



European Monitoring Centre
for Drugs and Drug Addiction

Sexual assaults facilitated by drugs or alcohol

TECHNICAL DATA SHEET

Sexual assaults facilitated by drugs or alcohol

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Introduction

Over the past 10 years, the numbers of cases of what is commonly termed 'date rape' by the mass media and 'drug-facilitated sexual assault' (DFSA) in the scientific literature has increased. According to population surveys from six European countries, up to 20 % of women in Europe have experienced some form of sexual assault during adulthood, but a lack of appropriate monitoring systems means that the full scale of DFSA remains unknown. However, as a result of the publicity the topic has received, women are increasingly aware of the risk of drugs being added covertly to their drinks for the purpose of sexual assault. Furthermore, there are now signs that a more coherent approach to this phenomenon is developing in Europe, with concerted attempts being made to measure the incidence of DFSA and to explore and implement appropriate responses.

The psychoactive substance most commonly and traditionally linked with sexual opportunism and assault in Europe (and elsewhere) is alcohol, but rising levels of recreational drug use and expanding drug markets appear to offer new ways to incapacitate a victim that may be faster and cheaper than alcohol. The phenomenon of using drugs to induce people to submit to sexual activity without their consent has led to the introduction of terms such as 'date rape drugs' and 'drink spiking' (1). However, there are considerable differences in how such terms are interpreted.

Empirical research on sexual victimisation in general is extremely controversial, with little consensus about the definitions used in medical, legal, social science and journalistic circles. Indeed, the whole subject of DFSA is relatively new and marked by a high level of confusion. Issues about victims' capacity to consent and about their voluntary or involuntary use of illegal drugs and/or alcohol still need to be resolved. New developments suggest that there has been a shift in the conceptualisation of this type of sexual assault in Europe.

As previously mentioned, population survey data from six European countries (Germany, Ireland, Lithuania, Finland, Sweden and the United Kingdom) suggest that up to 20 % of adult women have experienced some form of sexual assault in their adult lifetime. The figures are much lower for men. For example, the British Crime Survey reports that 5 %

Information sources and methods

This paper draws on recent evidence from studies of alleged cases of DFSA reported to police and forensic services in France and the United Kingdom and on reports from other social, psychological and legal research studies. Data have also been gathered from surveys about crime victimisation and rape support services in Europe, the United States, Canada and Australia.

In addition, the paper draws on two new recommendations made by:

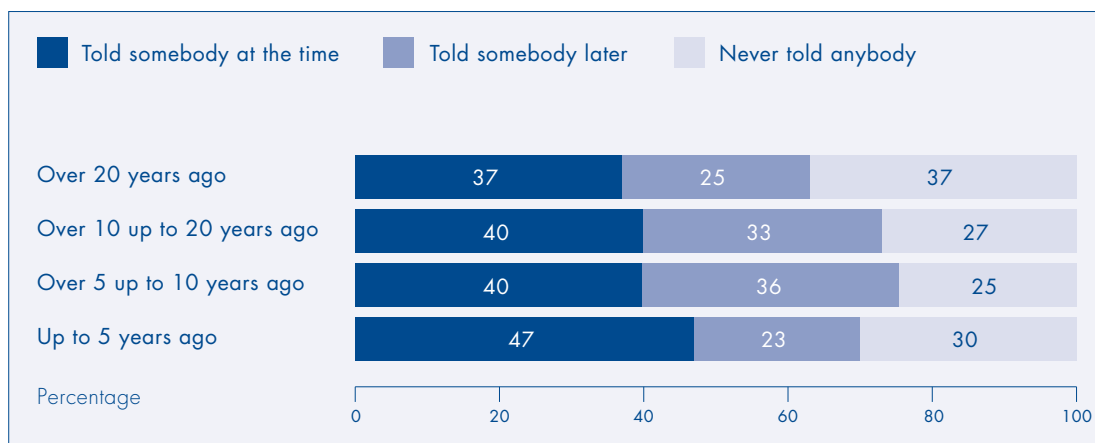
- (i) the Council of Europe (January 2007); and
- (ii) the UK Advisory Council on the Misuse of Drugs (ACMD) (April 2007).

(1) Covertly adding a psychoactive substance to a drink usually to incapacitate a potential victim or for entertainment.

of men have experienced some form of sexual assault in their adult lifetime. The prevalence of rape (2) among women has been reported to be 8.2 % in Germany, 6.4 % in Ireland and 4.9 % in England and Wales (Regan and Kelly, 2003). Extrapolating figures from the 2001 British Crime Survey to the population of England and Wales would suggest that around 25 000 women were the victims of rape during 2000 (3) (ACMD, 2007). The British Crime Survey notes that most perpetrators of sexual assault are men who are known to their victims and that sexual assaults are most likely to take place in urban areas, over the weekend and at night. It is also noteworthy that, of those who had been subjected to serious sexual assault, fewer than half told somebody about it at the time and the police were informed in only 12 % of cases (Myhill and Allen, 2002; Walby and Allen, 2004) (Figure 1).

Figure 1

Proportion of victims who told somebody about last incident of sexual victimisation



NB: Totals may not sum to 100 due to rounding.

Source: Myhill and Allen, 2002 (British Crime Survey data).

The proportion of sexual assaults that are reported varies greatly between countries, and this appears to reflect individual, social and cultural differences, such as the relative willingness of women to report the assault, the extent to which they think they will be believed and their confidence in the justice system (Walby and Allen, 2004). It is a matter for concern that the conviction rate for sexual assaults has fallen in many European countries since the 1970s, despite the fact that reporting typically has risen. The average conviction rate over the period 1998–2001 ranges from 8 % or less in Ireland, Sweden and the United Kingdom to 45 % in Poland, 54 % in Hungary and 66 % in Latvia. However, comparisons should be made with caution as variations exist in samples, methods and definitions (Regan and Kelly, 2003).

(2) Definitions of rape and other serious sexual assault vary between countries, therefore comparisons should be made with caution. Detailed analysis of the definitions and legal situation is outside the scope of this paper.

(3) 95 % confidence intervals 11 000 to 39 000.

Drug-facilitated sexual assault (DFSA)

Literature from the United States, Canada, Australia, France and the United Kingdom suggests that over the past 10 years there has been an increase in the use of drugs and alcohol to immobilise victims for the purpose of carrying out a sexual assault (McGregor et al., 2004; Dorandeu et al., 2006; Hurley et al., 2006; Nutt, 2006). According to the 2001 British Crime Survey, 5 % of rape victims had been drugged in some way, while a further 15 % reported being incapable of giving consent because they were under the influence of alcohol. Of those victims subjected to other serious sexual assault, 6 % reported being drugged and 17 % were incapable of giving consent owing to the influence of alcohol (ACMD, 2007).

Two conceptually different types of DFSA are commonly recognised in the literature. 'Proactive DFSA' is the covert or forcible administration of an incapacitating or disinhibiting substance by an assailant for the purpose of sexual assault whereas 'opportunistic DFSA' is sexual activity with someone who is profoundly intoxicated by his or her own actions to the point of near or actual unconsciousness (Horvath and Brown, 2005). However, the definition recently adopted by the ACMD in 2007 brings the two commonly used definitions together by making no distinction between forced, covert or self-administration and no distinction between the use of controlled drugs and other substances (including alcohol) as all affect capacity to consent.

Definition adopted by the UK Advisory Council on the Misuse of Drugs in 2007

Drug-facilitated sexual assault includes:

'all forms of non-consensual penetrative sexual activity whether it involves the forcible or covert administration of an incapacitating or disinhibiting substance by an assailant, for the purposes of serious sexual assault: as well as sexual activity by an assailant with a victim who is profoundly intoxicated by his or her own actions to the point of near or actual unconsciousness' (ACMD, 2007).

Drugs that facilitate sexual assault

The drugs that are most commonly implicated in cases of sexual assault are central nervous system depressants. These substances alter a victim's behaviour, ranging from loss of inhibition to loss of consciousness, and are often associated with anterograde amnesia (4).

Alcohol is the central nervous system depressant that has been most commonly associated with sexual assault in the international literature. Alcohol has the capacity to impair judgement and reduce inhibition and, in larger quantities, can cause loss of physical control and consciousness. Currently, there is much concern about the levels of binge drinking and drunkenness that characterise the nightlife scene in parts of Europe.

Benzodiazepines are also central nervous system depressants, which are in most cases controlled under drug or medicines legislation. The benzodiazepine most commonly associated in the media with DFSA is flunitrazepam (widely known as Rohypnol®, or 'Roofies' by habitual users). Licensed as a powerful sedative-hypnotic prescription drug in many European countries, Rohypnol®, is tasteless, odourless, and dissolves in liquid. Once flunitrazepam began to be implicated in cases of sexual assault through 'drink spiking', the manufacturer (Roche Pharmaceuticals) modified the product by adding a blue dye that fizzes when it comes into contact with liquids. However, the dye is not present in flunitrazepam from illicit sources (ACMD, 2007). In France, other manufacturing restrictions have been placed on the product. The effects of most drugs with anxiolytic, sedative or hypnotic properties may be significantly increased when

they are taken in combination with alcohol (AFSSAPS and CEIP, 2005).

Gamma-hydroxybutyrate (GHB) is a central nervous system depressant that has been licensed as a prescription drug in parts of Europe and in the United States as an anaesthetic agent and is used to treat alcohol withdrawal. In 2005, the European Medicines Agency (EMA) authorised its use as a medicinal product to treat adults who have narcolepsy with cataplexy. In March 2001, GHB was added to Schedule IV of the 1971 UN Convention on Psychotropic Substances, thereby binding all EU Member States to control it under their legislation addressing psychotropic substances (EMCDDA, ELDD). GHB produces sedation and anaesthesia and has a dose-response curve that, while very variable between individuals, is generally steep, such that a small increase in dose can cause loss of physical control and consciousness. An Australian study highlights this risk, reporting that over 50 % of individuals who had used GHB voluntarily for recreational purposes had experienced unconsciousness at least once following use (Degenhardt et al., 2002).

GHB is easily manufactured from its precursors gamma-butyrolactone (GBL) and 1,4-butanediol (1,4-BD), which are solvents widely used in industry and commercially available. These precursor chemicals are rapidly converted to GHB in vivo when ingested. In most countries the precursors are not controlled under current drugs or medicines legislation, although three EU Member States (Sweden, Italy and Latvia) have chosen to control them under the same, or similar, legislation as that affecting GHB. In

(4) Memory loss of events leading up to an assault.

the United Kingdom, measures for restricting these substances are currently being examined (EMCDDA, 2008).

Central nervous system stimulants and other drugs are associated with the same nightlife settings as those in which women are considered to be at risk of sexual assault — these drugs include ecstasy, amphetamine, cocaine and

ketamine. There have been substantial increases in the recreational use of these drugs across Europe, but prevalence tends to be highest among males and in recreational and metropolitan nightlife settings (EMCDDA, 2007). The effects of many recreational drugs can be disinhibiting and in secondary exhaustion phases of stimulant drug use drowsiness is exacerbated by alcohol.

Evidence of drug-facilitated sexual assault

Forensic evidence of DFSA is notoriously difficult to establish, and law enforcement records do not usually differentiate between sexual assaults facilitated by drugs or alcohol and sexual assault committed using other types of force.

Toxicological information available from forensic studies in the United Kingdom, France, the United States and Australia would suggest that only a very small proportion of the total number of sexual assaults that are reported involve the covert use of GHB and Rohypnol®. In 2000, a study by the United Kingdom Forensic Science Service analysed samples of blood and urine, and occasionally samples of vomit or hair, from 1 014 alleged victims of DFSA. GHB was identified in only two of the reported cases (Figure 2). And a study in Paris identified GHB in 8 % of 119 cases of alleged drug-facilitated assault ⁽⁵⁾ (AFSSAPS and CEIP, 2005). The narrow window of detection for GHB (6–8 hours in blood and 10–18 hours in urine) is a serious limitation in establishing forensic evidence of GHB use in the case that an alleged DFSA is not reported, and samples collected, immediately. An additional confounder in establishing forensic evidence is that GHB can occur naturally in body tissues and in beverages that involve the fermentation of some types of grapes. This limits even further the possibility of establishing robust evidence of covert, or even voluntary, use of GHB (Elliott, 2004). However, the true incidence of this type of sexual assault may be higher than identified because of non-reporting or delayed reporting by the victim, or as a result of police failure to collect samples for forensic drug analysis or to process the samples correctly (Hurley et al., 2006).

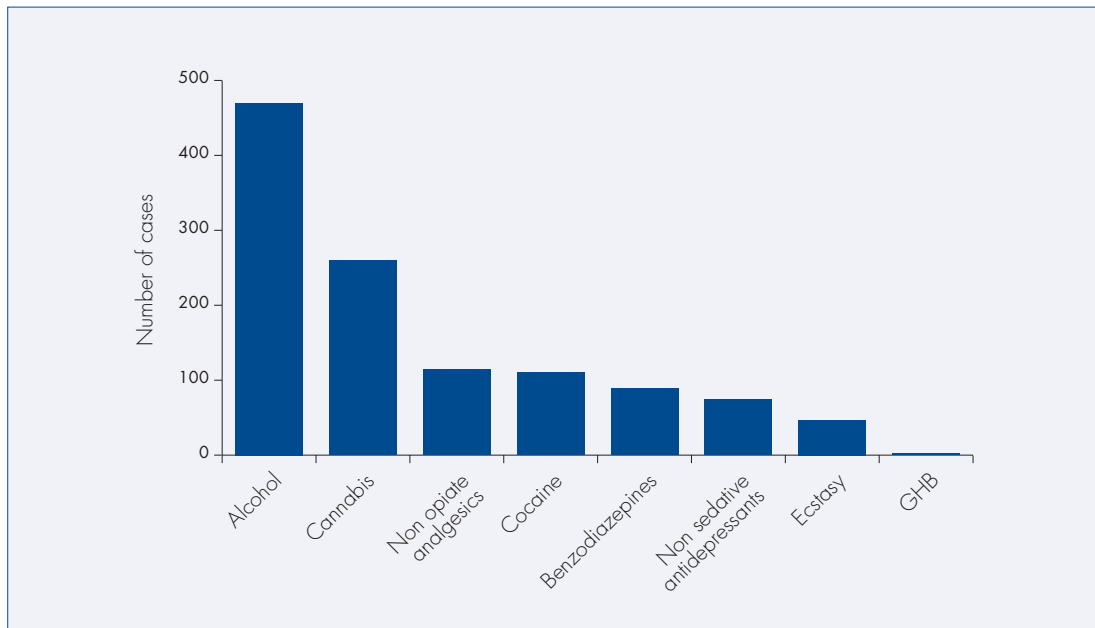
Despite media coverage describing Rohypnol® as a 'date rape' drug, there is no forensic evidence to support claims that it is commonly used to facilitate sexual assault. Other sedative prescription drugs are more commonly identified in cases of alleged sexual assault. Three different Parisian studies have identified the use of benzodiazepines as an underestimated problem in cases of sexual assault. For example, in one of these studies a variety of benzodiazepines were identified in 60 % of the 119 reported cases (Dorandeu et al., 2006). In the United Kingdom, a sedative drug was identified in 18 % of 1 014 cases analysed. Of course, chemical forensic analysis alone cannot provide evidence to distinguish deliberate 'drink spiking' from voluntary and prescribed use of benzodiazepines.

Alcohol was identified in nearly half of the cases of alleged drug-facilitated assault in studies in both France and the United Kingdom. Furthermore, in the United Kingdom study, excessive quantities of alcohol were identified in 18 % of cases. In these cases, blood alcohol levels at the time of the incident were estimated to be greater than 200 mg, which is four times the legal alcohol limit for driving a car in most EU Member States (50 mg). The sedative or disinhibiting effects of benzodiazepines, GHB and other drugs are often reinforced by concurrent use of alcohol. It has been suggested that the common signs of intoxication may lead law enforcement officers to assume that a victim of alleged sexual assault is simply drunk rather than drugged. However, self-reports from victims of DFSA often describe the effects of alleged 'drink spiking' as being very different from the

(5) This study examines cases that include drug-facilitated robbery as well as sexual assault.

Figure 2

Toxicological findings in the cases analysed of alleged DFSA in the United Kingdom over a 3-year period



NB: n = 1 014 and some samples contained more than one drug.

Source: Scott-Ham and Burton (2005).

effects they normally experience from similar amounts of voluntary alcohol consumption.

Research studies report that cases of alleged DFSA take place most commonly at the assailant's address, at the victim's own home address, or in clubs and pubs where first contact is made. Although the majority of victims classify their assailant as a friend or acquaintance, it should be noted that a significant number of acquaintances were not known to the victims prior to the evening of the assault. One study reported that 62.5 % of victims did not know the full name of the alleged assailant, which suggests that perpetrators of this type of sexual

assault are likely to possess levels of interpersonal, communication skills and appearance sufficient to inspire at least some level of confidence in the victim during a first meeting (Ruparel, 2004; Scott-Ham and Burton, 2005; UK Home Office, 2006).

Public attitude surveys show that stereotyping and victim blaming around rape are prevalent and entrenched. A telephone survey of 1 000 people in the United Kingdom carried out by Amnesty International reported that a significant proportion of the general public are of the opinion that victims are partly responsible for their rape by their mode of dress, use of

excessive alcohol and their behaviour (Amnesty International, 2005). Such attitudes can result in less blame or responsibility being attributed to the perpetrator. This is illustrated by a survey in Canada of 280 randomly selected university students, which found that higher levels of blame were assigned to the victim, and perpetrator responsibility was reduced, when a woman had voluntarily consumed drugs prior to a sexual assault (Girand and Senn, 2008). Legal and scientific literature in recent years has increasingly argued that preoccupation with the virtues or vulnerabilities of the victim deflects attention from perpetrators of sexual assault and deters women from reporting cases of sexual assault.

There is a need to raise awareness on 'date-rape drugs' across the whole of Europe, both in the general public and amongst law-enforcement agencies. Appropriate assistance must be made available to victims of a sexual assault linked to 'date-rape drugs', as well as support and encouragement to make use of this.

(Council of Europe, recommendation 17777, 2007)

Such preoccupations and attitudes are barriers to achieving conviction rates that would prevent this sort of crime (Harne, 2002; Kelly, 2002).

Responses

Efforts are intensifying in the EU to prevent sexual assault in general, and significant changes have been made to the legal situation. Over the past 20 years, the following changes have been recorded:

- Rape has been made a gender-neutral offence, or rape of men has been included in the legal definition, in 11 countries.
- The rape in marriage exemption has been removed in 11 countries.
- Eleven countries have extended the definition and included other forms of penetration.
- At least seven countries have removed or lowered the resistance requirement. Germany widened the definition to include the exploitation of vulnerability and, in May 2003, the United Kingdom introduced for the first time the notion of victims having the capacity to consent (Regan and Kelly, 2003).

Most European countries do not specifically mention drugs in their criminal codes on cases of sexual assault, although many countries already have well-established laws to control crimes related to the addition of a poison or another incapacitating substance to drinks for the purpose of robbery or homicide (Dorandeu, 2006). A recent review of laws concerning DFSA highlighted the fact that many English-speaking countries (United Kingdom, United States and Canada) seem to consider DFSA legally as an aggravating circumstance, or a separate crime, but the situation with regard to covert administration of alcohol is less clear. Table 1 shows the legal provisions made for DFSA in five EU Member States.

Table 1

Drug-facilitated sexual assaults: comparative table of the law

Country	Legal provisions	Sanctions for rape
Germany	<p>German Criminal Code:</p> <ul style="list-style-type: none"> • Chapter 13, section 177: sexual coercion or rape • Chapter 13, section 178: sexual coercion or rape and resulting death of the victim • Chapter 13, section 179: assault on a person incapable of resisting. <p><i>DFSA an aggravating circumstance in the latter case</i></p>	<ul style="list-style-type: none"> • Sexual coercion or rape: imprisonment from 6 months to 10 years • Sexual coercion or rape and resulting death of the victim: from 10 years to life • Assault on a person incapable of resisting: from 3 months to 5 years

Country	Legal provisions	Sanctions for rape
Spain	<p>Spanish Criminal Code:</p> <ul style="list-style-type: none"> Articles 181, 182, 183: sexual abuse without the victim's consent but with no violence or intimidation Articles 178, 179, 180: sexual assault with the addition of violence or intimidation <p><i>DFSA not an aggravating circumstance</i></p>	<ul style="list-style-type: none"> Sexual abuse without the victim's consent but with no violence or intimidation: imprisonment 1-2 years in the absence of penetration; 2-6 years in the case of penetration Sexual assault with the addition of violence or intimidation: 1-12 years depending on whether penetration occurred and according to aggravating circumstances
France	<p>French Criminal Code:</p> <ul style="list-style-type: none"> Article 222-3: rape Article 222-15: administration of harmful substances to another person causing mental or physical consequences Decree no. 2003-1126: increases penalty for the illegal import and export of some 'rape drugs' <p><i>DFSA not an aggravating circumstance as such</i></p>	<ul style="list-style-type: none"> Rape: imprisonment up to 15 years. Increased to 20 years if one of eight aggravating circumstances is recognised (mutilation or resulting infirmity). Imprisonment up to 30 years if victim dies Administration of harmful substances to another person causing mental or physical consequences: up to 15 years
Italy	<p>Italian Criminal Code:</p> <ul style="list-style-type: none"> Article 609b: victims in a position of physical or mental inferiority due to the defendant's direct action Article 613: victims reduced to a state where she is incapable of understanding or consenting Article 643: victims in a state of mental infirmity or deficiency (not necessarily a complete absence of mental faculties. Weakened discernment comes within the definition) Article 728: suppression of another's conscience (hypnosis, administration of narcotics) <p><i>DFSA an aggravating circumstance</i></p>	
United Kingdom	<p>Sexual Offences Act 1956:</p> <ul style="list-style-type: none"> Section 1: sexual intercourse between a man and a person who does not consent to it at the time Section 4: administering drugs to obtain and facilitate intercourse. Administration of DFSA drugs either an aggravating circumstance of a separate offence. Misuse of Drugs Act 1971 	

In 2007, two new major responses to concerns about this type of sexual assault emerged that challenge stereotypical attitudes to this sort of crime and make recommendations that constitute a positive development for women.

In January 2007, the Parliamentary Assembly of the Council of Europe recommended to Member States that they address the problem with a variety of measures, stating that 'appropriate assistance must be made available to victims' and that they should be supported and encouraged to make use of it. The measures recommended by the Parliamentary Assembly included a revision of sexual assault legislation; development of information campaigns; improved support for victims; better and more standardised methods for forensic analysis; and pressure on pharmaceutical companies to alter products that might be used for sexual assault. The Parliamentary Assembly also recommended that drugs used to facilitate sexual assault be placed on lists of controlled drugs (Council of Europe, 2007). Whilst these recommendations are not legally binding, they provide the moral authority to encourage Member States to make the changes necessary in order to develop measures and respond to the problem. The second major response was the report on DFSA to the United Kingdom government in April 2007 by the ACMD, which adopted a definition that makes no distinction between forced, covert or self-administration of drugs or alcohol on the grounds that all of these scenarios can remove the capacity to consent. The report suggests that the law might be strengthened on advice from appropriate law officers in respect of this definition.

Other recommendations made by the ACMD included a specific recommendation that the legislation for the GHB precursor chemicals GBL and (1,4-BD) be re-examined; measures should be taken by police forces to ensure that appropriate samples of blood and urine are obtained in a timely manner from potential victims using specially designed kits; the Department of Health should consider ways to improve the management of potential victims by hospital accident and emergency departments; and further efforts should be made through school and higher education establishments to alert young people to ways of minimising the risk of DFSA. The ACMD also recommended that further research in the area should be promoted and convictions for assaults that have been facilitated by drug or alcohol use should be recorded (ACMD, 2007). Government measures are now being adopted in the United Kingdom to address the problem and increase conviction rates (Kelly et al., 2005; Hansard, 2008).

In 2002, following the results of Parisian studies, the French Ministry of Health circulated recommendations to hospital emergency departments concerning DFSAs, stressing the importance of early, high-quality detection (Dorandeu, 2006). However, the most visible and widespread responses to concerns about DFSA in Europe to date have taken the form of information campaigns advising young people not to leave drinks unattended and not to accept drinks from unknown persons. Commercial kits claiming to detect the presence of drugs in drinks that may have been 'spiked' are being marketed for use in pubs and clubs, but recent studies investigating the efficacy of such kits have concluded that their use may create a false sense of security

The dangers of alcohol on sexual risk are widely underestimated. Many women and increasing numbers of men are raped whilst intoxicated (...) Strangely there is no education on this risk in pubs or other licensed premises even though they routinely display warning posters to women about the need to use licensed taxis or to travel home in groups to avoid the risks of rape.

(David Nutt, in his Editorial to *Journal of Psychopharmacology*, 2006)

(in the case of false-negative results) or undue concern (in the case of false-positive results) (Meyers and Almirall, 2004; Beynon et al., 2006; ACMD, 2007).

In the context of wider public health concerns about the burgeoning binge drinking culture and the diverse health risks that it brings, policy-makers and service providers across the EU are working on strategies to reduce levels of hazardous alcohol use among both sexes in the night-time settings where sexual assaults are most likely to take place (Payne-James and Rogers, 2002; Nutt, 2006).

Conclusions for change in Europe

Until now, public discourse about 'date rape' and 'drink spiking' has paid disproportionate attention to scenarios in which controlled drugs such as GHB and Rohypnol® have been used covertly to incapacitate a potential victim. Recent evidence from forensic studies indicates that alcohol and a range of benzodiazepines are much more commonly implicated in cases of DFSA when victims are too intoxicated to give consent. The adoption of a definition that makes no distinction between forced, covert or self-administration, or between the use of controlled drugs and other substances (including alcohol), provides a new conceptual framework in which to monitor the situation and develop appropriate responses.

It has been argued that information campaigns that appeal to women to modify their behaviour imply an abdication of male responsibility for their part in sexual assaults and, consequently, serve to perpetuate sexual violence. The new recommendations and developments described in this paper provide an operational framework in which to target information campaigns more appropriately at males as well as females. Campaigns that warn about the risk of becoming a victim — or a perpetrator — of sexual assault by excessive use of alcohol or drugs are only one element of a more comprehensive approach to the problem of sexual assault. Monitoring and reducing the incidence of drug- and alcohol-facilitated sexual assaults should be accompanied by changes in the law, better methods of forensic analysis and better training and support for criminal justice personnel and hospital emergency staff. Developments in these sectors are important signs of change in gender and power dynamics. Better monitoring of DFSA is an essential first step in addressing the problem. However, the fact that DFSAs are most easily perpetrated against women whose drug and alcohol use and mental health problems make them particularly vulnerable should not be overlooked. Specialised services and other interventions are urgently needed for these women.

References

ACMD (2007), *Report on drug facilitated sexual assault (DFSA)*, UK Advisory Council on the Misuse of Drugs (<http://drugs.homeoffice.gov.uk/publication-search/acmd/drug-facilitated-sexual-assault/ACMDDFSA.pdf?view=Binary>)

AFSSAPS and CEIP de Paris (2005), *Soumission chimique, résultats de l'enquête nationale 2003–2005*, Agence française de sécurité sanitaire des produits de santé, Saint-Denis.

Amnesty International UK (2005), *Sexual assault research summary report*, London.

Beynon, C., Sumnall, H. and McVeigh, J. (2006), 'The ability of two commercially available quick test kits to detect drug facilitated sexual assault drugs in beverages', *Addiction* 101, pp. 1413–20.

Council of Europe (2006), Doc. 11038: *Sexual assaults linked to 'date-rape drugs'*, Committee on Equal Opportunities for Women and Men, Council of Europe, Strasbourg (<http://assembly.coe.int/Main.asp?link=/Documents/WorkingDocs/Doc06/EDOC11038.htm>, accessed January 2008).

Council of Europe (2007), *Recommendation 1777, Sexual assaults linked to 'date-rape drugs'*, Committee on Equal Opportunities for Women and Men, Council of Europe, Strasbourg.

Degenhardt, L., Darke, S. and Dillon, P. (2002), 'GHB use among Australians: characteristics, use patterns and associated harm', *Drug and Alcohol Dependence* 67, pp. 89–94.

Dorandeu, A., Pagès, C., Sordino, M., et al. (2006), 'A case in south-eastern France: a review of drug facilitated sexual assault in European and English-speaking countries', *Journal of Clinical Forensic Medicine* 13, pp. 253–61.

Elliott, S. (2004), 'Further evidence for the presence of GHB in post-mortem biological fluid: implications for the interpretation of findings', *Journal of Analytical Toxicology* 28, pp. 20–6.

Elliott, S. and Burgess, V. (2005), 'The presence of gamma-hydroxybutyric acid (GHB) and gamma-butyrolactone (GBL) in alcoholic and non-alcoholic beverages', *Forensic Science International* 151, pp. 289–92.

EMCDDA (2007), *Annual report 2007: the state of the drugs problem in Europe*, European Monitoring Centre for Drugs and Drug Addiction, Lisbon.

EMCDDA (2008), *GHB and its precursor GBL: an emerging trend case study*, European Monitoring Centre for Drugs and Drug Addiction, Lisbon.

EU Commission (2006), *Communication on Reducing alcohol related harm in Europe* IP/06/1455.

Girard, A. and Senn, C. (2008), 'The role of the new "date rape drugs" in attributions about date rape', *Journal of Interpersonal Violence* 23, pp. 13–20.

Hansard House of Commons (2008), Written answers from Solicitor General, Thursday 7 February, Column 1377
(<http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm080207/text/80207w0019.htm>).

Harne, L. (2002), Editorial on 'The problem of rape and supporting victims', *Journal of Family Planning and Reproductive Health Care* 28, pp. 120–2.

Horvath, M. and Brown, J. (2005), 'Drug assisted rape and sexual assault: definitional, conceptual and methodological developments', *Journal of Investigative Psychology and Offender Profiling* 2, pp. 203–10.

Hurley, M., Parker H. and Wells, D. (2006), 'The epidemiology of drug facilitated sexual assault', *Journal of Clinical Forensic Medicine* 13, pp. 181–5.

Kelly, L. (2002), *A research review on the reporting, investigation and prosecution of rape cases*. London: Her Majesty's Crown Prosecution Service Inspectorate.

Kelly, L., Lovett, J. and Regan, L. (2005), *A gap or a chasm? Attrition in reported rape cases*. Home Office Research Study 293. Development and Statistics Directorate, February 2005.

McGregor, M., Ericksen, J., Ronald, L. et al. (2004), 'Rising incidence of hospital-reported drug-facilitated sexual assault in a large urban community in Canada: retrospective population-based study', *Canadian Journal of Public Health* 95, pp. 441–5.

Metropolitan Police, *Sexual offences index*, London, 2001–2003.

Meyers, J. and Almirall, J. (2004), 'A study of the effectiveness of commercially available drink test coasters for the detection of "date rape" drugs in beverages', *Journal of Analytical Toxicology* 28, pp. 685–8.

Myhill, A. and Allen, J. (2002), *Rape and sexual assault on women: the extent and nature of the problem*, Home Office Research Study No. 237, London.

Nutt, D. (2006), 'Editorial', *Journal of Psychopharmacology* 20 (3).

Payne-James, J. and Rogers, D. (2002), 'Drug-facilitated sexual assault, "ladettes" and alcohol', *Journal of the Royal Society of Medicine* 95, pp. 326–7.

Puri, B. (2007), Editorial on 'Drug-facilitated sexual assaults', *International Journal of Clinical Practice* 61, pp. 184–5.

Regan, L. and Kelly, L. (2003), *Rape: still a forgotten issue. Briefing document*, Rape Crisis Network, Europe.

Ruparel, C. (2004), *The nature of rape of females in the Metropolitan Police District*, Home Office Findings 247.

Scott-Ham, M. and Burton, F. (2005), 'Toxicological findings in cases of alleged drug-facilitated sexual assault in the United Kingdom over a 3-year period', *Journal of Clinical Forensic Medicine* 12, pp. 175–86.

Sturman, P. (2000), *Drug Assisted Sexual Assault*. Study for UK Home Office.

UK Home Office (2006), *Operation Matisse: investigating drug facilitated sexual assault*, Police Standards Unit.

Walby, S. and Allen, P. (2004), *Inter-personal violence: findings from 2001 British Crime Survey*, Home Office Research Study No. 276, Home Office, London.

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Author: Deborah Olszewski

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