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# Spanish Journal of Legal Medicine

## Revista Española de Medicina Legal

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### REVIEW

## Prevention of drug-facilitated sexual assault<sup>☆,☆☆</sup>



Maria Neus Panyella-Carbó<sup>a,b,\*</sup>, Carles Martin-Fumadó<sup>c,d,e</sup>, Esperanza L. Gómez-Durán<sup>e,f</sup>

<sup>a</sup> *Gabinet Jurídic de la Generalitat de Catalunya, Departament de la Presidència, Generalitat de Catalunya, Barcelona, Spain*

<sup>b</sup> *Facultad de Derecho, Universitat Internacional de Catalunya, Barcelona, Spain*

<sup>c</sup> *Servicio de Responsabilidad Profesional, Área de Praxis, Colegio de Médicos de Barcelona, Consejo de Colegios de Médicos de Catalunya, Barcelona, Spain*

<sup>d</sup> *Cátedra de Responsabilidad Profesional Médica y Medicina Legal, Universitat Autònoma de Barcelona (UAB), Barcelona, Spain*

<sup>e</sup> *Departamento de Medicina, Universitat Internacional de Catalunya, Barcelona, Spain*

<sup>f</sup> *Clínica Galatea, Fundación Galatea, Barcelona, Spain*

Received 12 March 2020; accepted 21 April 2020

#### KEYWORDS

Chemical submission;  
Chemical  
vulnerability;  
Prevention;  
Education;  
Sexual assault;  
Drug facilitated  
sexual assault

**Abstract** The aim of this paper is to perform a literature review on the prevention of drug-facilitated sexual assault. A comprehensive literature search was performed in PubMed, including articles containing relevant information on this type of crime and prevention measures. The results obtained show that these crimes are committed mainly in nightlife situations and during weekends; the authors agree that the enabling risk factor is alcohol consumption. On the other hand, there is limited literature on prevention measures, methods and strategies, which are also ineffective in view of the increase in these kind of crimes in recent years. The design of cross-sectional and multidisciplinary strategy campaigns to prevent sexual assaults by chemical submission is considered essential and urgent, and it is suggested that these should be forensic-led.

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#### PALABRAS CLAVE

Sumisión química;  
Vulnerabilidad  
química;

#### Prevención de los delitos sexuales mediante sumisión química

**Resumen** El objetivo de este trabajo es realizar una revisión bibliográfica de la literatura sobre la prevención de los delitos sexuales mediante sumisión química. Se llevó a cabo una búsqueda en PubMed y se incluyeron aquellos artículos que contenían información relevante sobre esta tipología delictiva y las medidas de prevención. De los resultados obtenidos se desprende que

DOI of original article: <https://doi.org/10.1016/j.reml.2020.04.001>

<sup>☆</sup> Please cite this article as: Panyella-Carbó MN, Martin-Fumadó C, Gómez-Durán EL. Prevención de los delitos sexuales mediante sumisión química. *Rev Esp Med Legal*. 2021;47:24–34.

<sup>☆☆</sup> This manuscript is part of the doctoral thesis by Maria Neus Panyella Carbó.

\* Corresponding author.

E-mail address: [mnpnyella@uic.es](mailto:mnpnyella@uic.es) (M.N. Panyella-Carbó).

Prevención;  
Educación;  
Delitos sexuales;  
*Drug Facilitated  
Sexual Assault (DFSA)*

estos delitos se cometen principalmente en situaciones de ocio nocturno y durante los fines de semana, coincidiendo los autores en que el factor de riesgo habilitante es el consumo de alcohol. Por otro lado, existe escasa bibliografía sobre medidas, métodos y estrategias de prevención, siendo, además, ineficaces en atención al incremento de su frecuencia en los últimos años. Se estima indispensable y apremiante el diseño de campañas de prevención de los delitos sexuales mediante sumisión química de carácter transversal y estrategia multidisciplinar, recomendándose un liderazgo por parte del ámbito forense.

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## Introduction

The concept of drug-facilitation (DF) may be defined as the administration of psychoactive substances to an individual, without their consent and for criminal purposes<sup>1</sup>, to manipulate their will or modify their behaviour. Under these circumstances the effects of the substance administered may prevent the victim from being in a condition in which they can freely give their consent according to the law, or resist their attacker<sup>2</sup>.

Although it is not a new phenomenon, cases have been increasing since the 1990s<sup>3</sup> and the use of drugs has become more notorious due to their association with sexual assault, robbery and other criminal practices, as they are sometimes used to manipulate individuals' will<sup>4</sup>.

Among sexual crimes the specific term drug facilitated sexual assault (DFSA), refers to sexual relationships without consent which take place while the victim is incapacitated or unconscious, under the effect of psychoactive substances such as alcohol, illegal drugs or psychoactive drugs<sup>5</sup>. The fundamental characteristic which distinguishes these sexual crimes committed using psychoactive substances and defined in the Spanish Penal Code as sexual abuse (article 181.2 CP), from other sexual assaults or abuses is that the victim suffers a loss of power and control due to the effect of the psychoactive substances they have consumed, a factor that their assailant then takes advantage of.

Two types of DFSA are usually distinguished in the scientific literature<sup>6–9</sup> within the context of the sexual crimes in which substances are involved: a) Premeditated or proactive DFSA, which takes place when the offender gives the victim an incapacitating or inhibition-lowering substance with the aim of dominating them sexually (administering them a substance without their knowledge or consent), which is the core definition of DF, and b) opportunistic DFSA, which occurs when the aggressor takes advantage of the victim, having found them in a state of unconsciousness due to a substance which they had consumed voluntarily. This second form is also known as chemical vulnerability. Some authors also describe a third mixed type of DF<sup>10</sup>: when the victim is consuming a substance that may alter their decision-making capacity (such as alcohol), into which the aggressor surreptitiously adds a product which accelerates or ensures the desired effect of submission.

Other associated terms which describe different situations include date-rape, or rape during a date (opportunistic DFSA), and drug-rape, which corresponds to situations in which the offender drugs the victim with the intention of raping them (premeditated DFSA)<sup>11</sup>.

Whatever the circumstances, the shared connection between all of these forms is that the said consumption renders the victim unconscious or incapable or resistance, giving the criminal a greater opportunity to attack them sexually, given that it is unnecessary to use force as the victim is intoxicated and unable to resist their attacker<sup>12</sup>. Due to the increase in crimes of this type, in recent years research into them has increased<sup>9</sup> within the medical-forensic field<sup>13–15</sup>, with epidemiological studies of the incidence and prevalence of aggressions of this type<sup>6,7,16,17</sup> as well as the relevant medical and legal aspects<sup>18–21</sup>. Nevertheless, no specific reviews on the prevention of this phenomenon are known. When we talk of prevention (from the Latin *praeventio*) we refer to the preparation and arrangements made beforehand in order to prevent a risk<sup>22</sup>. Respecting sexual delinquency, this would involve actions with the aim of reducing or decreasing risk factors, developing public awareness campaigns to offer information about the risks of DF, with the aim of combating sexual abuse in nocturnal and leisure environments<sup>23</sup> while strengthening protective factors. Currently, and due above all to the events in the 2016 San Fermín Fiestas, educational campaigns have started to proliferate that inform about the risks of DF, with the aim of combating sexual crimes at night or during leisure. Public bodies (at a state level as well as above all local ones) have run preventive and awareness-raising campaigns, concentrating on the responsibility of the different agents who intervene and are present at night and in spaces where the phenomenon occurs the most often. These campaigns emphasise collective responsibility in eradicating the said forms of violence. Several different types of campaign are used, such as the one by the Youth Department of Malaga Town Hall, in 2018, which raised awareness against DF during Malaga Fair, with the slogan “Does this look like fun to you? It looks like rape to us”; or the one by the Valencian Youth Institute for Christmas 2016, which presented the campaign “Live life and enjoy ourselves”; and the campaign by Pamplona Town Hall, which has presented campaigns during recent San Fermín Fiestas to prevent sexual attacks, and more specifically those committed using DF:

**Table 1** Bibliographical search strategies.

Search	Key words and Boolean operators
1	Chemical Submission AND prevención
2	Drug Facilitated Sexual Assault AND Prevention
3	Drug Facilitated Sexual Assault AND Education
4	Chemical Submission AND Prevention
5	Chemical Submission AND Education
6	Drugs Rape AND Prevention
7	Drugs Rape AND Education

**Table 2** Inclusion and exclusion criteria for the reviewed papers.

Inclusion criteria	Exclusion criteria
Works published in Spanish and English	Works published in a language other than Spanish and English
Works which refer to sexual offenses	Works which do not refer to sexual offenses
Works which refer to DFSA	Works on toxicological aspects
Works which refer to prevention	Works on medical-forensic aspects
	Works that do not refer to DFSA
	Works that do not refer to prevention

“For celebrations that are free of sexual attacks” (2014) and “Pamplona free of sexual attacks” (2019). All of these campaigns address a small part of night-time leisure, consisting of the street parties in every town. These take place on specific dates when normal private night-time leisure at the weekend is forgotten<sup>24,25</sup>. Although these campaigns are aimed at the population as a whole, with the core message that “No means no”, they have raised the profile of the DF phenomenon and increased social awareness of it. As a result of this there has been an increase in the number of reports of sexual crimes committed using DF. In spite of this, the efficacy of these preventive campaigns may be called into question.

Given all of the above considerations, we understand that it is of key importance to dispose of a bibliographical review of the measures and preventive strategies to stop crimes of this type and sexual victimisation.

## Methodology

A bibliographical search was undertaken in the PubMed database in November 2019, for papers in Spanish or English, without a time restriction and using the following key words: *sumisión química*, *prevención*, drug facilitated sexual assault, prevention, education, chemical submission and drugs rape. The search strategy using combined Boolean operators is shown in [Table 1](#). By applying this search strategy to the PubMed database, papers were selected after reviewing their title, abstract and complete text, taking into account the exclusion and inclusion criteria shown in [Table 2](#). [Fig. 1](#) shows the sample screening strategy.

## Results

210 works were obtained at first, which after sample screening gave a final total sample of 12 papers on the prevention of DF ([Fig. 1](#)). Although no work solely on the prevention of DF-based sexual offenses was found, all of the works that mentioned or included a section on establishing methods or means of prevention of such crimes were included, as were those which covered the determination of risk factors.

[Tables 3–5](#) show the works included in the sample, classified separately according to the type of paper in question, based on the different scientific evidence of each of them.

## Discussion

The majority of the papers reviewed indicate that most of these offenses occur during night-time leisure and especially at the weekend (from Friday to Sunday)<sup>2</sup>. Moreover, all of the authors agree that alcohol consumption is one of the most important risk factors for the commission of offenses of this type. This may either be consumed alone, as it is in the majority of cases of chemical vulnerability, or together with other drugs or medicines, most commonly in cases of DF<sup>2</sup>. Alcohol consumption also create a positive perception of the aggressor’s (nearly always a man) behaviour<sup>27</sup>. The latter behaves in a way that shows they see the victim (nearly always a woman) as a reactive individual rather than a sexual object, and that any sexual act may be socially acceptable.

Studies of the correlation between voluntary excess alcohol consumption, known as heavy episodic drinking, and sexual victimisation, have centred on female university students and situations where they are at risk of sexual aggression. From this point-of-view, sexual aggression is considered to be one of the negative consequences that can be attributed to heavy episodic drinking; the contribution of alcohol and other drugs to sexual aggression has increased over the part 15–20 years<sup>11</sup>.

Other authors state that the presence or absence of recreational alcohol and/or drug usage is not a useful distinguishing factor in rape cases, as rather than this it is important to consider who consumes alcohol and/or drugs. They conclude that the state of the victim is potentially more critical than the state of the criminal<sup>12</sup>.

## Prevention

Given that the main risk factor for DF is alcohol consumption, either alone or together with other psychoactive substances, the majority of preventive measures aim to reduce the said consumption. The fact that alcohol is cheap, affordable and easy to obtain means that consumption of the same must be managed specifically, increasing young people’s awareness and education<sup>11</sup>.

To reduce the incidence of sexual violence using DF it is essential to evaluate the use and consumption of drugs and/or alcohol, as well as the physical and sexual abuse which offenders inflict on their victim. Effort is required to change attitudes which promote crimes of this type, covering questions about safe sex, self-control, social group support and reducing drug and alcohol consumption<sup>29</sup>.

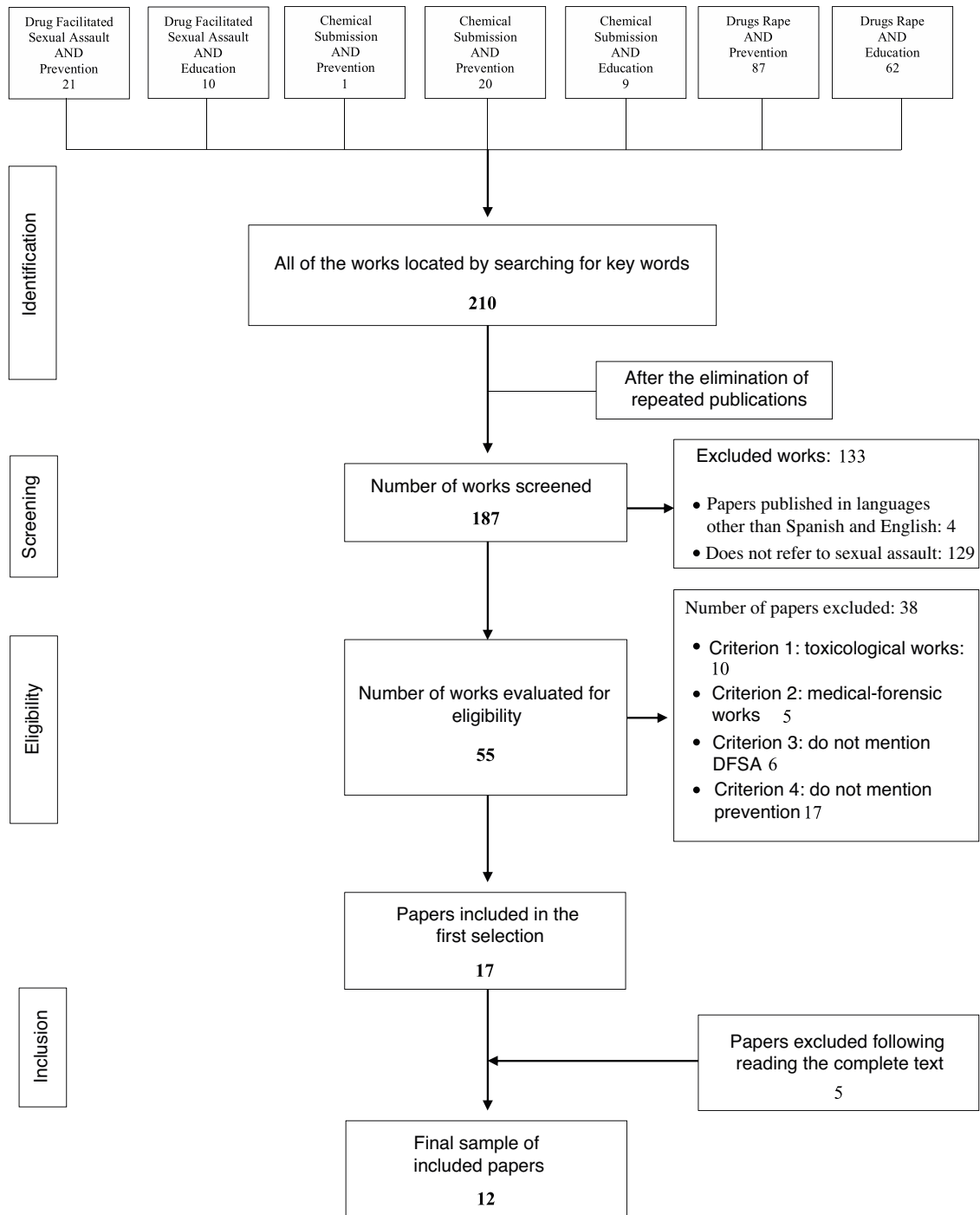


Figure 1 Screening strategy for the sample of reviewed papers.

Drug facilitated sexual offenses have become an increasingly common form of sexual violence<sup>30</sup>, so that several studies show that all efforts should have the aim of education and prevention, combating acceptance of DF-based rape and raising awareness of DFSA, underlining the need to control the consumption of alcoholic drinks<sup>32</sup>.

On the other hand, some authors consider that a previous history of sexual victimisation influences how victims behave in potentially threatening situations, so that traditional preventive programs are practically ineffective<sup>32</sup>. Studies show

that in these cases an educational program is necessary on how to respond effectively to personal risks in case of possible sexual assault using DF, thereby preventing victimisation in the future<sup>32</sup>. This finding indicates that experience is not a protective factor, and it underlines the need for interventions in individuals who have already been victims of DFSA to prevent future occurrences.

There is consensus in the scientific literature that to implement a preventive program it is necessary to demonstrate the existence of a link between substance use and

**Table 3** Reviewed editorials.

Author/journal/year	Country	Title	Highlights
Butler and Welch <sup>11</sup> /CMAJ/2009	Canada	Drug-facilitated sexual assault	Alcohol and drugs are the most common elements in sexual offenses Toxicological and DNA samples must be taken to determine the evidence for DF Prevention must target education to reduce sexual victimisation
Nicoletti <sup>26</sup> /J Pediatr Adolesc Gynecol/2009	United States	Teens and drug facilitated sexual assault	Sexual offenses annulling the victim's will have increased in recent times Alcohol is the most widely used substance for these offenses Preventive strategies should aim to raise awareness of the association between the use of alcohol and drugs and the risky decisions taken by victims
Payne-James and Rogers <sup>27</sup> /J R Soc Med/2002	United Kingdom	Drug-facilitated sexual assault, 'ladettes' and alcohol	Great attention must be paid to drug-facilitated sexual offenses The substances used by attackers are easy to obtain and easy to administer, rendering the victim unconscious and causing anterograde amnesia. Prevention strategies are based on not leaving one's drink unattended. Offer guidelines to prevent sexual victimisation
Weir <sup>28</sup> /CMAJ/2001	Canada	Drug-facilitated date rape	The drugs used in sexual offenses cause sedation and amnesia, so that victims are unable to resist. The most common substances are alcohol, marijuana, cocaine, benzodiazepines, heroin and amphetamines As prevention they recommend consuming alcoholic drinks slowly, controlling drinks and not leaving them unattended

sexual victimisation. Such programs should also teach victims how to use a range of cognitive, behavioural and social strategies to control the amount of alcohol and/or drugs they consume, and to recognise when they or their companions suffer cognitive or physical problems due to this consumption. Likewise, they consider that it is important to promote the message that alcohol consumption should be restricted and that drugs should not be consumed, as these are important strategies for self-protection against sexual aggression<sup>33</sup>.

Although it is obvious that the victim may reduce their probabilities of suffering victimisation by changing the behaviours that increase their vulnerability, this does not imply responsibility in case of suffering aggression.

In connection with prevention strategies aimed at victims, it has to be said that some studies in United States' university campuses have verified the correlation between voluntary excessive alcohol consumption and sexual victimisation. From this viewpoint, sexual aggression is considered to be one of the negative consequences of heavy episodic drinking. This is why the majority of papers reviewed were based on studies in United States' university campuses with preventive and intervention programs to reduce the high consumption of alcohol by university students and thereby reduce the rates of sexual victimisation<sup>27</sup>.

On the other hand, it is necessary to take into account the fact that preventive strategies in the majority of the

papers reviewed are aimed at women, as they form the majority of the potential victims of these offenses and have to be specifically educated about the association between risky drug-induced decisions, reduced inhibition and lowered capacity for resistance<sup>26</sup>. It is necessary to prepare women to recognise the risk of sexual aggression and to respond to it effectively<sup>32</sup>. Given this need, some authors propose changing preventive methods and ceasing to centre all responsibility on the need for women to protect themselves, by placing more emphasis on changing male attitudes which support the view that intoxicated women are an opportunity for sexual relations<sup>12</sup>, as well as educating them on the fact that an intoxicated woman may be unable to consent to sexual contact, and that the use of alcohol or drugs (or both) to incapacitate a woman for sexual purposes constitutes sexual assault<sup>35</sup>.

Only the papers by Schwartz et al.<sup>30</sup> and Payne-James and Rogers<sup>27</sup> specify certain actions to prevent DF. These preventive strategies generally concentrate on ways of stopped the surreptitious addition of DFSA to alcoholic drinks. They therefore advise young people:

- Not to leave alcoholic drinks unsupervised.
- To restrict the consumption of alcoholic drinks to a maximum of one or two per hour.
- To drink with moderation and not to swallow alcoholic drinks.

**Table 4** Reviewed review papers.

Author/journal /year	Country	Title	Objectives	Results and conclusions
Elliott <sup>29</sup> /Nurs Womens Health/2008	United States	Drug-facilitated sexual assault: Educating women about the risks	To examine the factors which facilitate the commission of these offences and establish prevention strategies	Alcohol consumption is associated with sexual violence In the majority of cases (80%) the victims had voluntarily consumed large amounts of alcohol before being sexually assaulted Medicines and drugs were consumed voluntarily by the victims in 75% of cases, and only 22 cases showed drugs unknown to the victims, having been administered surreptitiously <i>Conclusion:</i> Alcohol consumption and sexual violence are strongly associated To reduce violence in dates, it is necessary to evaluate the use and consumption of drugs and alcohol, as well as physical and sexual abuse
Hall and Moore <sup>8</sup> /J Forensic Leg Med/2008	United Kingdom	Drug facilitated sexual assault—A review	To identify the factors to understand accusations of drug-facilitated sexual aggression for those who work in police and forensic fields, and this may create greater understanding of the complexities of these offences	The effects of alcohol on sexual behaviour are identified High levels of alcohol occur in cases of sexual victimisation <i>Conclusion:</i> Practical specifications in cases of sexual offences must be considered in the light of evidence of excessive alcohol consumption Recommendations must be made to raise the awareness of society to any potential threat, together with strategies to reduce the possibilities of becoming a sexual victim
Schwartz et al. <sup>30</sup> /South Med J/2000	United States (Alabama)	Drug-facilitated sexual assault ('date rape')	To review certain drugs known as "rape drugs" to offer information on tests to detect them in laboratories and offer guidelines to prevent drug-facilitated sexual assault	Together with alcohol, the following are considered to be drugs used in rape Rohypnol®, beta-hydroxybutyric acid and gamma-butyrolactone These substances affect the nervous system and cause rapid loss of inhibition in the victim, together with anterograde amnesia These substances can be detected by urine analysis within the first 96 h. Prevention strategies include restricting alcohol consumption, not accepting drinks from people you have just met and not losing sight of your drink, among others <i>Conclusion:</i> DFSAs have increased in recent years Alcohol is the substance that is most used to annul the victim's willpower and sexually assault them



**Table 5** Original papers reviewed.

Author/journal/year	Country	Title	Method	Sample	Objectives	Results and conclusions
Carey et al. <sup>31</sup> / J Stud Alcohol Drugs/2015	United States	Precollege predictors of incapacitated rape among female students in their first year of college	Prospective study, responding to a referential survey and then 3 follow-up surveys in the following year	483 in the first year of university studies	To identify the risk factors associated with attempted or perpetrated rapes while the victim was incapacitated	Alcohol is the main factor that incapacitates the victim prior to sexual assault. The women who had been victims of rape while incapacitated due to alcohol consumption before going to university had more behaviours that led to the risk of becoming victims again <i>Conclusion:</i> Prevention strategies must be developed and implemented for victims and to raise awareness that heavy episodic drinking increases the risk of becoming a rape victim
Crawford et al. <sup>32</sup> / J Am Coll Health/2008	United States	Drug-facilitated sexual assault: College women's risk perception and behavioural choices	A descriptive observational study, evaluating the risk of sexual violence in certain vignettes	400 female university students	To study the relationship between previous victimisation, risk perception and behaviour to respond to DFSA in a university party with alcohol	A risk situation is perceived when someone offers a drink, but this risk is not perceived when a drink that is being consumed is left unattended If someone is indisposed in a party this is not associated with "rape drugs" Those who had already been sexual victims had more forms of risk behaviour <i>Conclusion:</i> Preventive and informative programs about the risks of alcohol consumption as well as date rape are not effective

Table 5 (Continued)

Author/journal/year	Country	Title	Method	Sample	Objectives	Results and conclusions
Horvath and Brown <sup>12</sup> /Med Sci Law/2006	United Kingdom	The role of drugs and alcohol in rape	Comparison of police cases of rape where the victim was under the influence of alcohol or drugs compared to cases in which the victim was not	184 police cases of rape from 1999 to 2004:  93 police cases of rape where the victim was under the influence of alcohol or drugs  91 police cases of rape selected at random where the victim was not under the influence of the said substances and the aggressor had been accused of the said offence	Compare the police cases by analysing the following elements:  The place where the offence was committed The characteristics of the victim The characteristics of the aggressor Behaviours that occurred during the offence	There are differences between rapes that take place while the victim is intoxicated and those in which they are not  <i>Conclusion:</i>  Awareness must be raised about the risks of consuming too much alcohol, proposing strategies so that victims can get home safely or be in a safe place while they are intoxicated This study showed that the majority of complete sexual relations by female university students occur while they are incapacitated by the voluntary consumption of alcohol
Krebs et al. <sup>33</sup> /J Am Coll Health/2009	United States	College women's experiences with physically forced, alcohol or other drug-enabled, and drug-facilitated sexual assault before and since entering college	Data gathering study on sexual victimisation by a transversal survey	5446 female university students	To evaluate the relationship between alcohol and/or drug consumption in female university students and the risk of suffering a sexual assault, and comparing these situations before and during university studies	



Table 5 (Continued)

Author/journal/year	Country	Title	Method	Sample	Objectives	Results and conclusions
Testa and Hoffman <sup>34</sup> /J Stud Alcohol Drugs/2012	United States	Naturally occurring changes in women's drinking from high school to college, and implications for sexual victimization	A longitudinal study of the transition from high school to university using the replies to several questionnaires	437 women who were in the last year of high school and started their first year at university	To explore the hypothesis that alcohol consumption at university is higher than it is in high school	Universities should be encouraged to develop, implement and evaluate university campus preventive programs that include an educational component on the association between alcohol and/or drug consumption and sexual victimisation; teaching female university students forms of behaviour and preventive strategies. It is important to promote the message that not drinking or consuming drugs to excess helps to prevent sexual violence Alcohol consumption increases during the transition from high school to the first year at university, giving rise to situations of heavy episodic drinking Subsequently during the transition from the first year to the second year alcohol consumption does not increase Alcohol consumption is associated with situations in which a victim is incapacitated in rapes and other forms of sexual victimisation <i>Conclusion:</i> Universal prevention strategies must be found and applied in high school to reduce episodes of high alcohol consumption and thereby prevent sexual victimisation

- To pay attention to alcoholic drinks that are open or offered by strangers.
- To allow their date to drink first from drinks in a bar or club.
- Not to consume alcohol in a group and more specifically never to take part in games involving drinking.
- To ask the local police, as they are a good source of information, about the location of bars, clubs and areas where drug facilitated sexual assault is known to have occurred.
- When you find yourself in a bar you do not know, observe directly how the barman serves your drink.
- Only accept drinks served to you by the barman.
- If an open drink has a strange taste, aroma or appearance, do not drink it.
- When you return to your table after dancing or going to the bathroom or making a telephone call, order a new drink.
- If you feel dizzy or dazed in a bar, club or party, ask for help.
- If you go to a bar or party with friends, agree on a plan with them to check on each other visually and verbally before leaving separately.
- Keep an eye on your friends' behaviour; if one of them is intoxicated or drunk, they may be in danger.

Following the above description, it may be said that there is little literature on measures, methods and strategies to prevent DF. Moreover, it was found that the majority of preventive measures normally target women, to give them the tools they need for protection and so that they are able to take responsibility for their own body. These measures rarely address the potential aggressor, so that they have been accused of falling into the historical error of educating women in fear and freeing men from responsibility<sup>36</sup>. The lack of studies on the prevention of DF, the risk of normalising sexual violence and blaming the victim make it necessary to examine the patterns and tendencies involved in these offenses and create preventive campaigns that target not only the victims, a majority of whom are women, but also the potential aggressors and society as a whole. Sexual violence must not be socially normalised, and it must be identified as criminal behaviour that must be penalised by those within its context.

This is a social problem involving gender inequality in which women, the objects of sexual desire and victims of the situation, are sometimes blamed for having caused the situation. It would be useful to target the prevention of this form of victimisation as a public health problem in terms of the required intervention in the consumption, whether or not it is voluntary, of substances<sup>2</sup> and the victim's state of unconsciousness or lack of inhibitions, together with the social tolerance of promiscuity, encouraging "capable guardians" to act in defence when a victim seems to be vulnerable<sup>2</sup>.

Additionally, and in agreement with Martínez-Catena and Redondo,<sup>37</sup> given the diversity of individual and social factors, different means should be used to prevent these offenses, within the fields of primary as well as secondary prevention. Primary prevention refers to all of the general educational initiatives in the family and school on the sexual and social education of the young, while secondary prevention would be more specific and have the purpose of preventing young people from repeating and consolidating their first sexual offenses. This is why education plays a

highly important role in prevention; it is necessary to educate people so they report events of this type, with zero tolerance for any form of sexual violence<sup>24</sup>.

We propose emphasising the following elements in recommendations for the preparation and content of preventive protocols and campaigns:

- These protocols and campaigns should be general, *i.e.*, they should cover private night-time leisure and not only public holidays.
- They should not only target women, but rather society as a whole, men as well as women.
- They should not be restricted to universities, as they should also cover preventive workshops in secondary schools. Guidelines and workshops should also be offered to the personnel of discotheques and bars, so that they are able to detect possible situations involving sexual assault using DF.
- Protocols and campaigns should offer clear information about DF, its risk factors and consequences, as well as setting out prevention strategies and giving instructions on what to do in a possible case.
- These protocols should include prevention strategies to stop DFSA being added surreptitiously to alcoholic drinks, using the guidelines set out in the papers by Schwartz et al.<sup>30</sup> and Payne-James and Rogers<sup>27</sup>.
- They should be transversal and set out a multidisciplinary strategy for the participation of different professionals (in public health, education and the legal, criminological and psychological fields), led by forensic professionals due to their expertise in the DF phenomenon.

## Conflict of interests

The authors have no conflict of interests to declare.

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