefit.

Penington has suggested that pharmacists are probably in the best position to supply MDMA, yet recreational drug use always carries some potential for harm and is not aimed at treating any condition. Because the supply of MDMA is intended for recreational and not medicinal use, pharmacists providing the drug would have to accept the aim to "reduce harm to the user and society", rather than "first, do no harm". Pharmacists could potentially screen persons requesting MDMA before supply is given in order to avoid serious harm coming to specific individuals who are at "high risk".

The potential harm of using any drug is greater for some individuals compared to others. For example, penicillin is more dangerous to a person who is allergic to it, as opposed to someone who is not. Specially developed guidelines, similar to those used for the supply of "Pharmacist Only Medicines" that are not available in supermarkets, can be developed to assist pharmacists in determining whether a person could be at high risk of sustaining serious harm by taking MDMA. While medical experts should be consulted to develop these guidelines, it is likely that persons with known cardiovascular defects would be regarded as higher risk and refused supply. The guidelines should also take into consideration that MDMA is potentially harmful for persons taking medications that affect the release of serotonin and may interfere with treatment aims in psychological conditions. Providing advice with respect to potential adverse consequences may be more appropriate than refusing supply in some circumstances. The pharmacist would also need to be satisfied that the person requesting MDMA has the capacity to make an informed choice, which is generally required when selling any over-the-counter pharmaceutical product. All persons supplied MDMA should be offered harm minimisation advice about safe night clubbing.

Nearly all drugs need to be restricted in some way, including medicinal products. If antibiotics were freely available, this would likely cause an increase in the prevalence of antibiotic resistant bacteria, having a negative impact on public health. Furthermore, health professionals cannot guarantee how each individual person will respond to a drug. It may be difficult for pharmacists to assess risk without a complete medical picture, if only information provided by the consumer is available. Despite this, if MDMA was regulated, there is no convincing reason not to at least attempt to reduce harm at the point of supply.

The question of whether supply should be limited to permanent residents of the State in which the regulatory scheme operates is open to debate. The term “drug tourism” refers to travellers visiting a particular destination primarily to take advantage of more liberal drug laws. Should visitors be able to access legal MDMA, this would likely impact the tourism industry.

One criticism of a restricted legal market is that persons who are refused legal supply of MDMA might obtain it from someone who is a registered user or attempt to obtain illegally manufactured

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243 Penington, n 5; Douglas, Wodak and McDonald, n 5, p 39.
245 See, for example, the guidance documents for pharmacists prepared by the Pharmaceutical Society of Australia at http://www.psa.org.au/supporting-practice/professional-practice-standards/pharmacist-only-medicines-s3-protocols. See also Poisons Standard 2014 (Cth), Sch 3.
ecstasy. This argument does not form a strong basis to discount regulation. First, the number of persons refused supply is likely to be a small percentage because most users of ecstasy are young adults between the ages 20 to 29, who are less likely to be at risk of serious harm in the first place compared to older persons. Of those who would be in a “high risk” category, a significant proportion would already be aware of the risks and may choose not to take MDMA. Secondly, MDMA does not create physical cravings and users are not overly bothered if they cannot find it. Therefore it is unlikely that individuals who are refused supply would go to great lengths to obtain the drug in a diminished illegal market, against professional advice, and at serious risk of harming themselves.

It may be argued that implementing any restrictions is paternalistic and curtails individual freedoms because the government determines who can be legally supplied MDMA. This view lends support to free-market legalisation for any substance, including those used for medicinal purposes, ignoring the harm principle entirely. Infringements of the proposed model can be dealt with using civil penalties (fines), not criminal, which may ameliorate some concerns about restricting rights and freedoms.

There are a number of issues to consider when developing a legal product, including the strength and dose form of MDMA, as well as the number and frequency of doses allowed. The normal recreational dose of MDMA contained in ecstasy pills is approximately 80-120 milligrams, although strengths can vary markedly. Small-scale experimental studies have administered doses of up to 125 milligrams with no drug-related serious adverse events. However, more research is required to find the right balance between recreational enjoyment and safety.

Research indicates that a large proportion of regular ecstasy users purchase the drug less than once a fortnight. Penington suggests that supply should be “limited to a monthly total representing a safe weekly amount”. However, considering that most users do not use the drug weekly, it would be more appropriate that supply be limited to a monthly total of MDMA allowing for fortnightly use. The actual number of dose units provided would depend on their strength.

There may be concern that users will stockpile their MDMA and take it all at once. Considering the alternatives, this is not a convincing argument against regulation. Current users could do the same thing with illegal pills, with potentially far worse consequences, especially if one pill contained PMA. It is also well known that MDMA depletes serotonin levels. This means that after experiencing a peak high, taking more MDMA will produce little positive effects because it takes time (several days) for serotonin levels to be restored. Taking excessive amounts of MDMA in one session is also more likely to lead to unpleasant side effects. Each of these factors deters the user from taking their MDMA all at once.

For regulation to operate effectively, the offences of use and possession of small amounts of MDMA should be removed from criminal law. Registered users could be supplied a uniquely identifiable users’ card that non-registered users would not have. Civil penalties could be issued to individuals found in possession of personal use quantities of unregulated MDMA and to non-registered users found in possession of pharmacy-supplied MDMA. Since most users would be able to obtain the regulated product, it would be expected that infringements would be uncommon.

249 Advisory Council on the Misuse of Drugs, n 14 at [7.2]; Dillon, n 209.
250 Kuhn, Swartzwelder and Wilson, n 4, p 85.
251 Advisory Council on the Misuse of Drugs, n 14 at [2.12].
252 Oehen et al, n 144; Ludewig et al, n 128; Mithoefer et al, n 128.
253 Sindicich and Burns, n 147, pp 37, 166.
254 Penington, n 5.
255 Green et al, n 1 at 467, 477.
256 Parrott, n 104 at 186.
257 Kuhn, Swartzwelder and Wilson, n 4, p 85.
The sale of MDMA to consumers at retail level would presently constitute trafficking. In any State, law reform is necessary to implement a regulation model.

CONCLUSION

If any currently illegal drugs were to be trialled for regulation in Australia, MDMA must certainly be one of them. First, there does not appear to be any rational justification for criminalising MDMA use. Compared to other drugs, both legal and illegal, MDMA is much less harmful to users. There is also little evidence that the use of MDMA causes harm to others, including direct harm to persons other than the user or public disutility. For these reasons, the use of MDMA and the possession of small quantities of MDMA should no longer be criminal offences.

Secondly, the prohibition framework intended to control MDMA manufacture appears to create more harm to the user and to society than it prevents. Illegal ecstasy pills are not subject to quality control and may contain variable strengths of MDMA and/or other drugs. There is a possible link between MDMA prohibition and the prevalence of potentially more dangerous drugs, including those contained in pills sold as ecstasy, new synthetic legal drugs and cheaper alternatives.

Small-scale experimental trials have not demonstrated serious adverse effects of MDMA, and it is likely that allowing the use of controlled amounts of MDMA would reduce potential harms associated with ecstasy use. Despite the health risks of drinking alcohol and cigarette smoking and the burden these drugs have on society, there is no risk-benefit analysis conducted or advice provided when these drugs are sold to adults. Australia can learn from the problems of legal alcohol and tobacco sales and carefully implement a regulation model for MDMA where most adults could access the drug legally if desired.

If it is accepted that regulation is the best model and there is no strong justification for criminalising MDMA use, one can ask why this finding is important. Australia is a heavy consumer nation of ecstasy, and recreational drug use overall will never cease. The government should consider a more pragmatic approach than prohibition in order to make ecstasy safer, as well as reduce the negative impact of prohibition on society. Concern for the health and wellbeing of Australians makes this finding important. The fact that MDMA in pure form carries a low level of harm compared to other drugs demonstrates that criminal law in Australia with respect to drug prohibition is applied inconsistently. If criminal law is exercised without justification, this is a significant issue with regards to restricting liberty, and there are few things more important to people than their health and their liberty.

258 Oehen et al, n 144; Ludewig et al, n 128; Mithoefer et al, n 128.
259 Collins and Lapsley, n 152.