

TECHNICAL DOCUMENT

AN APPROACH TO THE MENTAL HEALTH OF CHEMSEX USERS

A Training Resource for Mental Health Professionals

Oversight and coordination

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Welcome to the English edition of “An approach to the mental health of chemsex users. A training Resource for Mental Health Professionals,” originally published in Spain in 2020.

This resource provides mental health professionals with the tools and insights needed to better support individuals engaged in chemsex practices.

We hope that this work will significantly improve how mental health professionals address the needs of chemsex users, making a valuable contribution to their care and well-being.



This project was funded with collaboration from MSD Spain. MSD Spain in no way influenced the design, contents or development of this project

TECHNICAL DOCUMENT:

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A Training Resource for Mental Health Professionals

Project managed by:



With the approval of:



ISBN: 978-84-09-55925-1

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Recommended Citation

Curto J, Dolengevich H, Soriano R, Belza M.J. An Approach to the mental health of chemsex users. A training Resource for Mental Health Professionals. Madrid: MSD; 2020.

Created: November, 2020

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PRESENTATION

Over the last decade, various European cities have experienced a growing demand for psychiatric and psychological care from individuals experiencing problems related to chemsex use.

The origin of the term “chemsex” comes from British English. This term is professionally used to describe a specific phenomenon of recreational drug use in sexual contexts, closely associated with gay sexual culture. The term “chemsex” is derived from the combination of “chems” and “sex.”

While the types of practices and consumption patterns of chemsex can vary widely, the intensification or persistence of these practices over time can lead to problematic situations.

Chemsex has been associated with overdoses, addictions, and other mental health issues, and can have a significant impact on sexual health, as well as social and emotional relationships, among other aspects.

In the context of chemsex practices, engaging in unprotected sex is common, often with multiple sexual partners, increasing the risk of contracting sexually transmitted infections, including, HIV, hepatitis C and others.

Scientific evidence also suggests that chemsex is more prevalent among gay men with HIV, which is concerning, as some drugs may interact with antiretroviral treatment.

Psychiatry professionals play a crucial role in addressing mental health issues associated with chemsex practices.

Some users, facing medical and psychiatric complications (suicidal ideation, psychotic symptoms), require immediate psychiatric care for stabilization during crisis moments. At other times, there are outpatient care needs.

This document aims to provide a response to the need for specific materials that contribute to improving training for the evaluation and management of mental health problems in chemsex users.

This text also seeks to promote greater understanding of this phenomenon and to contribute to the development of technical knowledge and capacities related to the identification, evaluation and management of psychiatric pathologies related to chemsex, in the context of emergency services, brief hospitalization units, liaison psychiatry, mental health centers and drug services.

Furthermore, since chemsex can impact various aspects of health (sexual health, addictions, mental health, etc.), it is essential to understand the role of different services and stakeholders that intervene in care, and to establish coordination mechanisms to provide users with an integrated approach. The text also provides examples of best practices, keys to enhancing LGBTQ+ cultural competencies, clinical case studies, and references to further knowledge on the subject.

In line with other publications advocating for an integrated approach to these health issues, the challenge is to share expertise and develop appropriate treatment pathways for the benefit of this vulnerable group of people¹. We hope that this material will be an effective contribution to help them improve their health and quality of life.



1

1. INTRODUCTION

1.1. What do we mean by chemsex?

The term “chemsex” originates from the United Kingdom and combines the words “chems” and “sex,” referring to the use of drugs in a sexual context ². Since its inception, this term has been used to denote a specific type of recreational drug use linked to the gay sexual culture. As will be described later, it is a phenomenon that is more prevalent in urban environments, and there may be variations at the local level regarding the types of drugs consumed. In Spain, the substances most commonly used for chemsex include mephedrone and other synthetic cathinones, methamphetamine, GHB, poppers (inhaled nitrites), cocaine, ketamine, and pharmaceuticals such as sildenafil. Drug use in the context of chemsex may involve intravenous administration, known among users as “slam” ³. The psychopathology associated with this route of administration is noteworthy⁴.

In Spain, the term “chemsex” is currently well-established in professional and scientific circles to refer to this specific phenomenon. However, individuals engaging in chemsex practices use different slang expressions to describe them ⁵.

One of the most cited definitions of chemsex in Spain characterizes it as the “intentional use of drugs for sexual activities over a long period (lasting from several hours to several days)” among gay, bisexual, and other men who have sex with men (GBMSM). The key element is “time”, because longer durations may lead to increased exposure to various risks or harm ⁶.

In the European context, there is a consensus around a broader definition of the phenomenon that includes other profiles. In the position paper of the 2nd European ChemSex Forum, chemsex is defined as: “a particular type of sexualised substance practice among gay and bisexual men, other men who have sex with men (MSM), and trans and non-binary people who participate in gay “hook-up culture” ⁷. Similarly, in Spain the Manifesto of the ChemSex Support Commission of the community organization Stop Sida⁸ states: “people who practice chemsex are gay men, bisexuals, crossdressers, trans individuals, and non-binary people who are part of the LGBTQ+ community.”

There is a strong international consensus that “not all sexualized substance use is chemsex”⁷. The term chemsex is reserved to refer to drug use in sexual contexts linked to the LGBTQ+ sexual culture (particularly the gay sexual culture).

Certainly, there are other types of drug use in sexual contexts, such as those occurring in the context of sex work involving women and their clients or within swinger clubs, among others⁹⁻¹². However, these are different environments with distinct populations. Various factors, including the substances of choice, how they are accessed, the duration of the sexual encounter, the number of participants, the epidemiological situation of HIV and other STIs in these population groups, as well as the reasons for engaging in this sexualized drug use or its meaning, may differ¹³.

Regarding the number of participants in chemsex sessions, the practice can involve two individuals (with an occasional sexual partner or a stable partner), a threesome, or group sex. Some individuals also engage in chemsex alone, either by watching pornographic material or through online interactions with others, using tools such as webcams or engaging in online sex via video calls, for example¹⁴.

As will be seen later, the consumption patterns and personal and contextual circumstances of chemsex can vary greatly. Not all individuals who practice chemsex perceive negative consequences from it, and these practices are not inherently pathological. However, maintaining or increasing the intensity of these practices, or the presence of pre-existing mental health conditions, may increase the risks of associated health problems or serve as the basis for the development of various mental disorders, such as substance use disorders or induced mental disorders.



1.2. Where is chemsex practiced?

Regarding the locations where chemsex is practiced, it most commonly takes place in private homes^{14,15}. Chemsex also occurs in various businesses catering to the gay public, such as saunas, sex clubs, hotels, parties in private venues, venues with dark rooms^{6,16-18}, and festivals that have a playroom^{17,18}. These practices have also been observed in cruising areas (locations where outdoor sexual encounters occur)¹⁹.

Regarding the locations where chemsex most frequently takes place in Spain, the EMIS-2017 survey inquired about the location of the most recent sexual encounter where stimulant drugs were consumed, and group sex occurred (last 12 months) (n=1,004). About 68.4% of respondents reported it took place in a private home¹⁵. On the other hand, among men who had ever used stimulant drugs to make sex more intense or last longer, 50.7% had used them with more than one man (threesome or group sex) in the last 12 months¹⁵. This implies that a significant proportion of users engaged in chemsex with a single sexual partner or alone. The EMIS-2017 survey analyzed sexual health data from men who have sex with men in 48 countries (including all European Union countries), with a sample of 127,792 users²⁰. A specific report with the results of the sample of 10,634 users who completed the survey in Spain was published¹⁵.

The ways in which individuals seeking to engage in chemsex connect with each other can be quite varied. The use of location-based dating applications is common, as they facilitate connections with potential sexual partners or for buying, selling, or sharing substances⁵. Directing oneself to places where individuals can meet in person, such as certain saunas, is also common. Various studies have analyzed different types of chemsex sessions. Some occur anonymously among participants who do not know each other, while others involve encounters between previously acquainted contacts or a mix of familiar and new participants¹⁶.



In the case of saunas and sex clubs, the tolerance level regarding drug use can vary significantly between different establishments. Deaths have been recorded in saunas as a result of drug consumption. Typically, the person was in a cabin, and no one noticed until it was too late ²¹⁻²³. Sexual assaults on intoxicated clients have also been documented ²¹. Some businesses enforce strict policies prohibiting drug consumption and sales (especially in the case of GHB) and display signs with rules for customers, violation of which results in immediate expulsion from the premises ¹⁸.

In Spain, some saunas have set a maximum stay limit on their premises, usually ranging between 6 and 10 hours ^{18,24,25} after which a new entrance fee must be paid or a stipulated amount for each additional hour.

Virtual ethnography and other qualitative studies have identified the existence of chemsex sessions in hotels during major events such as LGBTQ+ Pride and other festivals that attract numerous visitors ^{17,18}. Chemsex practices have also been documented through virtual ethnography and direct observation at large festivals, especially those with play rooms ¹⁸.



1.3. Some references to understand the chemsex phenomenon

Throughout the chapters of this document, we will attempt to address various questions. Is chemsex widespread in Spain? How have these practices become popular in certain population groups? What substances are used in this type of context? What effects do the substances consumed in these contexts produce? What implications can these practices have for health, particularly mental health? Why do some individuals engage in them? What are they seeking? How should users in need of professional attention be assessed and addressed?

In the following chapters of this document we will aim to provide a response to these questions and others.

Sexual culture and LGBTQ+ cultural competence

As this phenomenon is linked to a sexual culture ²⁶, any professional approach requires incorporating some key elements to contextualize it, understand its nature, and grasp the meaning that certain practices may have for chemsex users. In fact, a lack of specific knowledge about chemsex and its idiosyncrasies can hinder the provision of adequate support to users who may need professional assistance.

In this regard, it is necessary for professionals to incorporate certain cultural competencies into their training. The acquisition of cultural competencies has been defined as the process in which healthcare professionals strive to become aware of and incorporate knowledge and skills to work effectively within the cultural context of the family, individual, or community ^{27,28}. Acquiring these competencies can help reduce different situations of inequality in access to the healthcare system that individuals from vulnerable groups, such as migrants or LGBTQ+ individuals, may experience ²⁹.

In the specific context of chemsex, these cultural competencies include knowledge and skills needed to respect and understand the beliefs, behaviours, slang, social norms, and other cultural characteristics of the LGBTQ+ community. The acquisition of these competencies by professionals could enhance this population's access to adequate healthcare ³⁰. These insights and abilities also enable professionals to identify their own biases and moral prejudices ³⁰, fostering greater empathy with the perceived needs of users.

In Spain, various qualitative studies, ethnographic research, and blogs have been published, providing specific references to better understand the phenomenon of chemsex. For instance, some studies draw attention to the high level of normalization and visibility of drug use within the gay culture. They argue that the tolerance, permissiveness, and acceptance of drug use in that environment form a collective framework ⁶.

Another key element for understanding the chemsex phenomenon is the importance and meaning of sex in the lives of many gay men ³¹. There is an entertainment industry oriented toward the gay public in which sex plays a central role ⁵. Some venues in this industry are highly sexualized spaces. Similar dynamics are observed in advertising targeted at the gay audience, which frequently uses imagery loaded with sexual innuendo or provocation ⁶.

Following the arguments presented in the position paper authored by the organizers and participants in the second European Chemsex Forum (Berlin 2018), understanding chemsex cannot be decontextualized from certain elements and circumstances that intrinsically affect how sex is experienced in this community. Among them, the document mentions: The trauma the HIV/AIDS epidemic has had on LGBTQ+ people and on gay sex, chronic bullying of LGBTQ+ people, both explicit and more covert peer pressure amongst gay men, the importance of shared ritualised activities in a stigmatised group, community tensions about masc/fem behaviours (or self identities) particularly in regard to the enjoyment of sex and sexual fantasies, gay hook-up technologies and saunas, and the widespread availability of chems to gay men and trans and non-binary people via gay hook-up apps⁷.

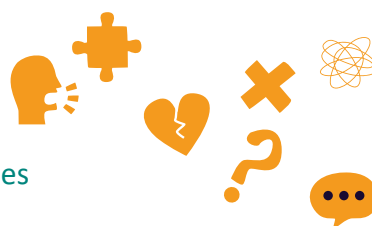
It is important to mention the link between HIV and chemsex. As will be described later in the epidemiological section, these practices are more common among HIV-positive GBMSM. Qualitative studies have shown that the majority of chemsex users have observed that condoms are not commonly used at sex parties ³², the serological status of participants in a sex party is not usually verbalized or discussed ^{16,32}, and many participants have the impression that the majority of attendees are people living with HIV ¹⁶.



At the same time, it's essential to bear in mind that someone with an undetectable viral load cannot transmit HIV³³. Within the gay sexual culture, the intentional pursuit of unprotected sex is known as bareback³². Some chemsex sessions have codes or behaviours that may also be linked to gay sexual subcultures like fetish or bears.

Gay culture can encompass various beliefs, behaviours, and social norms. It is essential to bear in mind that gay and bisexual men are a highly diverse population, consisting of individuals of different ages, ethnicities, nationalities, education levels, economic situations, etc.²⁶, which, in turn, are part of the broader sexual diversity within the LGBTQ+ community. These cultural differences can impact various aspects such as:

- the expression of emotions and suffering
- conceptions about health, illness and mental health
- the willingness to seek help in case of mental health issues
- patterns of psychoactive substance use and motivations for it
- the use of specific slang or terminology



To enhance professionals' understanding of the chemsex phenomenon, beyond knowing the substances used and their effects, it is necessary to delve into the knowledge and understanding of gay sexual culture, with its codes, norms, values, and language³¹. This way, it will be easier to comprehend, for instance, why some gay men have multiple sexual partners or why sex holds significant meaning in their lives³¹. One way to approach the sensitivity and discourses of chemsex users is through their own voices and testimonies, as presented, for example, on the blog: *Chemical bloggers*³⁴.



The role of dating apps and gay tourism

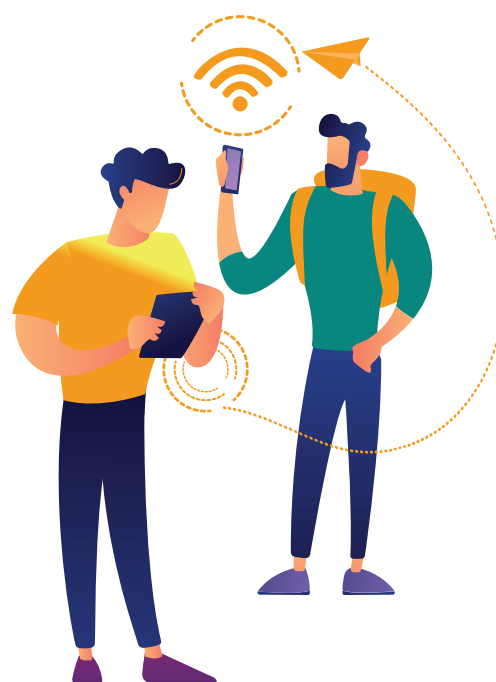
The way people meet or connect with new sexual partners has undergone significant changes in recent decades. Geolocation-based dating apps multiply the possibilities of finding sexual partners. In the gay context, their use has also been documented for buying, selling, or sharing substances. These links between app usage and chemsex have been documented both in Spain ^{5,16} and in other countries ³⁵⁻³⁸.

Dating apps are one of the spaces where the chemsex culture is expressed. In user profiles and the messages they exchange, abundant communication codes are used to indicate what is sought or offered, as well as preferences regarding certain sexual or consumption practices, etc. The available space for text in profiles is very limited, leading to the search for formulas to simplify communication by resorting to minimal expression. The use of communication codes based on emoticons, acronyms, and other codes is common ⁵.

It is common for chemsex users on dating apps to use slang expressions that refer to these practices. References to the names of substances are also frequently found, often using acronyms ⁵.

The use of information and communication technologies in the context of chemsex is not limited to dating apps and websites. Among GBMSM who already know each other (from previous sessions, saunas, sex clubs, etc.), other means are also used to contact and arrange the encounter, such as WhatsApp and Google Maps or other tools to exchange location and meet. On the other hand, just as these technologies have contributed to the spread of chemsex, they have also become a platform for disseminating information about support services and prevention messages ⁵.

In terms of the links between chemsex and gay tourism, according to the conclusions of the first European ChemSex Forum, drug use in sexual contexts is steadily increasing in Europe, and data show that sex tourism is one of the drivers of chemsex ³⁹. Often, sessions may involve the participation of users from other countries visiting a city as tourists ¹⁶. Tourism has already been identified as one of the contexts in which chemsex may tend to accelerate or increase ⁴⁰.



There are international circuits of large-scale events aimed at the gay public held in different cities throughout the year. Sexual leisure is a significant component of these gatherings ²⁶. Choosing one of the most popular gay destinations for vacation (or choosing to live there) may provide greater opportunities to engage in chemsex practices ²⁶.

The LGBTQ+ tourism industry encompasses more than 10% of tourists worldwide and is responsible for approximately 16% of total travel expenditure ⁴¹. Spain is precisely one of the most popular gay tourist destinations in Europe, receiving around 7 million tourists from this community annually, generating revenues of more than 7.2 billion euros for this sector ⁴². This places Spain in a position of greater exposure to the emergence of new practices and forms of consumption ⁵.

Large festivals and events targeting the gay audience offer significant opportunities for prevention and risk reduction related to chemsex. To address prevention in the context of chemsex in each city, it is necessary to consider the annual calendar of major leisure events targeting the gay audience, as these dates involve a higher concentration of people and events. It is advisable to enhance partnerships and cooperation between the private sector, community organizations, and health services ⁴³.

The communication codes used, contact methods, the substance market, etc., may vary locally. However, despite this, many aspects of chemsex culture share a common framework internationally. In other words, there is a collective understanding among users from different countries about the idiosyncrasies of these practices.



1.4. The chemsex situation in Spain

Various studies on drug use among the GBMSM community have indicated that drug consumption is higher in this population compared to the general population.

The findings from the EMIS-2017 survey in Spain (n=10,634) indicate that the prevalence of alcohol consumption at least once in the last 12 months was 91.9%, and tobacco use was 48.9%¹⁵. Among the other most commonly consumed substances were:

- *Poppers* 34.9 %
- Cannabis 25.8 %
- Sedatives or tranquilizers 20.4 %
- Substances to help get or keep an erection 20.4 %
- Cocaine 15.5 %
- Ecstasy (MDMA) in the form of a crystal or powder 11.9 %
- Ecstasy (MDMA) in the form of a pill 10.5 %
- GHB/GBL 8.7 %
- Amphetamine (*speed*) 8.1 %
- Mephedrone 5.7 %
- Ketamine 5.6 %
- Methamphetamine 5.4 %



Regarding drug use in a sexual context, 14.1% of participants reported having used stimulant drugs to make sex more intense or last longer in the last 12 months, and 7.6% in the last four weeks ¹⁵. The cities with the highest prevalence were Barcelona (13.7%) and Madrid (9.7%) ^{15,44}.

As part of a European project concerning GBMSM in 8 European countries (EURO HIV EDAT Project) conducted in 2016 ⁴⁵, Spanish resident participants' (N=2883) responses to the question, "In the last 12 months, have you used any recreational substances immediately before and/or during any sexual encounter?" were analyzed. Results were as follows:

- *Poppers* 17.1%
- Cannabis 10.7%
- Cocaine 9.1%
- Erectile dysfunction medications 7.1%
- GHB/GBL 5.6%
- Ecstasy 3.9%
- Mephedrone 3.4%
- Amphetamines 3.2%
- Methamphetamines 3.0%
- Ketamine 2.3%



Even though the formulation of questions in some studies may hinder data comparability, previous research in Spain has indicated that chemsex is more prevalent in large cities and their surroundings ^{15,46}, similar to trends in the rest of Europe ²⁰. In Spain, the practice of chemsex is more common in major cities such as Madrid and Barcelona, but it is also observed in gay tourism destinations like Maspalomas, Torremolinos, and Sitges ²⁶.

Polysubstance Use

Available data, both European and from Spain, indicate that polysubstance use is a common practice in the context of chemsex ^{3,47-50}.

HIV and chemsex

Available evidence shows that chemsex is more common among GBMSM with HIV^{3,45,51} compared to those who are HIV-negative. The Chemsex4EU⁵² study compares the prevalence of recreational drug use in GBMSM with HIV in the last 12 months across four countries. The prevalence of chemsex practices in the last 12 months ranged from 12% to 32%, and the prevalence of slam practices (intravenous drug use) varied between 0.6% and 13%.

Table 1. Chemsex4EU Study: Prevalence of Recreational Drug Use, Chemsex and Slam Practices in the Last 12 Months

| | UK | Spain | Greece | Italy | Total |
|------------------------|-----------|-----------|-----------|----------|------------|
| Number of users | 544 | 534 | 449 | 173 | 1700 |
| Recreational use (n,%) | 278 (51%) | 239 (45%) | 167 (37%) | 57 (33%) | 741 (44%) |
| Chemsex (n,%) | 174 (32%) | 117 (22%) | 84 (19%) | 21 (12%) | 396 (23%) |
| Slamsex (n,%) | 69 (13%) | 15 (2.8%) | 22 (4.9%) | 1 (0.6%) | 107 (6.3%) |

Source: adapted from Conway K et al. 2019⁵²

In the case of Spain, the U-SEX study conducted on 742 HIV-positive GBMSM showed that 29.1% of participants had practiced chemsex in the last year. The most used drugs were poppers (72%), cocaine (52%), GHB/GBL (39%), mephedrone and other cathinones (44%), and methamphetamine (15%), with the practice of chemsex associated with risky sexual behaviours⁵³.

Overall, EMIS Spain data showed that the use of stimulant drugs to enhance sex (in the last 4 weeks) was more frequent in men with HIV infection (22.1%) compared to HIV-negative individuals (6.2%) or those unaware of their serological status (2.5%)^{15,52}.

Similarly, among participants from Spain in the EURO HIV EDAT project, drug use in a sexual context in the last 12 months was much more frequent in men living with HIV (21.9%) compared to those without HIV (6.6%) or those unaware of their serological status (2.1%)⁴⁵.

Other groups

In EMIS 2017, drug use was higher among those born in another country (11.3%) than among those born in Spain (6.6%). It was also high (21.4%) among those who engaged in transactional sex (in exchange for money) at least 3 times in the last 12 months^{15,51}.

1.5. COVID-19 AND CHEMSEX

The COVID-19 pandemic brought about a drastic change in living conditions and interpersonal relationships, with impacts that were difficult to imagine in the past. It affected population groups differently, including those engaged in chemsex practices. The limitations imposed on mobility and personal interaction in various phases of the pandemic could have had particular consequences for chemsex users that merit further study.

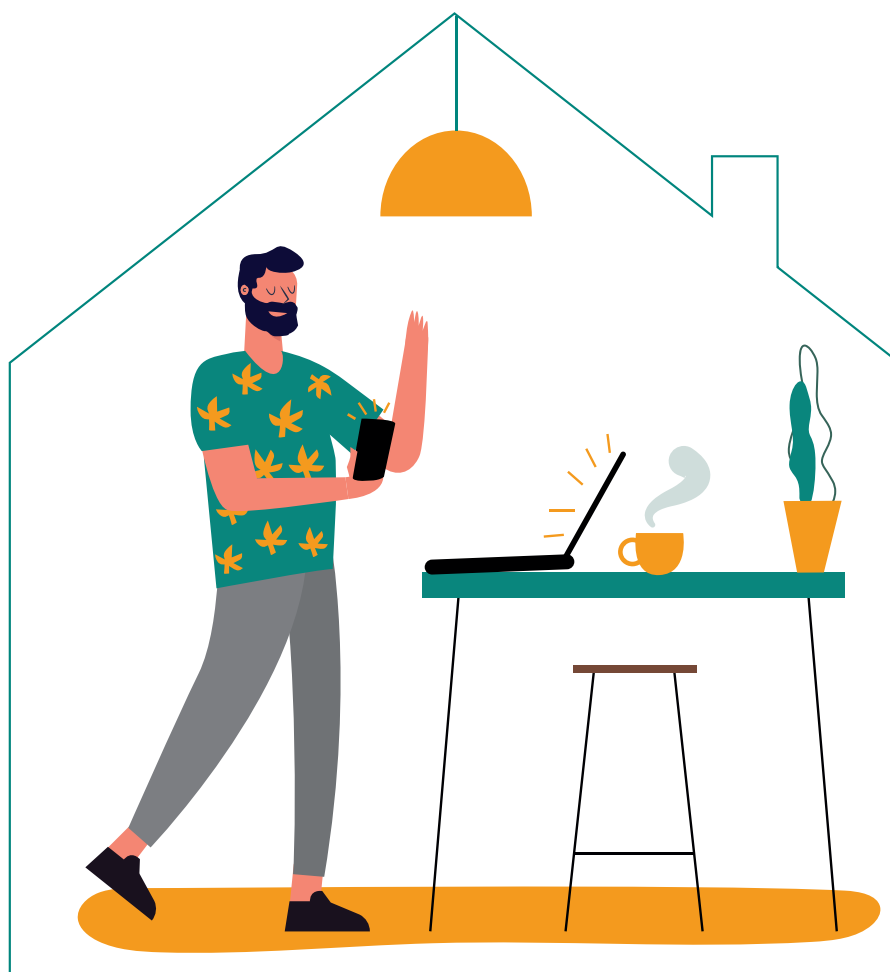
The measures implemented by national and international public authorities to address the spread of the COVID-19 virus had a direct impact on the tourism sector. Various mass events, such as in-person Pride LGBTQ+ demonstrations and celebrations⁵⁴ and gay festivals⁵⁵, were canceled. Some of the measures adopted affected the activities of the nightlife sector⁵⁶.



The measures adopted regulated the possibilities of meeting between people and had economic, social, and emotional impacts, which could have affected chemsex practices. Studies are necessary to objectively assess these impacts. In response to this situation, various organizations published materials that included specific health messages for risk reduction in chemsex practices during the COVID-19 pandemic ⁵⁷.

Some of the impacts related to the pandemic itself (and particularly the institutional and social response to it) may have directly affected mental health, by generating unprecedented situations of worry, uncertainty, and stress. New areas of concern included the acquisition and transmission of the virus among sexual partners, cohabitants, or other contacts. Other sources of stress included added difficulties in moving around and meeting, acquiring substances, or gathering in groups, activities that often took place in a clandestine and criminalized manner.

Chemsex sessions did not stop during the state of alarm ⁵⁸. Fears of being identified or reported became a reality for those involved in police operations that intervened in some private parties, saunas, and substance distribution points in cities such as Barcelona ^{58,59} and Madrid ⁶⁰.





2

2. DRUGS USED IN THE CONTEXT OF CHEMSEX

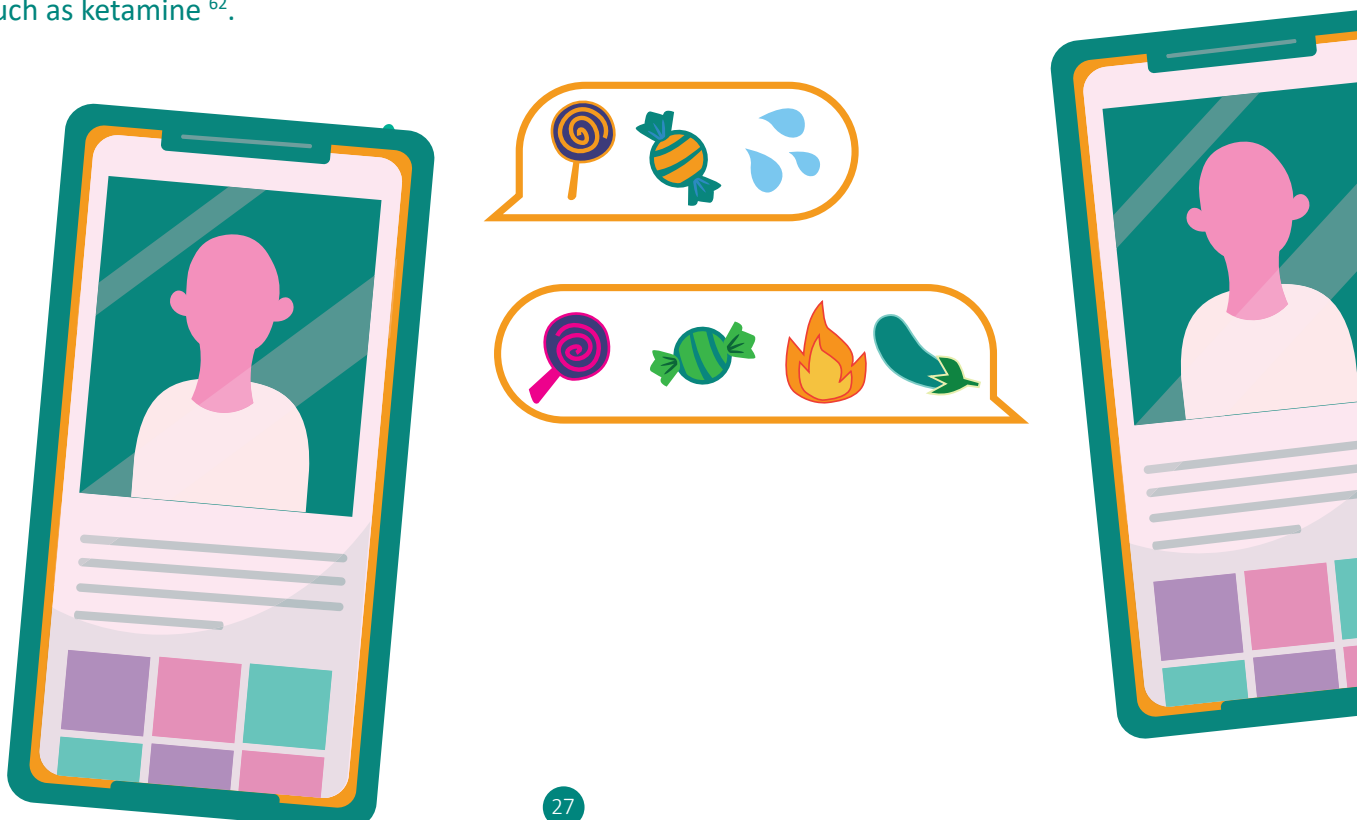
As stated in the introduction, scientific available evidence in Spain suggests that the substances that are most frequently consumed in chemsex sessions include GHB/GBL (gamma-hydroxybutyrate/gamma-butyrolactone), mephedrone (and other cathinones), cocaine, poppers, methamphetamine, ketamine, speed, ecstasy /MDMA and erectile disfunction drugs.

British scientific literature originally defines chemsex as restricted to the consumption of mephedrone, methamphetamine and GHB/GBL⁶¹.

Some sources argue that the specific characteristics of these drugs are different from other substances used in the gay sexual context, because they are associated with a sensation of euphoria or a specific high linked to a lack of inhibition and sexual arousal that chemsex users seek out².

In contrast, studies carried out in different countries have described the use of a wide variety of drugs with different psychoactive properties, beyond these three “chems”.

Based on their effects, the substances used in chemsex can be classified into 1) stimulants, such as cocaine and methamphetamine; mephedrone and MDMA (this two have a marked empathogenic or entactogenic effect, stimulants such as 2CB have a psychedelic effect; 2) depressants, such as GHB and ethyl chloride, and 3) dissociative hallucinogens, such as ketamine ⁶².



Chemsex is an emerging phenomenon, and as such, the substances associated with this practice change depending on their legal status, ease of acquisition, etc. Factors such as price, accessibility, legal status, and geographic location have been described to influence the prevalence of one substance over another. Some studies ⁴⁶ point out that, for example, in Madrid, the consumption of mephedrone in the context of chemsex is more prevalent, while in Barcelona, there is a higher consumption of methamphetamine than mephedrone.

In addition to well-known substances obtained in the illegal market, in the last two decades, so-called New Psychoactive Substances or New Psychoactive Drugs ⁶³ have emerged in the market. These substances, initially legal, filled the gaps left by illegal or low-quality drugs in the market. For example, mephedrone was one of the first to appear, filling the void left by MDMA in the dance scene and the gay community in the 2010s. Mephedrone and similar substances were easily obtained over the internet under names like “legal highs” or “research chemicals”.

These substances have gained popularity due to their effects, similar to MDMA and cocaine, their low cost, and the ease of acquiring them online. Currently, mephedrone is legally banned, but many other similar cathinones are on the market and are sold on the street alongside other substances used in chemsex. This wide variety of substances poses a significant challenge, both in terms of public health and in relation to prevention activities and therapeutic interventions.

The following table provides a summary of the main substances used, the names most commonly used by users, different forms of presentation, routes of administration, as well as the sought effects, duration, and major adverse effects and complications.



Table 2. Main drugs and medications used in the context of chemsex

| SUBSTANCE | PRESENTATION FORM | ADMINISTRATION ROUTES | DESIRED EFFECTS | ADVERSE EFFECTS AND COMPLICATIONS | DURATION |
|--|-------------------------------------|--|--|---|--|
| MEPHEDRONE Other cathinones: pentedrone, 4-MEC | Powder, crystals, tablets, capsules | Oral Insufflated (Snorted) Intravenous (SLAM) Intrarectal | Stimulation, sexual excitement, euphoria, feelings of empathy. | Dependency. Psychotic symptoms. Seizures, dystonias. Cardiologic, hepatic, renal toxicity. Sudden death. | Oral: 4 h. Snorted: 1 h. Intravenous (SLAM): 45 min. |
| METHAMPHETAMINE | Powder, crystals | Insufflated Smoked (Pipe) Intravenous (SLAM) Intrarectal | Stimulation, disinhibition, sexual excitement, increased confidence and self-esteem. | Psychotic symptoms, psychomotor agitation. Hypertension. Arrhythmias. Stroke and coronary ischemia. High addictive potential. Dry mouth. | 4-12 h. |
| GHB/GBL (gamma-hydroxybutyrate/ gamma-butyrolactone) | Liquid, tablets | Oral (consumed in small doses) | Sedation, relaxation of the anal sphincter Euphoria, disinhibition, intoxication, sexual stimulation. | Drowsiness, loss of motor control (with cumulative doses). Seizures. Coma, death. Dependence Delirium Psychotic symptoms. Severe withdrawal syndrome. | Up to 7 h. |
| ALKYL NITRITES BUTYL NITRITES | Volatile liquid | Inhaled | Euphoria, desire for socialization. Excitement and increased sexual potency, prolonged pleasurable sensations. | Retinal toxicity. Hypoxia. Hemolytic anemia. | 1-2 min. |
| MDMA | Crystals, powder, or tablets | Oral | Stimulation, feelings of empathy, acceptance, and connection. | Anxiety. Tachycardia. Bruxism "Heat stroke". Affective symptoms and hangover. | 6 h. |
| COCAINE | White powder | Insufflated Smoked (base) Intravenous | Activation, sexual excitement, hyper-alertness. | Paranoid ideation. Adrenergic hyperactivation. Vasospasm, arrhythmias, and ischemia. | 45 min. |
| KETAMINE | Powder, crystals, liquid | Insufflated Oral Intramuscular | Initial stimulation, relaxation, empathy, improved perception Dissociation. | Mydriasis. Derealization. Loss of motor control, falls. Confusional/dissociative symptoms . Hepato-, nephro-, and neurotoxicity. | 2-3 h. |
| 5-PHOSPHODIESTERASE INHIBITORS | Tablets | Oral | Maintenance of erection. | Headache, dyspepsia, diarrhea, and transient visual disturbances (blue vision tint). Loss of hearing. Coronary ischemia. | Sildenafil and vardenafil: 4-8 h. Tadalafil: 36 h. |

Source: National AIDS Plan Secretariat 26 (adapted from Dolengevich-Segal, H. et al.⁶⁴ in that document)

2.1. Mephedrone and other synthetic cathinones

Synthetic Cathinones are a family of psychoactive substances with a stimulant profile and empathogenic effects.

These are molecules that share a betaketone ring (and began to be marketed from around 2008 as “legal highs” or “bath salts”, following the significant decrease in the distribution of MDMA in the market) ⁶⁵.

It is a substance that has been illegal in the UK since 2010 and in international treaties since 2015. Currently, there are some cathinones used in the context of chemsex, such as pentedrone, 4-MEC, 3-MMC, and alpha-PVP. Often, these cathinones are sold under the name of mephedrone, even if they are other psychoactive substances.

Image 1. Mephedrone



Source: Energy Control/Chem-Safe (ABD) ⁶⁷

Image 2. Mephedrone



Mechanism of action

Cathinones act by acutely increasing extracellular levels of dopamine, norepinephrine, and serotonin. They do so by inhibiting their reuptake and reversing the normal flow of transporters, analogous to amphetamines, increasing presynaptic release of monoamines.

The following table describes the psychopharmacological profiles of some of the cathinones most commonly used in the context of chemsex. Depending on the psychopharmacological profile, the effects they produce will be more similar to MDMA, methamphetamine, or cocaine

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Table 3. Classification of synthetic cathinones according to their relative potential for inhibition of reuptake and release of monoamines, compared to MDMA, methamphetamine, and cocaine

| | Inhibition of Monoamine Reuptake | | | Monoamine Release | | |
|---|----------------------------------|----------------|-----------|-------------------|----------------|-----------|
| | Dopamine | Norepinephrine | Serotonin | Dopamine | Norepinephrine | Serotonin |
| Synthetic Cathinones Similar to MDMA | | | | | | |
| Mephedrone | +++ | +++ | ++ | ++ | ++ | ++ |
| Methylone | +++ | +++ | ++ | ++ | ++ | ++ |
| Synthetic Cathinones Similar to Methamphetamine | | | | | | |
| Cathinone | ++ | +++ | + | +++ | +++ | - |
| | ++ | +++ | + | +++ | | - |
| Synthetic Cathinones Similar to Cocaine | | | | | | |
| Pyrovalerone | ++ | +++ | ++ | ++ | - | - |
| MDPV | ++ | +++ | ++ | ++ | - | - |

Source: adapted from Karila, L. et al. ⁶⁶

Presentation forms

Synthetic cathinones are usually presented in the form of powder, crystals, tablets, or capsules

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Routes of administration

Cathinones can be consumed through different routes: oral, intranasal, intrarectal, intramuscular, intravenous, or subcutaneous. The most commonly route used is intranasal. For mephedrone, the typical doses used are 100-200 mg per hour, with higher doses if taken orally and lower doses if taken intranasally (snorted) ⁶⁹.

The effects begin after 30-45 minutes and last 2 to 5 hours if consumed orally. If snorted, the effects begin after 10-20 minutes and last 1-2 hours. If consumed intravenously (IV), the effect occurs in less than 10 minutes and lasts 30 to 45 minutes ⁷⁰. Therefore, there is a described need for compulsive re-dosing to maintain and prolong the effects ⁶⁸.

Expected effects

The psychoactive effects of cathinones include euphoria, excitability, increased alertness, and energy. They also produce an increase in sexual desire, arousal, and feelings of empathy or closeness with others, similar to MDMA ⁶⁵.

Complications

Complications related to adrenergic symptoms such as tachycardia, hypertension, restlessness, sweating, hyperthermia, and dilated pupils have been described. Other serious systemic complications include difficulty breathing, disseminated intravascular coagulation, rhabdomyolysis, liver and kidney failure, seizures, and even cases of death ⁷⁰, including sudden death ⁷¹. In cases of intravenous use, skin infections or collapses of the venous system have been reported ⁶⁶.

Similarly, the use of these substances has been associated with severe psychopathology, such as mood disorders and suicidal behaviours, anxiety, hallucinations, and paranoid ideation, both self-limiting and persistent, delirium, and aggressiveness ^{72,73}. These substances have a high addictive potential, especially when used intravenously ⁷⁴. Intense craving and withdrawal syndrome have also been described, along with significant difficulties in controlling their use, leading to a loss of control and engaging in risky sexual behaviours, as well as reusing or sharing needles ⁷⁵.

2.2. GHB and GBL

GHB refers to gamma-hydroxybutyric acid or γ -hydroxybutyrate, GBL stands for gamma-butyrolactone, and BD for 1,4-butanediol. These are potent central nervous system depressants that have been used for decades as substances of abuse. Both in the United States and the European Union, GHB has been a controlled substance for years due to its association with sexual assaults involving chemical submission ⁷⁶.

On the other hand, GBL (gamma-butyrolactone) and BD (1,4-butanediol) are used as organic solvents and are freely sold on the internet as cleaners, making regulation difficult. Both act as precursors to GHB and function as prodrugs, converting into GHB in vivo ⁷⁷.

Image 3. GHB

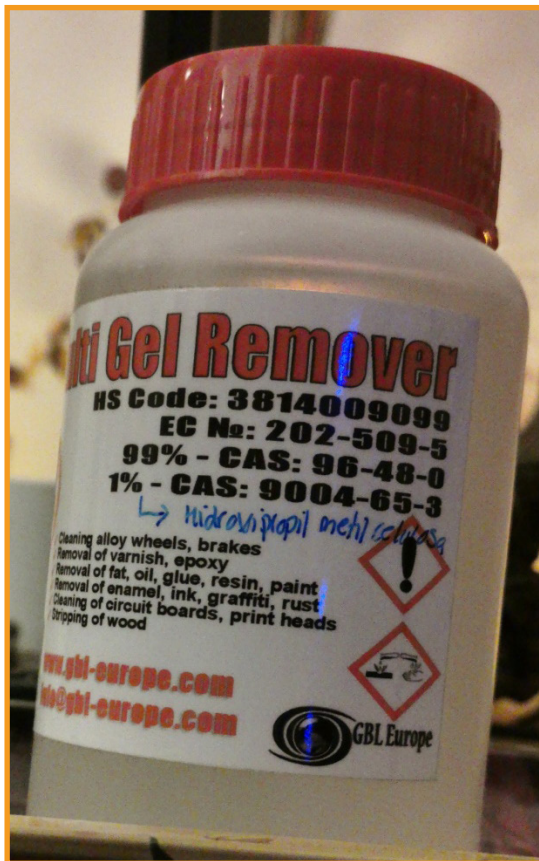


Source: Energy Control/Chem-Safe (ABD) ⁶⁷

Image 4. GHB



Image 5. GBL



Source: Energy Control/Chem-Safe (ABD) ⁶⁷

Mechanism of action

These are molecules that bind to and modulate receptors in the GABAergic system, especially through the GABA-B receptor complex. They also act on the specific GHB receptor, which appears to promote the release of neuroactive steroids. Chronic administration of GHB increases dopamine release, probably due to desensitization of receptors influenced by GABA on central dopaminergic circuits. Traces of GHB have also been detected endogenously in various tissues, including the central nervous system (0.5-1.0 mg/L), where it acts as a precursor and metabolite of GABA ⁷⁸.

Presentation forms

This substance is consumed in the form of a clear odorless liquid, with a slightly salty taste ⁶⁷. While there are tablets available, they are not commonly used in chemsex contexts.

Administration methods

GBL is generally consumed orally using droppers, pipettes or syringes. It is noteworthy that GBL is absorbed much more quickly than GHB and is eliminated more slowly, resulting in faster and more prolonged effects. Pure GBL preparations can be up to three times more potent than GHB ⁷⁷.

GHB is rapidly absorbed orally. The absorption of GHB is not linear and depends on the dose, so higher doses may result in a later peak concentration with more prolonged clinical effects, suggesting that oral absorption and elimination may be saturable. Plasma levels correlate with stimulating effects but not with sedative effects, which can last longer than expected ⁶⁷. The onset of effects usually occurs 15-30 minutes after ingestion and can last up to 6 hours depending on the dose and individual idiosyncrasy. The dose-response curve is steep, indicating that low doses can produce disproportionately large increases in behavioural effects and toxicity ⁷⁹.

However, the ingested dose of GHB is not easily correlated with its blood plasma levels, considering that a plasma concentration of ~100 mg/L produces euphoria and disinhibition, while 500 mg/L can cause death due to cardiorespiratory depression ⁸⁰. The effects produced based on the dose can be observed in the following table:

Table 4. Effects of Oral GHB by Dose

| ORAL GHB DOSES | |
|----------------------------------|------------------------|
| Treatment for alcohol withdrawal | 0.15 g (every 8 hours) |
| Mild Effect | 0.5-1.5 g |
| Usual Dose | 1-2.5 g |
| Intense effect | 2-4.0 g |
| May induce deep sleep | 3-5 g |
| Overdose | 5-10 g |
| Risk of death | 10 g |

Source: adapted from Erowid.org ⁸¹

Expected effects

When used in low doses, GHB has a euphoric, disinhibiting, anxiolytic effect and increases sexual desire. Additionally, visual or tactile perceptions are altered, leading to more intense orgasms and a more sensual interaction with the sexual partner. As the doses increase, drowsiness and loss of motor control prevail ⁸².

Complications

The most common complication of GHB is overdose. As the substance accumulates, and intoxication from other substances is added, it becomes more difficult to control dose/time, often resulting in states of intoxication with loss of consciousness that can include loss of motor control, seizures, vomiting with the risk of aspiration, hypotension, bradycardia, hypothermia, and coma ⁸². The high frequency of overdoses is related to the narrow margin between the desired and lethal doses, with little margin for control, especially when mixed with other depressant substances, mainly alcohol.

GHB overdoses in the context of chemsex are often perceived by other users as something common and normalized, creating a situation of extreme vulnerability for intoxicated users. Acute Intoxication is often associated with the risk of vomiting, aspiration, respiratory depression, and death, as well as the potential for sexual abuse by other participants in the session. In fact, some cities have reported an increase in GHB overdose-related deaths in connection with chemsex ⁸³. On the other hand, it is difficult to determine whether GHB or GBL has been consumed, as they are not typically detected in standard urine drug tests. The use of GBL to prepare GHB carries the risk of causing erosions in the digestive system when combined with sodium hydroxide for its preparation ⁶⁷.

GHB has a high addictive potential. In cases of chronic consumption and abrupt cessation, a severe withdrawal syndrome can occur, which may include tachycardia, insomnia, psychomotor restlessness, tremors, myoclonus, seizures, visual hallucinations and delusions, similar to delirium tremens. This is considered a medical emergency, often requiring intensive care unit (ICU) admission for treatment ⁸⁴. Acutely, emergency department attendance for GHB users in a coma of unknown origin is common, requiring ICU care with frequent spontaneous recovery after a few hours. Users often request voluntary discharge against medical advice.

2.3. Methamphetamine

Methamphetamine, or desoxyephedrine, is a N, α -dimethylphenethylamine belonging to the phenethylamine family. It is a potent synthetic stimulant derived from amphetamine. According to the latest report from the United Nations Office on Drugs and Crime, methamphetamine is one of the most widely consumed drugs in the world ⁸⁵.

Image 6. Methamphetamine



Source: Energy Control/Chem-Safe (ABD)⁶⁷

Mechanism of action

Methamphetamine acts by releasing norepinephrine and dopamine, and to a lesser extent serotonin. It can also reverse the action of transporters, facilitating the release of neurotransmitters into the synaptic cleft. This displaces newly synthesized neurotransmitters in vesicular stores. Additionally, it increases the release of newly synthesized norepinephrine and dopamine. Its addictive potential is based on its ability to modulate dopamine release in the nucleus accumbens, influencing brain reinforcement and reward processes. It also inhibits the monoamine oxidase (MAO) enzyme responsible for neurotransmitter metabolism ⁸⁶. Inhibition of norepinephrine and dopamine transporters prevents reuptake and increases the presence of these neurotransmitters in the synaptic cleft ⁸⁷.

Methamphetamine's methylation makes it more potent than other types of amphetamines, as it allows it to be highly lipophilic and easily cross the blood-brain barrier, making its effects faster, more intense, and longer-lasting ⁸².

Presentation forms

It is commonly found in the form of transparent crystals and powder. Tablets of methamphetamine are primarily used in Southeast Asia ⁸⁵.

Routes of administration

There are various routes of administration: smoking with glass pipes, oral consumption in tablets or capsules, in rolling paper (parachuting), snorting, intravenous (slam, slamming), intrarectal with a syringe (booty bumping), or in capsules diluted in water (plugging).

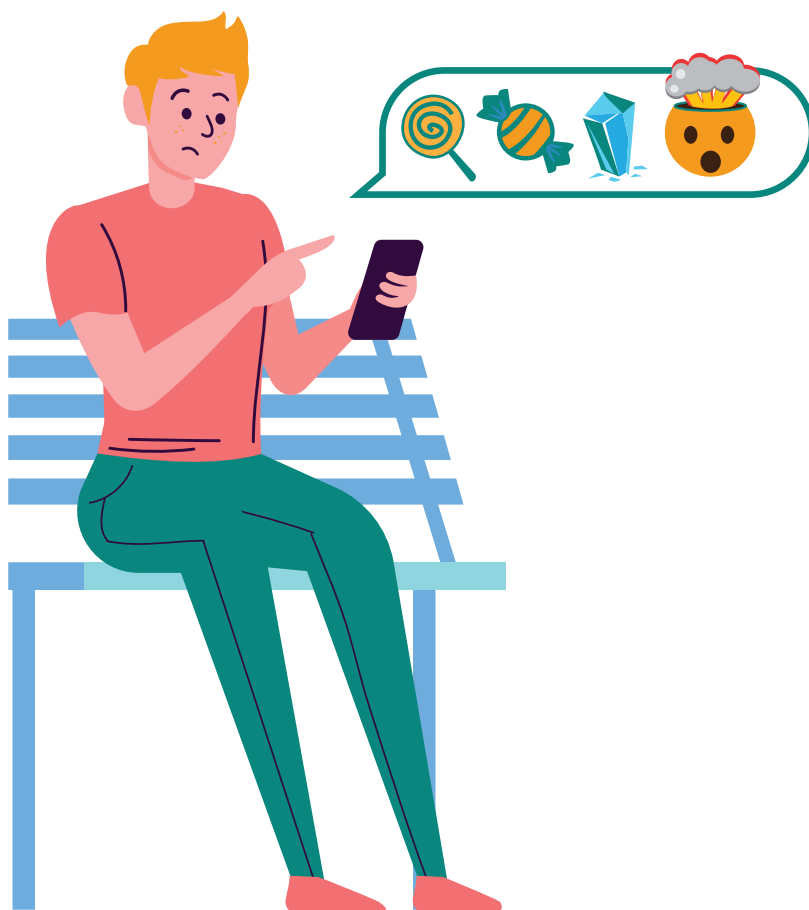


Table 5. Effects of methamphetamine by route of administration

| ORAL METHAMPHETAMINE DOSE | |
|--|--|
| Threshold | 5 mg |
| Mild stimulation | 5 - 15 mg |
| Usual dose | 10 - 30 mg |
| Intense effect (mild excitement) | 20 - 60 mg |
| Very intense effect (or due to tolerance) | 40 - 150 mg |
| Onset of effect | 20 - 70 minutes (depending on gastric content) |
| Duration | 3 - 5 hours |
| Comedown | 2 - 6 hours |
| Post-consumption effects | Up to 24 hours |
| DOSAGE OF SNIFFED METHAMPHETAMINE | |
| Threshold | 5 mg |
| Mild stimulation | 5 – 15 mg |
| Usual dose | 10 – 40 mg |
| Intense effect (mild excitement) | 30 – 60 mg |
| Very intense effect | 50 + mg |
| Onset of effect | 5 – 10 minutes |
| Duration | 2 – 4 hours |
| Come-down | 2 – 6 hours |
| Post-consumption effects | Up to 24 hours |
| DOSAGE OF SMOKED METHAMPHETAMINE | |
| Threshold | 5 - 10 mg |
| Mild stimulation | 10 - 20 mg |
| Usual dose | 10 - 40 mg |
| Intense effect (mild excitement) | 30 - 60 mg |
| Very intense effect | 50 + mg |
| Onset of effect | 0 - 2 minutes |
| Duration | 1 - 3 hours |
| Come-down | 2 - 4 hours |
| Post-consumption effects | Up to 24 hours |
| DOSAGE OF INTRAVENOUS METHAMPHETAMINE | |
| Threshold | 5 mg |
| Mild stimulation | 5 - 10 mg |
| Usual dose | 10 - 40 mg |
| Intense effect (maild excitement) | 30 - 60 mg |
| Very intense effect | 50 - 100 mg |
| Onset of effect | 0 - 2 minutes |
| Duration | 4 - 8 hours |
| Come-down | 2 - 4 hours |
| Post-consumption effects | Up to 24 hours |

Source: adapted from Erowid.org ⁸⁸

Expected effects

The most prominent effects of methamphetamine include a prolonged sense of well-being and excitement, along with an increase in self-confidence. It also induces euphoria, heightened alertness, energy, and focused attention, with a decrease in the need for sleep and appetite. Additionally, it produces an increased desire for sexual activity and a loss of inhibitions, which encourages the pursuit of pleasure and may facilitate the engagement in certain sexual practices (fisting, group sex), raising the risk of acquiring STIs or viral infections such as HIV or HCV ⁸⁹. It can delay ejaculation, allowing for extended sexual encounters. Paradoxically, it can also impact sexual function, leading to difficulties in achieving and maintaining an erection, leading to its frequent combination with erectile dysfunction drugs ⁹⁰.

Complications

Various physical complications have been described stemming from the adrenergic syndrome methamphetamine can induce, including hypertension, arrhythmias, myocardial infarction, cerebrovascular events, among others. Smoking it in a pipe can lead to bronchitis and pulmonary hypertension. Characteristic oral complications such as xerostomia and tooth loss, known as meth mouth, have been reported ⁸⁷.

High doses of methamphetamine can cause dysphoria, anxiety, restlessness, as well as generalized tremors and dyskinesias. Compulsive behaviours such as scratching and organizing objects have been described ⁹¹. It also leads to insomnia, hallucinations, and paranoid delusions, especially when used intravenously ⁹¹. Psychotic symptoms often subside with sustained abstinence. However, the persistence of psychosis has been reported even after six months of abstinence ⁹².

The addictive potential of methamphetamine has been widely described, with intense craving and a tendency toward compulsive use. It induces a very unpleasant withdrawal syndrome, which is one of the most feared side effects by users ⁸². Symptoms include various manifestations such as irritability, restlessness, anxiety, depression, psychotic symptoms, among others.

Chronic use of methamphetamine can also lead to anxiety, restlessness, insomnia, feelings of grandiosity, paranoid ideation, or other types of psychosis, hallucinations (visual, tactile, parasitosis), depression, aggressive or violent behaviour, irritability, psychomotor agitation, among others. Finally, the neurotoxicity of methamphetamine in chronic use has been extensively described, with various alterations observed in functional neuroimaging studies, such as changes in the dopaminergic pathway, with dopamine depletion in basal ganglia or alterations in serotonin systems, as well as changes in the brain morphology of chronic users, such as loss of gray matter, reduction in hippocampal volume, and hypertrophy in cerebral white matter. These observations have been correlated with neuropsychological alterations, such as impairment in cognitive spheres and executive functions ⁸⁷.

2.4. Ketamine

Ketamine is a dissociative anesthetic derived from phencyclidine (PCP). Its recreational use became popular in the mid-1990s, in connection with the rave culture and club culture, making it one of the pioneers of the New Psychoactive Substances (NPS) phenomenon. Recreational ketamine use has been associated with different subcultures⁹³, lifestyles, and diverse occupations, including clubbers, psychonauts, and GBMSM (gay, bisexual, and other men who have sex with men). Risky sexual behaviours have also been linked to ketamine use in this population⁹⁴.

Image 7. Ketamine



Image 8. Ketamine



Mechanism of action

Ketamine is an arylcyclohexamine that appears as a mixture of two enantiomers: R-ketamine and S-ketamine, with the latter being twice as potent as an analgesic and hypnotic. Unlike other anesthetics that suppress the reticular activating system, ketamine induces a functional and electrophysiological dissociation between the thalamo-cortical system and the limbic system⁹⁵. Its main effect is as a non-competitive antagonist of the NMDA glutamatergic receptor, favoring the anesthetic or dissociative effect by inhibiting neuronal excitability.

Weaker effects include acting as an agonist on δ and μ opioid receptors and inhibiting NO-synthase, contributing to its analgesic effect. It also inhibits the reuptake of norepinephrine and serotonin⁹⁶. Some studies hypothesize that it may produce synaptic inhibition by GABA, while others have shown anti-inflammatory effects by reducing the biosynthesis of TNF- α and IL-6⁹⁷. It seems that its psychotomimetic effect occurs due to an increase in free glutamate, which in turn strongly binds to AMPA receptors in the prefrontal cortex, inducing a hyperdopaminergic state. Additionally, it directly acts on D₂ and 5-HT_{2A} receptors, which is related to its hallucinatory effects and alteration of perception⁸².

Forms of presentation

Ketamine is presented in liquid form. For recreational use, it is dehydrated and sold in the form of powder or microcrystals.

Methods of consumption

Ketamine can be consumed orally, intranasally, intrapulmonarily, intravenously, subcutaneously, intramuscularly, intrathecally, and intrarectally ⁹⁸.

The average psychoactive dose intranasally ranges between 25 and 400 mg (one-fifth of the anesthetic dose). The onset of action varies by route of administration, with 20 minutes for the oral route and 2 minutes for the intramuscular route. Acute effects last around 2-3 hours after administration.

Expected effects

At low doses, stimulating and disinhibiting effects predominate, accompanied by an increase in sexual desire. Euphoria, a sense of intoxication, and alterations in bodily perception occur as doses increase. At high doses, a psychedelic effect emerges, involving alterations in temporal and spatial perception, modifications in the consistency and boundaries of the body, hallucinations, feelings of merging with the infinite, mind-body dissociation, sensations of levitation, autoscapy, and even near-death experiences. Users refer to these experiences as a “K-hole,” where they completely detach from reality and undergo transcendental experiences ⁹⁶. Due to its anesthetic effect, ketamine may facilitate sexual practices that can be painful, such as anal penetration with large dildos, fisting, or others ⁹⁷.

Complications

During ketamine intoxication, individuals may experience dizziness, nausea, vomiting, headaches, confusion, and disorientation. Other physical symptoms that may occur during acute intoxication include tachycardia, hypertension, mydriasis, and bronchodilation due to sympathomimetic stimulation. Less common symptoms include fasciculations, hyperreflexia, spasms, and seizures. There is a high risk of falls due to loss of motor coordination and ataxia. In high doses, individuals may reach a state where movement or communication becomes impossible.

Chronic ketamine use has been linked to the development of cholestatic liver damage and liver fibrosis ⁹⁹. Cystopathy with increased urinary frequency is common, along with damage to the kidneys and urethra ¹⁰⁰.

In cases of chronic use, neuropsychological alterations may occur, including deficits in verbal fluency, episodic memory, attentional capacity, and processing speed.

Additionally, addictive symptoms may manifest with chronic ketamine consumption, including tolerance, compulsive use, and significant craving. Abrupt cessation can lead to withdrawal syndrome with symptoms such as anxiety, tremors, sweating, and palpitations. Psychologically, schizotypal symptoms and perceptual distortions have been described following discontinuation, although no proven association with chronic psychotic disorders has been established ^{82,98}.

2.5. Poppers

The term poppers refers to alkyl nitrites and their variations (butyl, hexyl, isopropyl, etc.). These are esters of nitrous acid that exist as highly volatile liquids at room temperature, characterized by a fruity odor ¹⁰¹.

Image 9. Poppers



Mechanism of action

There isn't much data on popper intoxication. It is proposed that nitrites release nitric oxide, a potent vasodilator that, in turn, activates guanylate cyclase and cGMP-dependent kinase pathways. All of this results in powerful generalized vasodilation, leading to pleasurable sensations of warmth and relaxation. Additionally, it facilitates sexual activity by enhancing erections and promoting anal sphincter relaxation ¹⁰¹. There is no robust evidence that nitrites have a direct effect on the central nervous system (CNS). The hypoxia derived from methemoglobin production may be linked to a probable psychoactive effect ¹⁰².

Forms of presentation

Poppers are typically sold in small, colored containers of various volumes (10 to 24ml).

Routes of administration

They are usually used by inhaling the vapors directly from the bottle. Intoxication occurs within a few seconds and lasts for 1-2 minutes before dissipating ¹⁰³.

Expected effects

Poppers induce a sudden state of euphoria accompanied by generalized warmth known as a “rush.” Sociability and empathy increases, with as a brief dissipation of spatiotemporal orientation. In the sexual realm, effects include increased desire and arousal, with a subjective sense of enhanced sexual performance and potency, along with heightened tactile and particularly sexual sensations. Due to smooth muscle relaxation, poppers facilitate anal penetration ¹⁰⁴. Additionally, an intensification and prolongation of orgasm have been described ¹⁰⁵.

Complications

The most common side effects include headache, respiratory difficulties, hypotension, ataxia, dysarthria, or irritation of the airways. More severe complications include retinal toxicity with loss of vision, which usually gradually reverses upon discontinuation, although some cases of irreversible vision loss have been described ¹⁰⁶. Hematological complications have also been reported, mainly due to the conversion of hemoglobin to methemoglobin, leading to hypoxia and hemolytic anemia described in accidental oral intoxication.

Clear dependence on nitrites has not been described, but the phenomena of tolerance and craving have been observed, particularly in relation to sexual use. The concurrent use of poppers and drugs for erectile dysfunction can be dangerous due to their synergistic effects, leading to a significant drop in blood pressure, which may result in syncope or neurovascular complications ⁸².



2.6. Cocaine

Cocaine is the most widely consumed stimulant drug in Europe, making it one of the substances used in chemsex due to its widespread availability. It has stimulating effects on the central nervous system with peripheral anesthetic properties.

Image 10. Cocaine



Mechanism of action

Cocaine inhibits the function of the dopamine transporter, increasing the availability of the neurotransmitter in the synaptic cleft, facilitating dopaminergic transmission, directly related to the clinical effect of euphoria.

Forms of presentation

Cocaine is usually presented as a white powder for snorting, in rocks for smoking, and also diluted for intravenous use.

Routes of administration

The most common routes of consumption are intranasal (snorting) or intrapulmonary (smoked), although it can also be taken orally or intravenously. The pharmacokinetics of cocaine depends on the route used for consumption. When cocaine is snorted, effects appear within a few minutes, with a duration of around an hour.

Expected effects

Cocaine acts as a sympathomimetic amine in the nervous system, causing vasoconstriction, tachycardia, hypertension, mydriasis, tremors, sweating, skin flushing, difficulty in urination, increased body temperature, and a potent stimulation of the central

nervous system. Among the psychological effects, euphoria, increased energy in a state of alertness, heightened bodily sensations, improved self-esteem, increased psychomotor activity, reduced sleep needs and anorexia are notable ¹⁰⁷.

Complications

The main medical complications related to cocaine use arise from its peripheral vasoconstrictor effect and are associated with ischemic accidents. The substance's impact on the central nervous system's reward circuit is responsible for dependence, wherein craving stands out as a powerful desire for consumption, and priming involves a compulsion to repeatedly redose ¹⁰⁷.

Cocaine use disorder has been linked to a higher prevalence of affective disorders (anxiety or depressive), psychotic disorders, other behaviour disorders, and an increased risk of developing another substance use disorder ¹⁰⁷.

2.7. MDMA

MDMA is an amphetamine derivative with structural similarities to amphetamine and mescaline. Its recreational use became widespread in the 1980s, associated with rave culture, electronic music, and the gay club scene ².

Mechanism of action

Acutely, MDMA reverses the flow of serotonin and norepinephrine transporters, increasing the availability of both in the synaptic cleft. It also inhibits monoamine oxidase and blocks 5-HT_{2A}, 5-HT_{2B}, 5-HT_{2C}, α ₂-adrenergic, and muscarinic receptors. Additionally, it increases the release of oxytocin and vasopressin ¹⁰⁸.

Presentation forms

MDMA is commonly consumed in the form of pills, tablets, or microcrystals.

Routes of administration

The most common ways to consume MDMA are through snorting and oral ingestion.

Expected effects

The primary effect of MDMA is to enhance feelings of empathy and connection with others, along with euphoria, increased energy, and heightened sensory perceptions (visual, tactile, auditory). It also enhances the perception of sensuality.

Complications

Mild side effects may include bruxism, nausea, vomiting, nystagmus, insomnia, and hyporexia. In the short term, serious complications can occur due to dehydration and hyperthermia. Other systemic complications may include high blood pressure, cardiovascular shock, acute renal failure, seizures, muscle spasticity, among others.

At a psychological level, the effect of intoxication can cause anxiety and restlessness, hallucinations, and psychotic symptoms that are usually transient. After consumption, symptoms of “hangover” are described: lethargy, clinophilia, fatigue, negative thoughts, lability, and distress. Likewise, a pattern of substance abuse and the development of tolerance can occur with chronic use, which has been shown to be neurotoxic¹⁰⁸.

2.8. Other substances and drugs used in the context of chemsex

Finally, the use of ethyl chloride and “Tusi” has been described in the context of chemsex. This is a more marginal use compared to the drugs described so far.

Ethyl chloride

Ethyl chloride is a local anesthetic medication in the form of a spray applied to muscle injuries to reduce pain by lowering the temperature of the area.

In chemsex, this spray is applied to handkerchiefs or clothing for inhalation, producing a rapid effect of sexual arousal, increased orgasm duration, and euphoria. Its effects are similar to those of poppers. The duration of the effect is approximately a minute and a half. Various complications have been described with its inhaled use, such as nausea, vomiting, drowsiness, difficulty speaking, apathy, aggressiveness, compulsive use, and encephalopathy¹⁰⁹, leading to death by suffocation.

Image 11. Ethyl chloride



Source: Energy Control/Chem-Safe (ABD)⁶⁷

Tusi, Tusibi or pink cocaine

Phonetically, this substance can be confused with 2-CB (Its name in Spanish sounds exactly the same as in English). 2-CB belongs to a group of psychedelic phenethylamines widely used in Spain in the 80s and 90s, replacing MDMA, and was known as “nexus”. So, as the street names *tusi* or the pronunciation *tusibi* seem to refer to the abbreviation 2-CB. However, this substance, also known as pink cocaine, is actually a powder compound, usually pink, sometimes with a sweet smell, composed of various stimulant, depressant, and psychedelic substances. The predominant substance in this mixture is ketamine, usually accompanied by MDMA and caffeine. Depending on the laboratory where it is manufactured and the dealers distributing it, there may be more or less of one or the other substance. Therefore, the effects can be unknown, with a prevalence of dissociation if there is more ketamine or more stimulation if there is more MDMA or caffeine.

Inhibitors of 5-PDE

It is important to note that many of the drugs previously described are combined with the use of 5-phosphodiesterase inhibitors. Some of the psychoactive substances described can cause difficulties in erection both in the context of acute and chronic use. To limit this effect of different substances, the use of sildenafil (Viagra®), vardenafil (Levitra®), and tadalafil (Cialis®) is common. These drugs inhibit the enzyme phosphodiesterase type 5, facilitating erection.

2.9. Potential interactions between drugs and medications

Finally, it is important to consider the possibility of interactions between the drugs consumed and pharmacological treatments of the users.



The following table describes potential interactions between drugs and medications.

Table 6. Potential interactions between drugs and medications

| Drug/Medication | Drug/Medication | Interactions | Risks |
|---|--|--|---|
| Sildenafil, Valdegrafil | <i>Poppers</i> | Potent vasodilator effect | Severe hypotension |
| GHB | Alcohol, Benzodiazepines | Increased GHB intoxication, GHB accumulation | Central nervous system disturbance, respiratory depression, coma |
| Methamphetamine | Mephedrone | Hyperactivation of the sympathetic system | Hypertension, tachycardia, hyperthermia, dehydration, cardiovascular events, psychosis, agitation |
| ANTIRETROVIRALS Mainly: Ritonavir/ Cobicistat | Ketamine, Sildenafil | Inhibition of CYP2D6 | Increased levels of ketamine, sildenafil in the body |
| ANTIRETROVIRALS Mainly: Ritonavir/ Cobicistat | GHB, Mephedrone, Methamphetamine, MDMA | Inhibition of CYP3A4 | Increased levels of GHB, mephedrone, methamphetamine, MDMA in the body |

Fuente: Secretariat of the National AIDS Plan. Ministry of Health ²⁶ (in that document, it was adapted from Moltó, L. ¹¹⁰)



3



3. MENTAL HEALTH VULNERABILITY FACTORS IN GAY, BISEXUAL, AND OTHER MEN WHO HAVE SEX WITH MEN (MSM)

3.1. Theoretical models for understanding chemsex practices

As previously discussed, gay, bisexual, and other men who have sex with men (GBMSM) experience a higher prevalence of mental disorders, substance use, substance use disorders, and HIV/STI infections compared to the general population ¹¹¹⁻¹¹³. While research analyzing specific motivations for drug use among GBMSM ¹¹⁴, significant efforts have been made in recent years to develop research and theoretical frameworks that aim to understand the emerging of chemsex ^{6, 115, 116}.

Several theoretical models have been proposed to explore the reasons why GBMSM are particularly vulnerable to certain health challenges. Some of these frameworks also serve to contextualize why some of these men develop and sustain problematic chemsex practices. These models provide valuable tools in implementing prevention strategies and planning mental health interventions to maximize their effectiveness.

3.1.1. Ecological model

The ecological model integrates the influence of structural, social, community, interpersonal, and individual factors. Percy Fernández Dávila proposes applying the ecological model (previously suggested by other authors to understand the HIV epidemic ¹¹⁷) and adapting it to the phenomenon of chemsex ⁶. As the author explains, ⁶ understanding individual behaviours, it is necessary to consider contextual factors at the structural level (such as economic and social crises), community level (incorporating attitudes and values in the gay community towards drug use and sexuality), group or individual factors (such as the influence of peers on drug use) as well as individual motivations (such as the presence of mental disorders or substance use disorders).

3.1.2. Minority stress theory

Ilan H. Meyer is the author who developed the Minority Stress Theory model applied to the LGBTQ+ population ¹¹⁸. According to his theory, gay and bisexual men, as part of a sexual minority, are at a higher risk of higher risk of experiencing specific stressors compared to the heterosexual population population. He classifies these stressors into two types, distal and proximal ¹¹⁸.

Distal stress factors

Distal stress factors are objective structural elements such as homophobia, violence, discrimination, and sexual abuse. Meyer believes that these factors have a negative effect on the mental health of the LGBTQ+ population, and coping strategies at both individual and group levels can help mitigate this effect. He also emphasizes that it should be considered that GBMSM are exposed to structural homophobia throughout the life cycle, something that can be considered a source of chronic stress ¹¹⁹. In adolescence and early youth, there is a higher risk of homelessness or suicide, increasing the risk of social isolation and a lack of access to resources with appropriate cultural competence for addressing LGBTQ+ health during old age ¹²⁰.

Homophobia is a significant distal stress factor and is at the root of others such as violence or discrimination. Homophobia has been described as “general, psychological, and social hostility towards those who are assumed to desire individuals of their own sex or engage in sexual practices with them” ¹²¹.

These forms of discrimination can manifest as harassment or bullying in educational environments such as schools, high schools, and universities ¹²², as well as in the workplace ¹¹⁸ and during old age ¹²³. Similar to other stigma phenomena such as serophobia or stigma related to mental health issues, experiencing these forms of violence or discrimination causes stigmatized individuals to anticipate rejection from the dominant culture. To avoid such violence, phenomena of self-monitoring of behaviour can occur, constitute the basis for the development of avoidance and hypervigilance phenomena, and even post-traumatic stress disorder. This anticipation of rejection can hinder access to the healthcare system, cause delay in seeking help for mental health issues, or make it difficult to disclose sexual orientation or discuss high risk sexual behaviors with healthcare professionals.

Some studies point out that gender expression that does not follow hegemonic masculinity patterns and childhood harassment in the LGBTQ+ population correlates with a high risk of lifetime suicidal ideation ¹²⁴. Other research suggests that these differences in mental health prevalences compared to the heterosexual population have persisted despite increased tolerance and protective policies in recent years towards LGBTQ+ individuals ¹²⁵.

As in the general population, studies conducted with GBMSM emphasize the importance of childhood sexual abuse as a risk factor for the development of psychopathology throughout life. In the meta-analysis conducted by Lloyd and Operario, they highlight the necessity of assessing and addressing cases of childhood sexual abuse. They conclude that gay men with a history of sexual abuse are at high risk of HIV infection, engaging in risky sexual behaviours for STIs, as well as increased use of psychoactive drugs and engaging in sexual activities while intoxicated with alcohol and other drugs ¹²⁶.

Proximal stress factors

Proximal stress factors are subjective stress factors that are more influenced by personal or social meanings that each person or a particular group may attribute to them. Among these proximal factors are internalized homophobia or anticipation of rejection.

Internalized homophobia has been defined as “negative feelings about one’s own sexual orientation resulting from the internalization of prejudice and stigma related to sexual orientation” ¹²⁷. It has been linked to derogatory attitudes towards oneself, low self-esteem, and difficulties in achieving a positive self-concept ¹²⁵. Recent research has noted the correlation of internalized homophobia with increased sexual compulsivity ¹²⁸, a higher risk of unprotected sexual relations, and engaging in sexual activities while intoxicated with psychoactive drugs ¹²⁹. It has also been associated with various mental disorders such as depressive disorders ¹³⁰, anxiety ¹²⁵, and quality of life ¹²⁷.

Jaspal points out several concepts that can help us understand the relationship between internalized homophobia and the health of GBMSM.



Table 7. Internalized Homophobia and Health in GBMSM

| |
|--|
| Internalized homophobia can limit access to psychosocial support networks within the gay community itself, as well as reduce ease of access to sexual health services and the development of skills and knowledge related to the sexual health of gay men. |
| Internalized homophobia correlates with poor self-concept and low self-esteem, which can facilitate substance abuse or high-risk sexual behaviors for HIV and other STIs. |
| Internalized homophobia correlates with high levels of anxiety, depression, suicidal ideation, and self-harming behaviours. |
| Internalized homophobia hinders the establishment of longer-term relationships, intimate connections, which may contribute to rejecting erotic relationships that involve a higher degree of commitment. |

Source: compiled from Rusi, J. ¹¹⁵

3.1.3. Syndemic theory

Syndemic theory proposes that the aggregation of two or more diseases or health conditions in a specific population, there is a synergy between them, generating a greater burden of disease than the sum of these diseases ¹³¹. It is a term that seeks to go beyond the definitions of medical comorbidity and is associated with situations of health inequality linked to structural violence or processes of stigmatization in certain groups ¹³¹.

Authors including Halkitis have applied syndemic theory to the phenomenon of chemsex ¹¹⁶. According to this theory, the health problems experienced by gay men, drug use, and the high prevalence of HIV and other STIs constitute epidemics that need to be addressed in a holistic manner, as these are processes that reinforce each other, and there is a synergistic relationship between them.

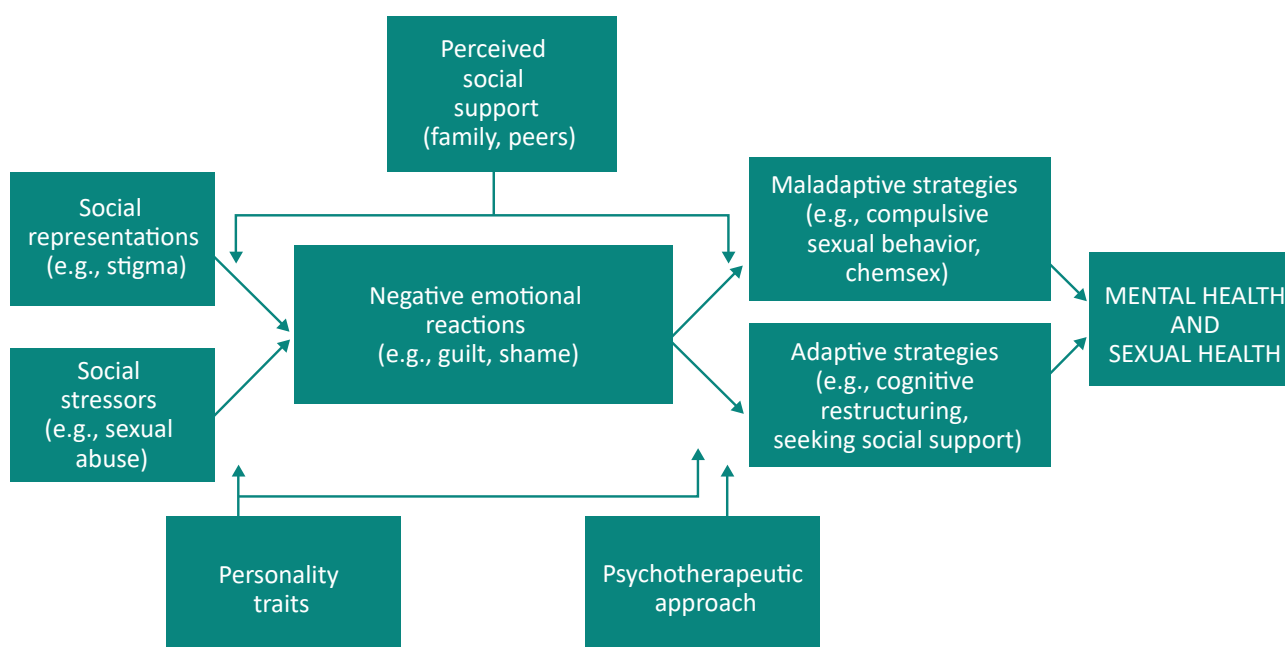
Halkitis argues that the increased burden of mental illness and substance use in GBMSM is related to the stigma associated with HIV and sexual orientation. Since issues related to chemsex practices can affect different facets of health, it is necessary to develop comprehensive models of intervention that include coordination among professionals from different areas, such as mental health, addiction, and sexual health.

3.1.4. Jaspal's Integrative Model

In his work “Enhancing Sexual Health, Self-Identity, and Wellbeing among Men Who Have Sex with Men,” Jaspal developed a theoretical framework that we consider to be of great utility for mental health professionals working with users engaged in chemsex practices. An adaptation of this model can be observed in the figure below. Drawing inspiration from the minority stress theory, Jaspal presents social representations of homophobia and stigma, as well as traumatic events like sexual abuse, as elements that can have a negative impact on identity formation and can lead to negative mood states including depressive symptoms, such as feelings of guilt or shame.

Jaspal also distinguishes between positive coping strategies, such as seeking social support, and negative coping strategies, such as sexual compulsivity, unprotected sex, or chemsex practices.

Figure 1. Jaspal's Integrative Model



Source: adapted from Rusi, J. ¹¹⁵ (page 189)

This theoretical framework allows us to observe different aspects on which preventive and therapeutic approaches can be established with users engaged in chemsex practices. Thus, it is just as important to work on aspects related to personality traits and anxious, depressive, or compulsive symptoms as it is to develop cooperation models with other professionals for the proper development of support networks, the search for alternative leisure, etc. Additionally, from this model, strategies can be adapted from different psychotherapeutic intervention models, whether they be interpersonal, cognitive-behavioural, psychodynamic, or trauma-focused. It can also be an excellent tool for case formulation or the adaptation of interventions in social skills, relapse prevention, and harm reduction that take into account aspects related to gender, sexual orientation, and cultural characteristics of the LGBTQ+ community ⁵¹.

3.2. HIV, chemsex and stigma

Individuals living with HIV can face various forms of stigma. On one hand, they may experience violence, discrimination, and marginalization. On the other hand, there is an observed anticipation of the rejection they will face due to their HIV status, as well as internalized stigma, which involves adopting stereotypes and negative feelings about oneself in relation to serostatus¹³². HIV stigma has been linked to a higher risk of depression, poor self-esteem, anxiety, suicidal ideation, reduced access to support networks, and poorer adherence to antiretroviral therapy¹³³. Studies examining the impact of HIV stigma on gay men suggest that it is associated with its associated with high-risk sexual behaviors and lower adherence to regular screenings for STIs¹³⁴.

When conducting psychotherapeutic work with users, it is essential to consider the weight of stigma and the experience of this group identity among consumers. These connections may play a role in the initiation and maintenance of substance use.

3.3. Motivations for engaging in chemsex

Bourne and Weatherburn identify three main reasons for drug use among GBMSM: the pursuit of pleasure, the sense of belonging to a community, and the use of drugs as a coping strategy to deal with discomfort or everyday life problems¹¹⁴. Other authors, such as Maxwell⁵¹ highlight additional motivations for engaging in chemsex, including the search for behavioural disinhibition, the sensation of increased energy, and muscle relaxation. Regarding the sexual experience, they highlight the intensification of sensations, increased self-confidence and awareness of one's own and others' emotions, as well as ease in engaging in sexual practices involving receptive anal penetration.

In studies conducted in Spain, motivations were also diverse, encompassing various reasons simultaneously³².

Table 8. Motivations for engaging in chemsex

| | |
|---|---|
| <p>Motivations directly related to sexuality</p> | <ul style="list-style-type: none"> • Increase or intensify sexual pleasure. • Seek sexual disinhibition. • Facilitate sexual practices that may be painful (e.g., fisting). • Engage in sexual relations for a longer duration and enhance sexual response. • Facilitate the sense of emotional intimacy. • Improve perceived efficacy in interacting with other men in a sexual context. • Access sexual practices such as group sex. |
| <p>Motivations not directly related to sexuality</p> | <ul style="list-style-type: none"> • Low self-esteem. • As a strategy for emotional avoidance of negative feelings related to recent emotional breakups, grief, etc. • Feelings of loneliness. • Unresolved internal conflicts or painful aspects. • Connecting with other individuals to establish support networks. |

Source: developed based on Fernández-Dávila, P³²

In the “Report on Chemsex in Spain,” the following motivations for practicing chemsex were documented⁴⁶:

- Increase the desire for pleasure in sexual relationships (77.4%).
- Achieve greater physical endurance (43.4%).
- Feel more confident during sexual encounters (26.1%).
- Alleviate negative feelings (23.3%).
- Facilitate practices that might otherwise be painful (17.9%).
- Other motivations (1.4%).



3.4. Risk and protective factors for chemsex practices

Based on his professional experience and various studies analyzing risk and vulnerability factors, Raúl Soriano has proposed several hypotheses regarding different factors that could act as risk and protective factors for chemsex practices ¹⁸. The following table present some of these factors, which also align with the clinical experience of the authors of this chapter:

Table 9. Possible risk factors for chemsex practices

| |
|---|
| Having previously engaged in problematic drug use (even if not for sexual purposes). |
| Having engaged in high-risk sexual practices repeatedly in the past (even if not under the influence of drugs) and having received successive diagnoses of sexually transmitted infections. |
| Incorporating group sex into regular sexual dynamics. |
| Engaging in sexual tourism by selecting vacation destinations based on a concentration of potential sexual partners from different geographical backgrounds (including gay festivals, Pride celebrations, or popular gay destinations). |
| Being a regular user of saunas and gay sex venues, where individuals engaging in chemsex practices may be present, especially during the weekend. |
| Regularly using geolocation apps to find sexual partners ^{5,137} (as they may receive invitations to participate in chemsex sessions). |
| Having a distorted risk perception, lacking detailed knowledge of the mechanisms of transmission of hepatitis C and other STIs, being unaware of the risks associated with the consumption of certain substances or the use of intravenous use of drugs. |
| Having friends, sexual partners, etc., who already engage in chemsex (which may lead to the perception that chemsex is common and practiced by many contacts in the personal environment). |
| Mental health conditions, such as depression or anxiety. |
| Receiving a recent HIV diagnosis ⁴⁰ and other stressors, such as breaking up with a stable partner ⁴⁰ , can trigger behaviours in some individuals that expose them to behaviours that increase their vulnerability. |
| Moving to live in a big city or immigrating to another country ⁴⁰ sometimes represents a situation of emotional instability. The lack of personal networks of primary solidarity limits the possibilities of receiving that type of support in case of becoming involved in problematic consumption. |

Source: developed from Soriano, R.¹⁸

Table 10. Possible protective factors for chemsex practices

| |
|---|
| Living in a rural or urban area far from the influence of new drug consumption trends or where it is challenging to acquire these substances. |
| Not knowing or being acquainted with individuals who already engage in chemsex. |
| Not being familiar with the use of geolocation apps targeting the gay community. |
| Not being a user of saunas and sex clubs. |
| Fear and phobias of needles and syringes. |
| Having numerous hobbies and interests (cultural, sports, etc.), maintaining a rich and diverse social life (not exclusively centered on gay nightlife), and including vacations in various locations (not repeatedly focused on gay sexual leisure destinations). |
| Having up-to-date and accurate information about the risks associated with drug consumption and its implications. |
| Being well-informed about the transmission mechanisms of STIs and high-risk sexual behaviors, for example, those related to the sexual transmission of HCV. |
| Having access to a reliable network of psychosocial and emotional support. |

Source: developed based on Soriano, R.¹⁸





4. SUBSTANCE USE DISORDERS AND OTHER MENTAL HEALTH ISSUES IN GBMSM ENGAGING IN CHEMSEX

4.1. Epidemiology of mental health problems in GBMSM who practice chemsex

Various studies have highlighted a high prevalence of various mental disorders in the LGBTQ+ population compared to the general population. In this regard, GBMSM are no exception and exhibit a higher prevalence of mental disorders than heterosexual men¹¹³. Recent meta-analyses estimate that the risk of suicide attempts is doubled in the LGBTQ+ population and is particularly high among gay and bisexual men. The risk of experiencing depressive disorders, anxiety disorders, and substance use disorders is at least 1.5 times higher in GBMSM¹¹³.

In the EMIS-2017 survey, which assessed psychopathological symptoms in the last two weeks, 18% of participants in Spain reported moderate symptoms of anxiety or depression, while 8% reported severe symptoms. Additionally, 21% had suicidal ideation, and 6% had suicidal thoughts for more than half of the days.

It is also noteworthy that among the participants in this sample in Spain¹⁵, more than 50% exhibited symptoms of anxiety or depression, with 5.9% reporting severe symptoms. Importantly, 21.4% of participants had experienced suicidal ideation in the past two weeks (from a few days to nearly every day), while 78.6% had not. The described psychopathological symptoms were more prevalent among those under 25 years old, with lower educational levels, unemployed individuals facing economic difficulties, those without a stable partner, and those with unknown HIV serostatus. Higher rates of suicidal ideation were observed among residents of cities with fewer than 100,000 inhabitants.

4.2. Clinical aspects

It is important to clarify that the practice of chemsex itself is not pathological. Rather it is a way of experiencing sexuality among GBMSM. As mentioned, the recreational use of drugs within the gay community is common, and its association with sex is increasingly prevalent. However, its practice in vulnerable individuals can lead, over time, to physical and mental health problems. In such cases, we consider that chemsex has transitioned from being recreational to becoming complicated or pathological. It is also worth noting that, given the complexity of the phenomenon, it needs to be addressed as a whole, as it is challenging to separate potential mental disorders, addictive behaviours related to sex or apps, possible complex trauma, homophobia, loneliness, etc.

Regarding psychopathology, individuals engaging in chemsex may be affected by mental disorders at various stages of their lives: prior to initiating chemsex, during the practice, or as a consequence of it. Thus, we could consider pre-existing mental disorders before engaging in chemsex as factors of vulnerability to the risks that chemsex may entail. On the other hand, there are symptoms or disorders induced by substance abuse or that can develop in association with addictive disorders.

The main psychiatric disorders associated with chemsex include anxiety, depression, psychotic episodes, suicidal behaviour, substance use disorders, and complex trauma and post-traumatic stress disorder (PTSD) as a biographical transversal experience, which, in many cases, overlaps with the rest of the psychopathology.

4.3. Trauma, complex trauma, and dissociation. Post-traumatic stress disorder (PTSD)

Although there are virtually no published data on this matter, when evaluating chemsex users in the last three years in our workplaces, we have frequently observed that they present various traumatic events throughout their lives. Many times, these events have not been verbalized until a problem related to chemsex arises, prompting us to reconsider the tools and approach for users exhibiting symptoms associated with trauma, dissociation, and substance use as a form of “self-medication.”

Some studies conducted with LGBTQ+ populations reflect that the risk of experiencing events related to PTSD is 9% in men and 20% in women, compared to the general population, where it is 4% in men and 10% in women ¹³⁸. Additionally, the high prevalence of psychoactive substance use in GBMSM has been associated with childhood traumatic events as causal factors, with chronic recurrent humiliation and sexual abuse being particularly harmful traumatic events ¹³⁹.

Table 11. Characteristics of traumatic events from a psychological perspective

A threat or attack that:

| |
|---|
| Occurs suddenly or outside of all norms (continuous abuse). |
| Exceeds the individual’s capacity to handle the threat or attack. |
| Disturbs the individual’s frames of reference and other basic schemes that help them understand and navigate the world. |

Source: developed based on McCann, I. ¹⁴⁰

Until recently, the diagnosis of trauma could not be made unless there was evidence of a direct experience of an event that has put one’s life in danger. The expansion of criteria has allowed clinicians to consider the overall impact of various vulnerabilities such as ongoing abuse, neglect, partner violence, bullying, and workplace discrimination.

Table 12. Main symptoms of trauma

| | |
|------------------------------------|---|
| Re-experiencing the event | Intrusive memories with images, thoughts, or perceptions, recurrent nightmares, illusions, or hallucinations, dissociative episodes. |
| Avoidance | Persistent avoidance, emotional numbness, efforts to avoid thoughts, feelings, or conversations that act as reminders of the event, inability to recall important aspects of the trauma, apathy, anhedonia, sense of emotional detachment from others, restricted affect, hopelessness. |
| Hyperarousal/hypervigilance | Increased alertness or reactivity not present before the trauma, such as difficulty initiating or maintaining sleep, irritability, outbursts of anger, difficulty concentrating, hypervigilance, exaggerated fear. |
| Disruption of life | Significant distress and/or significant impairment in various areas of functioning, such as social or occupational, among others. |

Source: developed form Morris, S. ¹⁴¹

In chemsex users, we have observed traumatic events throughout the subjects' biographies, which is in line with the limited literature available on the subject ¹⁴¹. Although many do not meet diagnostic criteria for PTSD, they do exhibit symptoms related to unprocessed traumatic events. We have also observed attachment disorders, with a focus on disorganized attachment, childhood abuse, neglect or abandonment, sexual abuse, familial rejection due to sexual orientation, bullying, internalized homophobia, and diagnosis of HIV infection.

The combination of these factors can lead to complex trauma, which is more deeply ingrained in the psychological structure of individuals and cuts across all diagnosed disorders, presenting unique symptoms that include low self-esteem, inadequate or absent self-care, sexual disorders, and a constant need for approval or recognition from peers. Additionally, other aggravating factors include social isolation, the experience of loneliness, and the need to keep these practices silent due to the associated stigma.

When an individual feels incapable of processing trauma, a dissociative process of emotional disconnection may occur in an attempt to neutralize the pain, leading to emotional and bodily disconnection. As described by some users in therapy: "Many times, I am baffled because I arrive at the session and don't know how I got there" "I come to consultation because I don't know who I am." "When I get home and open the door, I feel an emptiness I can't bear, so I go on the app, and it starts again."

Table 13. Main consequences of traumatic events

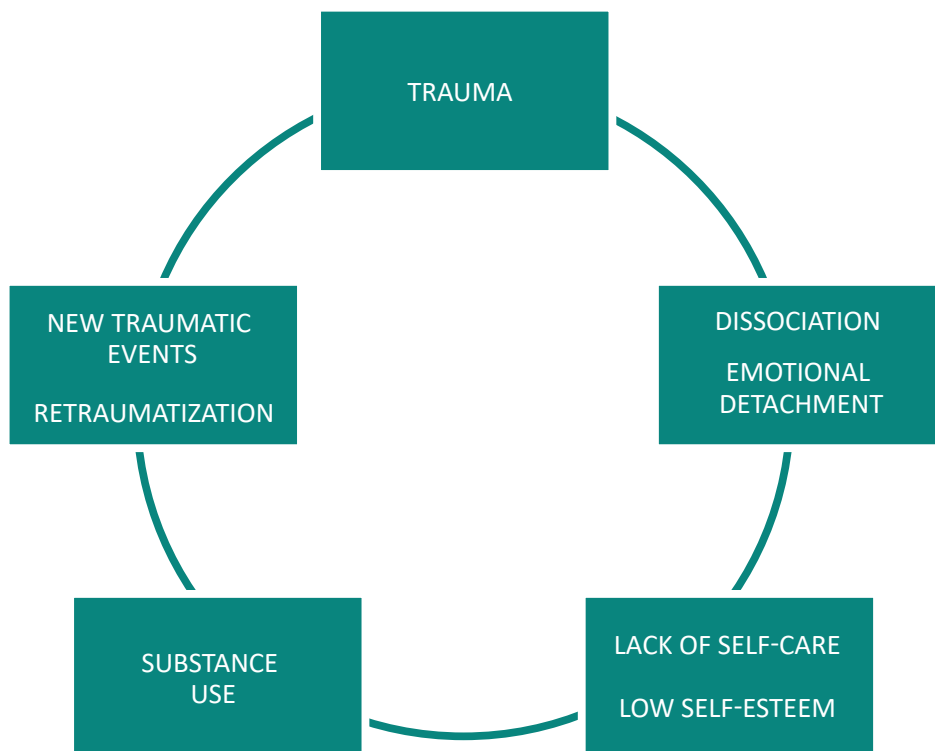
| |
|---|
| <i>Lack of connection with oneself, self-awareness, self-care, and self-protection. "I don't feel anything anymore, and everything is the same to me. I go to the sessions just to go because I don't even get the high anymore."</i> |
| Irritability |
| Intrigender violence within the couple |
| Isolation from the environment |
| Double sense of rejection from the general population and from the community (no sense of belonging to any group). Rejection from members of the LGBTQ+ community for not fitting the hegemonic profile (white, tall, muscular, masculine, young, without disabilities, without an HIV diagnosis, without flamboyance). |
| Loneliness and feelings of emptiness. "Maybe I go to a session and hook up with ten guys, but I think the only thing I'm looking for is not to feel alone." |
| Compulsive sexual behaviours, compulsive use of applications. "I spend hours and hours in front of the computer watching pornography to avoid thinking about everything else." |

Source: Own elaboration and based on Ibarguchi, L ¹⁴²

From the users' narratives, and in accordance with the retraumatization model presented at the last European ChemSex Forum ¹⁴², models have been proposed that link drug use to traumatic experiences. Thus, we observe how, following trauma (such as childhood sexual abuse or homophobic bullying), a process of dissociation and emotional disconnection can occur. This, in turn, may lead to neglect in self-care and affect self-concept. In this context, drug use is employed to remain disconnected from one's own emotions, numbed, even if only for a limited time.

Furthermore, each new episode of chemsex practice can place the user in a vulnerable position where they may relive traumatic situations, potentially generating feelings of shame and low self-esteem. These practices can also have different consequences that impact other areas of personal life, such as sexual abuse or assault, economic and employment problems, infections and reinfections of STIs, and hospital admissions due to overdoses, psychotic episodes, and suicide attempts. These circumstances can represent new instances of retraumatization for the user.

Figure 2. Model of retraumatization during chemsex ¹⁴²



Source: Ibarguchi L ¹⁴²

4.4. Anxiety and depression

As mentioned, both anxiety and depressive disorders are highly prevalent in GBMSM ¹¹³. In chemsex users, various symptoms of both anxiety and depression are often observed, without these reaching a complete diagnosis, but rather remaining subsyndromal.

This makes the approach complex, as many symptoms are considered “normal” and have been internalized throughout the individual’s biography. For instance, feelings of guilt and shame for engaging in chemsex are common, as the behaviours involved might not occur without drugs and likely carry significant stigma.

Living with internalized homophobia can contribute to the development of a sustained state of anxiety, which may underlie various anxiety or depressive disorders. Additionally, feelings of worthlessness, guilt, and even anhedonia and thoughts of death or suicide are associated with internalized homophobia ¹⁴².

4.5. Episodes of psychosis

Psychosis associated with chemsex may be more common when stimulant substances such as methamphetamine or synthetic cathinones are consumed.

The use of methamphetamine, both used through smoking or intravenously, and mephedrone, primarily when used intravenously, associated with lack of sleep during chemsex sessions, has been linked to psychotic episodes such as paranoia ⁸².

Chronic use of mephedrone has been associated with acute psychosis ¹⁴³. It is challenging to differentiate between drug-induced psychosis and primary psychosis, especially if the user continues active substance use. Psychotic symptoms can occur during intoxication or after consumption.

4.6. Substance use disorders

The majority of chemsex users exhibit non-problematic substance use and perceive that they have these practices under control. Substance-related problems are assessed on a continuum, ranging from mild to severe, concerning the substances themselves and their consequences on users. Chemsex practices can have impacts on various aspects of sexual health, mental health, and social well-being. Additionally, various personal factors, along with the choice of substances consumed, frequency, and route of administration, can influence the development of an addictive disorder.

In addition to drug use, chemsex involves other practices that can contribute to “multiple addictions,” such as compulsive sexual practices and intensive use of apps. This often complicates the compartmentalization of a single addictive disorder. In DSM-4-TR, terms like “abuse” and “dependence” were used, depending on the severity and, above all, the presence of symptoms of physical dependence associated with substances.

The current classification of DSM-V proposes that a substance use disorder can be mild, moderate, or severe, without the need for physical dependence to be present. It is important to emphasize that psychiatric diagnoses are clinical, and scales as well as criteria in manuals are only used to unify discourses and categorize disorders.

Finally, the time frame for the duration of substance use suggested by some clinical guidelines to establish a diagnosis cannot be easily applied in this context. If a person starts practicing chemsex and quickly transitions to slam practices, or if they significantly increase the number of sessions, they may experience serious negative consequences and problems within a few weeks or months.

4.6.1. Characteristics of psychosis induced by mephedrone and methamphetamine

Delusional ideas are usually paranoid, involving harm or persecution. Psychotic symptoms such as delusional ideas of reference and persecution may occur, along with auditory hallucinations (generally intrapsychic). Additionally, there may be distortions or visual hallucinations and paranoid delusional interpretations. As described by some users in counseling, “Those noises are from the neighbors who are bothering me for being gay.” Sometimes there are somatic symptoms as well, including psychomotor restlessness, tachycardia, sweating, and hypertension, among other adrenergic components. Induced psychoses are usually brief, self-limiting, and in the context of substance use, but in some cases, symptoms may persist for a longer time or not completely resolve, complicating their etiological diagnosis and psychopharmacological management.

4.6.2. Polydrug use

Various studies have shown that polydrug use is very common in chemsex sessions, as different drugs offer desired effects during the session and even act as “antidotes” to counteract the side effects of the substances used. For example, the use of Sildenafil to counteract impotence caused by methamphetamine. On the other hand, poppers are widely consumed substances and not considered psychoactive by users. However, they contribute to risk in the polydrug use combination.

The consumption of different drugs with diverse effects in a short period of time increases the risk of overdose and severe intoxication. Additionally, there are potential specific drug-drug or drug-pharmacological interactions that can enhance or diminish the perceived or sought-after effect, leading to excessive consumption. This, in turn, can increase the risk of severe intoxication with physical consequences such as overdoses and psychopathological consequences, including psychotic episodes, depression, suicidal behaviour, etc.

4.6.3. Slam

The practice of slamsex, slam, or slamming (intravenous use of substances, primarily stimulants such as mephedrone and methamphetamine), has been associated with an increased risk of HIV and other STIs, as its disinhibiting effect is much more potent than other routes of administration. There are limited studies analyzing the differences between slamsex practice and the use of substances through different non-injectable routes in the context of chemsex.

In qualitative studies that have analyzed motivations for engaging in slamsex, among the responses provided by participants was the quick onset of drug effects, impacting arousal and sexual desire¹⁴⁴. There is also a connection between slamming and other extreme practices such as fisting¹⁴⁴. The use of intravenous administration¹⁴⁵ has been noted as a practice linked to certain gay sexual subcultures¹⁴⁵.

In studies conducted in Spain with people living with HIV who attend HIV units, it was found that the main drugs consumed intravenously in the context of chemsex were mephedrone and other synthetic cathinones, and to a lesser extent, ketamine, cocaine, and methamphetamine⁴. Slamming practices were associated with a higher frequency of complications such as loss of consciousness, severe withdrawal symptoms, and paranoid delusional ideation⁴.

4.7. Primary or substance-induced mental disorders

In the case of detecting any mental disorder in a chemsex user, it is important to assess whether it is a primary disorder or induced by the substances consumed. After a chemsex session, it is common to experience “mood crashes” due to the hypodopaminergia inherent in withdrawal from stimulant substances (also known as an amphetamine “crash”). The duration and severity of these episodes should be evaluated. In the early stages of the evolution, there may be depressive symptoms, apathy, and anergia among others, in the first 2-3 days post-session, especially if chemsex is practiced on weekends in a controlled manner.

If the consumption is more frequent, it is more likely that depressive-anxious symptoms will persist, combined with withdrawal symptoms, craving, or other symptoms related to substance use. This complicates the differentiation of clinical syndromes and makes it necessary to address psychopathology as a whole. It is important to explore whether there is suicidal ideation or behaviour and take appropriate measures.

4.8. Psychomotor agitation

Episodes of psychomotor agitation can be encountered in chemsex users, primarily in hospital emergency services. Although there can be various causes of agitation, we will consider the main cause, which is agitation due to intoxication or withdrawal from one or more substances. In particular, the drugs most commonly associated with agitation, with or without psychotic symptoms, are mephedrone and methamphetamine. Additionally, withdrawal from GHB can lead to delirium-like conditions similar to those produced in alcohol withdrawal delirium tremens.

If a patient presents severe intoxication or withdrawal, it should be considered and treated as a medical emergency, requiring a comprehensive medical assessment with vital signs, blood glucose levels, and relevant additional tests. Initially, verbal de-escalation should be attempted to address agitation, but if the patient does not respond, therapeutic restraint with pharmacological intervention should be considered to limit the possibility of harm to themselves or others ¹⁴⁶.

Benzodiazepines should be considered as the first-line pharmacological alternatives, with the addition of a second-generation antipsychotic in case of psychotic symptoms ¹⁴⁷.

4.9. Suicidal ideation and behavior

As mentioned earlier, suicidal ideation is common in the GBMSM population. This may be related to complex trauma or depressive and anxiety disorders in chemsex users. On the other hand, slamsex users have more ideation and suicide attempts than those who do not use intravenous drugs during chemsex ⁴. In this regard, it is important to consider slam practice as a suicide risk factor in this population.

4.10. Chemsex, HIV and mental health

The HIV-positive population can be a vulnerable group with significant prevalences of mental health problems. As mentioned, some of the most prevalent disorders include affective disorders, anxiety disorders, and suicidal behaviour ¹⁴⁸. Depressive pathology is the most common psychiatric disorder in HIV patients, and its detection and treatment are crucial. It has been associated with poorer adherence to treatment and disease progression, possibly contributing to increased mortality in HIV patients ¹⁴⁹.



In GBMSM living with HIV who engage in chemsex, a higher frequency of anxiety and depression symptoms, active tobacco use, and the use of non-sexual environment-associated drugs have been described, as well as risky practices for the transmission of STIs¹⁵⁰, and hepatitis C³. Other complications reported in people with HIV practicing chemsex include interactions between drugs and antiretrovirals, as well as a decrease in adherence to antiretroviral treatment¹⁵¹. In particular, the consumption of methamphetamine significantly affects people with HIV¹⁵⁶, as this substance has been reported to increase viral load^{152–154}, reduce CD4 count¹⁵⁵, accelerate HIV disease progression¹⁵⁶, exhibit neurotoxicity¹⁵⁷, and induce changes in the blood-brain barrier¹⁵⁸.

There is a bidirectional correlation between chemsex practices and HIV infection. Therefore, it is crucial for mental health professionals working with individuals engaging in chemsex to be updated on primary approaches for HIV prevention and treatment. Additionally, they should be well-versed in addressing psychiatric pathology and substance use in populations with HIV, as well as potential interactions between medications and drugs used.

In recent years, various studies have been conducted on serodiscordant couples (where one partner is HIV-positive and the other is HIV-negative), demonstrating that with proper pharmacological treatment and undetectable viral load, the risk of transmission is negligible¹⁵⁹. In addition to behavioural interventions, two other prevention strategies have been developed: post-exposure prophylaxis and pre-exposure prophylaxis.

In the latest systematic reviews on chemsex⁵¹, various studies identified that individuals engaging in chemsex practices are more likely to require treatment with PEP (post-exposure prophylaxis)^{160,161} or PrEP (pre-exposure prophylaxis)¹⁶². The use of drugs in a sexual context without protection is one of the indications for PrEP in Spain. Therefore, it is essential for mental health professionals to be familiar with these treatments, their indications, and potential interactions and side effects.



5. PSYCHIATRIC ASSESSMENT OF USERS ENGAGING IN CHEMSEX PRACTICES

5.1. Why we need a specific clinical history related to chemsex

During the training of specialists, the curriculum for psychiatrists has significant shortfalls when it comes to aspects such as human sexuality- and in particular in the field of addictions, new psychoactive drugs and behavioural addictions. Therefore, the assessment of users engaging in chemsex practices often poses a challenge for the professional, as opportunities for detecting, evaluating, and treating issues associated with these practices may be overlooked.

We still do not have validated questions and instruments to assess chemsex users in each type of center or service. Additionally, many professionals need to update their training and cultural competencies (including knowledge of slang) to improve their approach to the user. The proposed assessment presented here is based on interview models commonly conducted in services that already assist users with chemsex practices.

The objectives of the therapeutic interview with chemsex users are the same as those of a general medical history interview ¹⁶³:

- Reception of the user's demand
- Collection and structuring of clinical information
- Assessment of severity and establishment of diagnosis
- Formulation of clinical hypotheses and assessment of approach and treatment
- Construction of a therapeutic alliance

However, evaluating and approaching these users requires improvements in interview skills and technical knowledge (which drugs are consumed, their effects, pharmacokinetics), cultural understanding (which users are using these drugs, how this use relates to their experience of sexuality), and clinical expertise (how to manage acute intoxications and mental health and addiction problems associated with these practices)

82.

To conduct this therapeutic assessment, it is necessary to develop a personal style, and it is usually beneficial to use a standardized version until it becomes a habit ¹⁶⁴. In reality, beyond having a list of questions, for proper management, it will also be necessary to incorporate the appropriate knowledge and skills for the psychiatric examination of chemsex users.

5.2. Barriers to conducting proper psychiatric interviews with chemsex users

Some barriers have been identified that hinder the interview with chemsex users, which we consider important to be aware of. Based on these barriers, each professional can develop strategies to make improvements in their own knowledge and skills, in the interaction with the user, and in the workplace setting.

There are different elements that can act as barriers for chemsex users to receive adequate professional attention. Some of these factors are related to difficulties observed in the implementation of public policies that address the health needs of users and challenges related to coordination and complementation between services.

However, there are also barriers or limitations that may be related to professionals, their training, and working conditions. Issues such as stigma, homophobia, and the lack of teams with adequate training in LGBTQ+ persons health, or the lack of confidentiality, can be mentioned in this regard ¹⁶⁵.

Working on understanding the barriers that limit the interview and acquiring basic knowledge, along with addressing the professional's own attitudes, can help conduct an interview that satisfactorily incorporates sexuality ¹⁶⁶.

On the other hand, there are elements that make it difficult for users to seek help or trust professional teams and engage in interventions. In some cases, users have had previous experiences of discrimination based on their sexual orientation or identity, which can be a barrier for them in engaging in a new interview ¹⁶⁷.

These elements and barriers are summarized in the following table:

Table 14. Barriers to the proper assessment of users with chemsex practices

| | |
|---|---|
| <p>User-related barriers</p> | <p>Stigma in relation to addiction treatment centers and mental health resources in general. Belief that there are no effective therapeutic resources for counseling and professional intervention with chemsex users. Difficulty accepting or verbalizing one’s own sexual orientation. Embarrassment when discussing drugs and sexual practices. Fear of judgment. Fear that confidentiality will not be respected. Fear of encountering other chemsex users in the therapeutic center.</p> |
| <p>Professional-related barriers</p> | <p>Existence of attitudes and prejudices that affect intervention on aspects related to sexuality. Fear of being misunderstood, fear of being negatively judged by users or other professionals, feelings of shame or modesty when addressing sexual topics. Reducing the approach to sexuality to sexual dysfunctions. Tendency to focus on sexuality solely on heterosexual, reproductive, and coital aspects. Limited specific training in sexual health and LGBTQ+ cultural competencies.</p> |
| <p>Difficulties related to intervention design</p> | <p>Difficulty ensuring confidentiality. Limited time in consultation for adequate counseling. Limitations on user access when care is restricted to morning hours.</p> |
| <p>Barriers related to public policies and coordination between services</p> | <p>Curriculum plans with little focus on addictions and sexuality in both general and specialist training. Lack of integration of sexual health into health plans. Lack of integration between mental health services, addiction services, and sexual health centers. Shortage of specialized professionals. Limited collaboration between public resources and community-based organizations.</p> |

Source: adapted from Sánchez-Sánchez, F. et al. ¹⁶⁸, Althof, S.E. et al. ¹⁶⁹ and own elaboration

5.3. General aspects of the interview and clinical communication with chemsex users

To conduct an appropriate assessment interview and begin building a therapeutic relationship, there must be a climate of trust, free from judgment, where the person can feel secure. During the interview, it will be necessary to address issues that can be particularly sensitive, such as those related to the use of certain drugs, or those related to sexuality and sexual health ³⁰.

There are some interventions that can help us follow these principles. Below are examples of interventions that professionals can perform. The phrases in quotation marks are statements proposed for professional use, which the authors of this guide themselves use during their practice with users or simulate examples of conversations with them based on experiences in the consultation.

Ensuring privacy and confidentiality

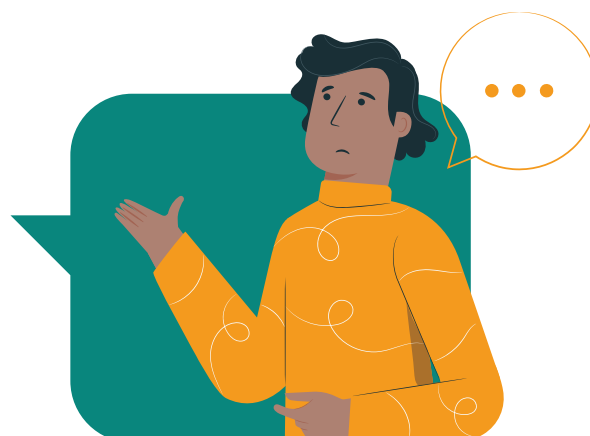
It is necessary to emphasize that the space where we are ensures privacy and to remind that the information collected is completely confidential.

“It’s important for you to know that the information we exchange here will be completely confidential...”

Asking questions appropriately

It is crucial to explicitly state the reason for asking questions and request permission from the user to introduce different parts of the interview, especially those related to sexuality. Open, direct, simple, and clear questions should be prioritized, while being able to handle silences. Avoid professional language (words like “toxic,” medical terms, scientific names of drugs like “gamma-hydroxybutyrate” if we see that the user does not use such terminology...)

“A significant number of users we see in these consultations mention having difficulty with drug use, and sometimes they use them for sexual encounters... Is this something that concerns you? Would you like to talk about it?”



Language

It is advisable to use neutral language when referring to the user and the user's partners (not assuming the user's gender identity or sexual orientation, not assuming the gender identity of the people the user is involved with). You can ask what name they would like us to use and with what pronoun (he, she, they). It is also necessary to listen to the language used by the user when referring to their own gender identity and body parts and sexual practices. This can help build trust between the user and the therapist.

"I've heard you talk about several people you've had sexual relationships with recently, were they men, women, both...? How would you like me to address you? I heard a word that I've never heard before, could you explain what it means?"

Show interest and be proactive¹⁶⁸

It is important to consider factors that may indicate problematic chemsex practices (such as repeated diagnoses of STIs, multiple visits to emergency rooms for complications related to substance intoxication, or difficulties in therapeutic adherence) in users and ask openly.

"I see that in the last few months, you've had quite a few visits to the emergency room with sexually transmitted infections, and you've also seen psychiatrists who prescribed medication... Do you want to talk about it? Does it have to do with using drugs during sexual encounters?"

Strategies for potential resistance¹⁶⁸

Sometimes, users may express feelings of shame or a certain level of mistrust in the professional. Here are some tools that can help address these resistances:

User: "I don't think anyone can help me; no psychiatrist has even asked me about this..."

Professional: "Perhaps there are areas where I can assist you, and others where I may need the collaboration of other professionals. If you're comfortable, I can ask you some questions to assess your situation and see how we can work together to help you..."

User: "It's a topic that I feel very embarrassed to talk about..."

Professional: "I can see that it's a challenging topic for you to discuss with me. If you think it might be easier to talk about it later or if you feel more comfortable discussing it with another professional... What do you think we can do to make you feel more at ease?"

User: "I don't think I know much about these topics..."

Professional: "There might be many medical and psychiatric aspects that I'm more familiar with as a professional, and others where you may be more of an expert based on your own experiences. How about we share our knowledge to assess what concerns you, and we'll see if I can help?"

User: "I don't think I really know anything about these topics..."

Professional: "It's possible that, as a health professional, I'm more knowledgeable about medical and psychiatric issues, and there are other areas in which you're more of an expert due to your own experience. How would you feel if we shared what we know so we can look at what's bothering you and see how I can help?"

5.4. Specific aspects of the assessment of users engaging in chemsex practices

The following sections outline the psychiatric interview related to drug use, sexuality, and additional tests. The remaining sections of the psychiatric interview are similar to the models commonly used.

5.4.1. Drug use

There is a wide range of substances whose use should be explored. It is important to inquire about all drugs consumed, the age at the onset of consumption, individuals who facilitated the initial use, subjective effects experienced over time and any variations (for example: "What effects did you perceive when you started using mephedrone? Have you noticed any changes since then?"), duration of consumption, periods of maximum or minimum consumption, reasons for changing or switching from one drug to another, presence of intoxications or overdoses, and other psychiatric complications related to drug use.

It is essential to consider the desired effect with each drug and recognize that polydrug use (including legal medications, illegal drugs, and other novel psychoactive substances) is common. Concurrent recreational use of some drugs with others showing signs of addiction should also be taken into account. Familiarity with the colloquial terms commonly used is important. Inquiring about the source of income to obtain substances and the presence of debts or requests for credit is relevant. Additionally, it is important to inquire about any legal issues, past convictions, or sentences served.

Routes of administration

It is necessary to inquire about almost all routes of administration (see Chapter 2). It is important to explore routes that we may not usually ask about, such as intravenous and rectal administration of drugs.

Patterns of use

It is important to assess the user's consumption pattern and practices. Some users engage in chemsex sporadically, sometimes in connection with their participation in gay festivals and large events aimed at this audience ¹⁷⁰. This concentrated consumption on specific dates can lead to binge patterns ²⁶.

Other users have more stable consumption patterns, often concentrated on weekends, a time when a part of the population typically has more free time ²⁶. Also, during these days of the week, it is more likely to find other people with whom to engage in chemsex practices. If these practices occur on more days of the week, it may indicate a possible greater risk of addiction, which needs to be assessed.

In the case of sex workers, chemsex practices may be linked to their activity, with a different distribution. Some clients may demand sexual services involving the use of substances ²⁶.

Determination of substances in urine and blood

Regarding drug testing in urine and blood, it is important to consider that the drugs used in the context of chemsex are structurally diverse compounds with various psychoactive effects, as discussed in previous chapters. We are dealing with heterogeneous substances of different origins: chemical, synthetic, semisynthetic, pharmaceutical, and combinations ¹⁷¹. These compounds are often adulterated.

Some of the psychoactive substances used in the context of chemsex are not detected by classical drug recognition systems, requiring the use of complex methods such as gas chromatography or high-performance liquid chromatography ¹⁷².

5.4.2. Sexual aspects

What is sexual health? Why should it be assessed in the psychiatric interview in chemsex?

The World Health Organization (WHO) defines sexual health as “a state of physical, mental, and social well-being in relation to sexuality, requiring a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free from coercion, discrimination, and violence”¹⁷³. Sexual health is directly related to the well-being and physical health of individuals¹⁷⁴. Sexuality is one of the central aspects of being human, and its assessment should be part of the routine psychiatric history.

Sexuality encompasses much more than sexual behaviours¹⁷⁵. When we talk about sexuality, we are actually referring to different aspects related to physical and mental well-being, the body, emotions, and relationships with others. These dimensions can be categorized or grouped into the following terms: sexuation, sexuality, and eroticism. Sexuation refers to the process of how individuals construct themselves as men, women, or non-binary individuals; sexuality refers to how the fact of being a sexed person is experienced in intimacy and the orientation of desire¹⁷⁶. Lastly, we speak of eroticism in relation to the expression of sexuality, which includes gender expression and behaviours such as desires, caresses, kisses, words, masturbation, and others¹⁶⁸.

On the other hand, from a biopsychosocial paradigm¹⁷⁷, sexuality encompasses physiological aspects (human sexual response), psychological aspects (desire, self-perception, body image, identity), and social aspects (social norms, interaction with partners, etc.).

When to assess sexuality with chemsex users

Sexual history should be routinely included in the medical history and adapted to the clinical context, conducted in an initial interview or throughout the intervention. There are many clinical situations that may prompt psychiatric emergencies, where sexual health becomes crucial, such as depressive symptoms in the context of a recent HIV diagnosis, suicidal ideation due to infidelity, or dissociative symptoms following a sexual assault.

How to ask about sexual history

It is often helpful to have a model of questions to ask, with which each professional feels comfortable. Similar to assessing a user’s academic or work sexual history can be assessed. This may involve a narrative approach, including the development of sexual identity, the sexual education received, and capturing current thoughts, emotions, and behaviours related to sexuality¹⁷⁸.

In general, there are two models for addressing sexuality that need to be adapted to the clinical context and the user ¹⁷⁹.

- Start by assessing current sexual health and then proceed to assess the psychosocial development of the individual. This type of intervention is usually carried out when the initial request is directly related to sexuality. Example: a user seeking help for controlling compulsive sexual relationships.
- Assess the psychosocial development of the individual and then evaluate their current sexual health. Example: a user seeking help for depressive symptoms who has a previous diagnosis of personality disorder and GHB use.

Just as with other issues like political ideology or religion, mental health professionals must conduct a personal review of attitudes related to sexuality to minimize interference in the assessment. It is helpful to engage in personal work that includes examining our beliefs, thoughts, and emotions related to sexuality. This can be done through personal therapy, workshops, case supervision, etc ¹⁸⁰.

Important aspects to remember related to sexuality¹⁷⁷:

- Sexuality is an intimate and subjective experience, subject to individual experiences, which we should avoid pathologizing.
- Sexuality is closely related to self-perception, body image, and identity.
- We must understand the user's sexuality based on their own history, emotions, thoughts, and behaviours.
- Sexuality is not static.
- Many sexual difficulties are not covered in diagnostic manuals. These manuals only include major difficulties related to sexual response.

Table 15. Areas of sexuality to explore with chemsex users

| | |
|--|--|
| <p>Sexual education</p> | <p>Identify the level of knowledge regarding their sexual health, as well as the influence of the sexual education received. It may also be opportune to find out the users' level of knowledge about the functioning and perception of their own body in relation to pleasure, desire, and sexual response. Poor sexual education interferes with the experience of their sexuality.</p> |
| <p>Attitudes regarding sexual orientation, sexual identity, and gender identity</p> | <p>It is important to analyze attitudes in the environment regarding sexuality. This should include users' experiences related to masculinity and homosexuality. Some motivations described by users are linked to difficulty accepting their own sexual orientation or aspects related to masculinity.</p> |
| <p>Experience of sexuality in childhood and adolescence</p> | <p>Analyze the experience of the first sexual, erotic, and emotional relationships, including behaviours and the emotions they aroused, and related memories. This can be an opportunity to assess the experience of sexuality in childhood and adolescence and throughout life. It may also be appropriate to assess possible experiences of sexual abuse. Many users have had experiences of sexual relationships accompanied by guilt or fear of different sexually transmitted infections (STIs), or closely linked to the idea of sin or disease (probably related to societal attitudes towards homosexuality), and drug use can serve as a way to escape or avoid such thoughts and emotions.</p> |
| <p>Expression of sexuality</p> | <p>It is important to evaluate different sexual behaviors, such as caressing, self-stimulation and different sexual conduct. These also include the ability to fantasize sexually and express feelings of affection and care (one's own or that of erotic partners). Frequently, after starting drug use, there is a reduction in the diversity of erotic conduct. In many cases drug use itself is eroticized, and these practices become the only practices desired.</p> |

| | |
|-----------------------------------|---|
| <p>Sexual response</p> | <p>Assess difficulties related to desire, arousal, orgasm, pain, and pleasure during sexual intercourse. It's important to see if there is a correlation between psychiatric pathology, psychotropic drugs, and difficulties in sexual response.</p> <p>It's important to analyze the relationship between drug use and sexual response and assess whether drug use is linked to any pre-existing difficulty such as lack of desire or erectile dysfunction.</p> |
| <p>Sexual satisfaction</p> | <p>Evaluate what the user feels and expresses regarding their sexuality, whether it is satisfactory or if there is any aspect that causes stress and affects their mood. This includes satisfaction with sexual relationships and also with emotional needs, security, trust, and intimacy.</p> <p>It's also important to assess whether sexual behaviours have taken place without the consent of individuals involved. Instances of rape and other forms of sexual abuse are frequently reported in the context of chemsex, such as sexual relations with individuals in a state of moderate to severe intoxication without their consent, which tends to be traumatic for users.</p> |

Source: compiled from SEMERGEN; Viñas, Lebot, H. and own elaboration¹⁸²

The relationship between drug use and sexuality

It is important to evaluate the different perceptions of sexual relationships under the influence of drugs and without them, sexual practices that are easier or less painful to perform with drugs, as well as difficulties in having sexual relationships without drugs. Some of the questions to ask are detailed below ¹⁸³.

Table 16. Motivations for engaging in chemsex related to sexuality

| | |
|--|--|
| Reduce sexual response difficulties | <i>Have you used drugs to have longer sexual intercourse or out of fear of losing your erection, fear of ejaculating too quickly, or to have more intense orgasms?</i> |
| Increase arousal, desire, or sexual interest | <i>Have you used drugs to increase arousal or sexual desire, or to be able to have sex with people you wouldn't normally have sex with without drugs?</i> |
| Use of drugs for specific sexual practices | <i>Is there any specific sexual practice that you cannot perform without drugs and that you only manage to do when under the influence? For example: sexual practices that embarrass you, or are painful, or fantasies that make you feel uncomfortable...</i> |
| Escape from negative feelings | <i>Have you used drugs because you didn't feel good about yourself or had a lot of stress or some unpleasant experience? Is there any part of yourself that you don't like or that doesn't make you feel good, and does this discomfort diminish when you engage in chemsex?</i> |
| Seeking affection, commitment, a sense of community | <i>Have you engaged in chemsex to achieve a greater sense of connection or intimacy in your sexual relationships? Or because you felt lonely? Have you practiced chemsex because you wanted to be with other people, and it was the easiest way to do so?</i> |
| Preferential use of consumption routes | <i>Is there a method of consumption that generates more excitement for you or makes certain sexual practices easier? Are the sensations different when you consume drugs through snorting, smoking, injecting, or rectal administration?</i> |

Source: adapted from Braun, Harvey D. ¹⁸³ and own elaboration.



5.4.3. Use of dating Apps

Approximately 33% of gay men use geolocation dating apps throughout their lives; of those who use them, up to 85% use them daily ¹⁸⁴. Some studies indicate that men who use apps engage in more sexual behaviours associated with increased risk of STIs, such as unprotected anal sex, group sexual activities, and substance use in a sexual context. On the other hand, there are studies that report high prevalence of app use under the influence (up to 50% for alcohol and up to 30% for any drug), contributing to an increase in practices considered risky for STIs ¹⁸⁵.

Scientific literature indicates different motivations for the use of dating apps in GBMSM: socializing, “out of boredom,” to buy drugs, etc ¹⁸⁶.

If we analyze the functioning of these apps, we can observe that operant conditioning can occur between accessing the app and the reward: a pleasurable sexual encounter, pleasurable masturbatory behaviour, feeling desired. We observe that there is positive reinforcement with a variable reinforcement ratio (as the intervals at which the reward is obtained are not predictable), which entails the basis of many addictions.

Given that in many cases there are links between the use of these apps and chemsex practices, it is pertinent to spend some time with the user to analyze how they use these apps (or dating websites).

We find different uses of dating apps in everyday clinical practice:

- Users who use dating apps with an objective similar to using social networks like Facebook or Instagram, aiming to socialize, view other people’s profiles, see if they have updated their biographies, meet new people, etc.
- Users who do not intend to have erotic relationships with others but aim to present or provoke sexual arousal by exchanging images or videos with others on the apps.
- Users addicted to sexual behaviour with others who use apps as a tool to find sexual partners.

It is advisable to assess the specific behaviours sought when using apps, which of them may have an addictive pattern, which may be causing more problems, and in what areas. Likewise, it is interesting to conduct a functional analysis that may include:

- Emotions being pursued.
- Sensations sought to avoid when using them.
- Sensations/emotions that occur when attempting not to use them.
- Strategies employed to try to reduce their use.
- The family, social, work, economic, or legal impact of the behaviours performed when using these apps.

In recent years there has been an effort to develop screening tools for problematic app use. The following section provides some useful questions for evaluating problematic app use. (Translated and adapted from PUTS, ¹⁸⁷.)

Table 17. Exploration of problematic app use

| |
|---|
| In the last year: |
| <i>How often have you thought about dating apps use?</i> |
| <i>Did you spend much more time on dating apps than initially planned?</i> |
| <i>Do you feel nervous or have issues if the use of dating apps is prohibited?</i> |
| <i>Have you forsaken other hobbies and leisure activities due to dating app use?</i> |
| <i>Did you use dating apps to alleviate feelings of guilt, anxiety, helplessness, and depression?</i> |
| <i>Have you attempted to reduce dating apps use without success?</i> |

Source: compiled from Gábor et al ¹⁸⁷



5.4.4. Compulsive sexual behaviour

Currently, there is debate about whether, in the case of problematic chemsex, it is possible to differentiate between addictive behaviour related to substances and addictive behaviour related to sexual practices. We are dealing with a compulsive sexual behaviour disorder when it is characterized by a repetitive pattern of difficulty in controlling sexual behaviours for at least six months, involving disruptions in family, personal, social, educational, occupational, or other areas of functioning ¹⁸⁸. This pattern would involve the following:

- Neglect of self-care, responsibilities, or interests due to engagement in repetitive sexual activities that have become the most important aspect of the individual.
- The individual has made unsuccessful efforts to try to reduce the behaviour.
- The individual continues the behaviour despite adverse consequences.
- The individual continues the behaviour even if they derive little or no pleasure from it.

When assessing users engaging in chemsex practices, it is essential to primarily evaluate the perception of “loss of control” and excessive behaviours with some degree of impulsivity or compulsivity. In the case of a pattern of impulsivity, sexual behaviours are perceived as ego-syntonic, and the issue lies in the difficulty of estimating potential harm with an external locus of control.

Conversely, in the case of a more compulsive pattern, there are repetitive behaviours, fantasies, or thoughts that the individual feels compelled to perform in response to an obsession or according to rules applied in a rigid or stereotyped manner ¹⁸⁹.

5.4.5. Social aspects

Just like with other addictions, it is important to assess the impact of chemsex on the social and recreational aspects, as well as in the workplace or academic environment, depending on the case ¹⁹⁰. The following areas should be analyzed:

- **Impact of chemsex on work or academic activity**

In general, depending on the pattern and frequency of consumption, there may be varying degrees of impact on the work or academic area for individuals engaged in chemsex. Initially, it is not uncommon for there to be work absences, typically on Mondays after weekends of consumption, which, if sustained over time, can lead to job loss. Low work or academic performance is also frequently observed.

- **Impact of chemsex on habits, lifestyle, and leisure**

It is important to assess the leisure activities of the individual and analyze how changes may have occurred in this area as a consequence of chemsex. Some community-based organizations offer recreational programs specifically designed for individuals engaged in chemsex.

- **Social and family bonds, and loneliness**

For some individuals, problematic drug use may also impact their relationships with family or non-using friends, making it important to address their recovery in these relationships. Often, there is also a reluctance to seek help from family and friends due to the stigma associated with drug use or sexuality. Many users identify loneliness as a stressful factor and a precipitant for relapses. This sense of loneliness can precede chemsex use and worsen during periods of high consumption. The lack of support networks and limited socialization spaces can be triggers for the initiation of chemsex practices. Sessions may serve as spaces to seek (and find) a sense of community and belonging. On the other hand, chemsex practices can also deteriorate pre-existing relationships and hinder the development of new connections with others.

- **User's legal situation**

Evaluate the impact of problematic practices on legal issues, difficulties in managing documentation, etc. In the case of users attending specific chemsex programs offered by community-based organizations, there is a high percentage of immigrants who may face challenges accessing documentation, housing, or social resources. There may also be legal issues related to drug use, such as penalties for possession of large quantities of drugs, assaults, thefts, etc.

5.4.6. Somatic complications and complementary tests

It is important to assess potential somatic complications related to the practice of chemsex. The most common ones include traumatic injuries (penile injuries, fissures and tears in anal mucosa, intestinal perforations, skin ulcers), STIs, and local and systemic infectious complications ²⁶. Other acute neuropsychiatric complications may include severe intoxication and coma, requiring urgent intervention, intubation, and transfer to the ICU, delirium ¹⁹¹, and encephalopathy ¹⁰⁹. Additionally, complications can arise from each drug used, the combination of several drugs, as well as interactions between drugs or drug-pharmaceutical interactions.

Periodically, it is necessary to conduct a comprehensive screening of serologies for major STIs based on the individual's risk level, following consensus documents that determine the screening frequency ¹⁹².

Additionally, regarding complementary tests, it is advisable to consider a complete blood count, biochemistry, coagulation studies, thyroid profile, and liver profile. In some cases, a chest X-ray and ECG may be relevant depending on the clinical presentation. Screening for infectious diseases such as HIV, HBV, HCV, and STIs (syphilis, gonorrhea, chlamydia, etc.) is also pertinent. Furthermore, if clinically suspected, it is important to rule out diseases related to anal-oral transmission, such as HAV, E.coli, and other intestinal bacteria.





6. THERAPEUTIC ALTERNATIVES FOR CHEMSEX USERS

6.1. Intervention strategies according to user needs

Psychotherapeutic intervention is the cornerstone of treating a chemsex user experiencing difficulties related to chemsex practices. Given the complexity of this phenomenon, different psychotherapeutic methods are often integrated based on the user's needs at various life stages and in multiple scenarios, including aspects such as substance use, app usage, sexuality, loneliness, and the need for alternative leisure, among others.

It is essential to assess the various potentially affected areas (social, occupational, mental and physical health, sexuality, etc.) and carry out different interventions based on the needs and profile of each user. Depending on the case, the following approaches can be considered:

User with recreational consumption without repercussions on physical or mental health

It is advisable to offer harm reduction interventions. Therapeutic goals for recreational consumption involve facilitating informed and thoughtful decision-making regarding sexual behaviours, drug use, and the prevention of unwanted consequences.

Some of the interventions that can be implemented include providing information about drugs (toxic doses, routes of administration, interactions, possible medical and psychopathological complications of acute and chronic consumption) and information about sexual health (sexual practices, associated risks, promoting reflection on short and long-term consequences).

User showing ambivalence regarding consumption

These are users who are aware that there may be a problem but have not yet started to make decisions that could facilitate a change. As some users describe in counseling, “I perceive some negative consequences but I’m not sure if I want to quit” or “I want to quit, but I’m not ready to do it yet.”

In this case, therapeutic goals will be to facilitate informed and thoughtful decision-making and prevent unwanted consequences from the practice, and to work on motivation for change. Some of the interventions that can be implemented are the same as those described in the previous section, and motivational interviewing techniques or brief interventions such as the FRAMES model can also be used, which will be explained later.

User with problematic consumption

The intervention objectives include reducing or quitting problematic practices, enhancing coping skills, emotional regulation, improving self-concept, quality of life, and stimulating impoverished vital areas - including addressing leisure and loneliness. Additionally, if another psychopathological disorder is present, addressing both the additional disorder and the addictive pathology simultaneously (dual pathology) is needed.

In the upcoming section, the basic principles of motivational interviewing are described, followed by some of the psychotherapeutic interventions that can be used with users engaged in chemsex practices.

6.2. Motivational interviewing

One of the most commonly used tools in addictive disorders is Motivational Interviewing (MI) ¹⁹³, which serves as a user-centered intervention combining an empathetic and supportive therapeutic style to help the user address their ambivalence towards change.

The essence of MI is based on evoking the user's values, fears, expectations, and hopes, with four key points and five fundamental principles ¹⁹⁴:

Table 18. Four key points of Motivational Interviewing

| | |
|----------------------|---|
| Acceptance | Not Judging. This involves affirming, showing empathy, supporting the user's autonomy, and genuinely valuing them. Chemsex: Care must be free from moral judgments. |
| Evocation | Not advising. This starts from the premise that the user has many skills and strengths that need to be evoked and enhanced. Chemsex: Ensure that the user shares what measures they have taken to avoid high-risk sexual behaviors,, excessive drug use, polyconsumption, etc. |
| Collaboration | Not Confronting. Active collaboration between the user and the therapist. Chemsex: Evaluate and ask if the user is capable of achieving small goals: eliminating profiles from apps, using non-injectable routes, etc. |
| Compassion | Not being indifferent, showing empathy but not pity. Chemsex: Consider well-being and satisfaction in the sexual sphere, self-care in consumption and sexual behaviours, and value the possibility of sober sex. |

Source: Author's elaboration based on Miller W and Bobes Bascarán M ^{193,194}

Table 19. Five fundamental principles of the Motivational Interview

| | |
|---|--|
| <p>Expressing empathy</p> | <p>Empathy involves accepting and respecting the user, but not necessarily approving of them. It entails communicating acceptance of the user’s perspective and using reflective listening. Chemsex: Empathy is crucial in therapeutic engagement and facilitating the process. It allows users to speak freely without feeling judged, often initiating a powerful cathartic process.</p> |
| <p>Developing discrepancy</p> | <p>Helping the user recognize where they are and where they would like to be regarding the habit or behaviour to modify. This leads them to name the reasons why they need or want to change, make plans, and commit to them. Chemsex: Working on changes regarding the duration of sessions, high-risk sexual behaviors,, methods of consumption, polydrug use, actively seeking alternative leisure activities, etc.</p> |
| <p>Avoiding arguing and debating with the user about the convenience or usefulness of a change</p> | <p>As ambivalence becomes evident, it is important for users to take responsibility for both sides: the good reasons for them to stay the same and the reasons for change. Chemsex: encourage the freedom to continue attending sessions even if there is resistance, and wait until the user is ready for change.</p> |
| <p>Working with resistance</p> | <p>The therapist must avoid attitudes that can foster potential resistance. In this approach, therapists never directly oppose resistance but empathize with the user, try to reframe the conversation, or shift the focus away from the area of resistance. When detecting resistance, a door will be left open to implement the change when appropriate and the user is ready. Chemsex: At this point, the therapeutic alliance must be strong, and there should be enough trust to address resistance later in the therapeutic process.</p> |
| <p>Supporting and fostering self-efficacy</p> | <p>Believing in the possibility of change is a crucial motivational factor, as it significantly influences the ability to initiate and sustain a new behaviour. It is essential to highlight strengths and specific skills, even reaffirming strengths that are evident to the user. Chemsex: Setting small, realistic goals allows for the reaffirmation of the capacity for change. For example, reducing the duration of sessions, decreasing the quantity consumed, uninstalling the dating apps by deleting the profile, etc.</p> |

Source: Miller, W. and Bobes Bascarán, M. ^{193,194}

To apply MI, it is valuable to understand the Transtheoretical Model of Change ¹⁹⁵, which is defined in various stages or dynamic states that can shift forward or backward. Depending on the stage in which the user finds themselves, specific techniques will be applied.

6.3. Psychotherapeutic interventions

Currently, there is not enough scientific evidence to recommend specific psychological interventions for users with chemsex practices. Below are some therapy models commonly used in the field of addictions that can serve as a foundation for treatment and intervention with chemsex users.

Table 20. Psychotherapeutic intervention in chemsex users

| | |
|---|--|
| <p>Relapse prevention therapy ⁸²</p> | <p>In this intervention model, the goal is to assist the individual in initiating and maintaining changes by identifying behavioural and cognitive processes that precede substance use.</p> <p>In the case of chemsex, the focus would be on working with the individual to identify cognitive distortions or factors that facilitate use, such as the use of geolocation-based dating apps.</p> |
| <p>Community reinforcement approach ¹⁹⁶</p> | <p>The community reinforcement approach involves providing positive reinforcements in the user's environment to encourage abstinence.</p> <p>In the case of chemsex, it is important to work on the support network and address healthy leisure alternatives. An example of this intervention is the one developed in Madrid by the community organization Apoyo Positivo in its therapeutic leisure program ¹⁹⁷.</p> |
| <p>Interpersonal skills training</p> | <p>The goal is for the user to train their abilities and knowledge related to social skills, communication styles, and coping strategies to promote self-control.</p> <p>This training can be done individually or in groups and is an aspect that can be addressed, for example, in addiction treatment centers.</p> |
| <p>Group therapies</p> | <p>The goal of group therapy is to provide a safe space where interventions allow the user to work on aspects such as emotional regulation, interpersonal skills, etc.</p> <p>Group therapy can become a space to address some aspects mentioned earlier, such as internalized homophobia, stigma related to certain sexual practices, or serophobia ¹⁹⁷.</p> <p>There are some group therapy models that specifically address drug use linked to sexuality, such as the one developed by Doug Braun-Harvey¹⁹⁸. Although not specific to chemsex, it can be adapted to this context.</p> |

FSource: Author's elaboration.

6.4. Pharmacological interventions

In the case of diagnosing a psychopathological disorder, depending on the type and severity, there are various options of psychotropic drugs that can be used in individuals with chemsex practices. We may encounter different situations where we need to use multiple psychotropic drugs, either acutely, for example, in a psychotic episode that presents at the emergency department, or a delirium episode in the liaison psychiatric consultation, as well as subacute or chronic use in mental health consultations or addiction treatment centers. Additionally, psychotropic drugs with broad profiles may be useful in different clinical scenarios.

Given that in many cases there is the possibility of using drugs off-label, it is necessary to thoroughly analyze the need and the benefit that the user can obtain. Some examples include the following: nalmefene as an anticraving or antipriming drug, topiramate and fluoxetine as anti-impulsivity agents, olanzapine as a hypnotic-sedative, gabapentin and pregabalin as anxiolytics, trazodone as a hypnotic, etc.

Since there are currently no guidelines or recommendations for addressing chemsex users, to facilitate the choice of psychopharmacological approach, some examples and recommendations are proposed that could be useful in clinical practice:

1. Assess a simple dosing regimen to facilitate therapeutic adherence.
2. In users diagnosed with HIV, various factors must be taken into account: adjusting psychotropic drugs in case of hepatic or renal impairment, possible interactions with antiretroviral regimens, immunological status, and virological control, etc. Making recommendations on the use of psychotropic drugs is crucial, and informing about possible interactions between psychotropic drugs, substances, and ART is essential.
3. In the case of needing to prescribe SSRIs (in depressive-anxious syndromes, addictive disorders), assess and agree with the user on the potential decrease in libido as a side effect. In many cases, this effect is sought as therapeutic assistance, so classic SSRIs are recommended. If this effect is not desired, the use of other drugs such as mirtazapine, trazodone, bupropion, or vortioxetine can be considered.
4. In the case of presenting an addictive disorder, if possible, avoid using benzodiazepines or only use them as an acute treatment or detoxification for a brief period, ideally not exceeding two weeks, and then switch to other sedative drugs such as gabapentin or pregabalin. Trazodone or mirtazapine can be considered as hypnotics, and even olanzapine. Avoid quetiapine due to potential interactions with ART.

5. In cases of psychomotor agitation due to stimulant intoxication, it is advisable to use benzodiazepines as the first-line treatment, associating a second-generation antipsychotic if psychotic symptoms are present. Olanzapine is useful due to its various formulations and sedative effect, or intramuscular aripiprazole can be combined with a parenteral benzodiazepine. In cases of GHB withdrawal, consider admission to the ICU for severe cases, use of long-acting benzodiazepines, and sedation with Propofol.
6. Acute-subacute psychosis. Use second-generation antipsychotics. Consider paliperidone due to its low potential for interactions and depot use. Aripiprazole depot may have an anticraving effect.

Table 21. Clinical situations and pharmacological alternatives

| CLINICAL SITUATIONS | PHARMACOLOGICAL ALTERNATIVES |
|---|---|
| Depressive Disorders | <p>SSRIs (Selective Serotonin Reuptake Inhibitors): Evaluate and agree with the user on the decrease in libido as a side effect. In many cases, this effect is sought as therapeutic assistance, making classic SSRIs advisable. If this effect is not desired, consider the use of Vortioxetine or another family of antidepressants, such as Mirtazapine, Trazodone, or Bupropion.</p> <p>Bupropion: Activating effect. It has shown efficacy in depressive states during stimulant withdrawal ²⁰⁰.</p> <p>HIV: Fewer interactions with Citalopram and Escitalopram due to weak action on the cytochrome P450 system ²⁰¹.</p> <p>Mirtazapine, Mianserin: Hypnotic-sedative effect. Monitor weight gain. Minimal alteration of libido.</p> <p>Duals: Duloxetine, Venlafaxine: Dual disorders as a first option, especially with alcohol. Severe cases with suicidal ideation ²⁰².</p> <p>Trazodone: Consider use as a hypnotic.</p> <p>Tianeptine: Few interactions, notable anxiolytic effect.</p> |
| Addictive disorders (Substances, sex, dating apps) | <p>Anti-craving and anti-priming drugs: Fluoxetine, Topiramate, Nalmefene, Naltrexone.: Monitor liver function. Watch for interactions. Nalmefene is useful on a “as-needed” basis. Off-label use. Mirtazapine has proven to be beneficial in methamphetamine use disorder ¹⁹⁹.</p> |
| Anxiety disorders | <p>SSRIs: Seek fewer interactions. Benzodiazepines: Use them for a short period. Gabapentin, pregabalin: Alternative use to benzodiazepines as anxiolytics.</p> |
| Psychosis (Acute, Subacute) | <p>Antipsychotics: Use second-generation. Olanzapine: Rapid hypnotic-sedative effect. Paliperidone: Low potential for interactions. Aripiprazole: Possible anticraving effect.</p> |

Source: Author's elaboration

6.5. Emergency and psychiatric consultation intervention

Finally, we want to highlight some recommendations for clinical settings where acute or subacute interventions are required, such as emergency or liaison psychiatric consultation. In the context of chemsex, there may be different situations that generate a demand for psychiatric assessment during hospitalization or psychiatric emergency. It may involve medical complications related to substance use (such as severe GHB intoxication or peripheral vein infection), psychiatric complications derived from substance use (psychotic symptoms in the context of substance use, suicidal ideation in a state of intoxication), and also patients who are assessed for other reasons but present problems derived from chemsex practices.

Below is a synthesis of the main recommendations for emergency and psychiatric consultation management:

- Use a syndromic approach for acute intoxications or withdrawal syndromes (considering the frequency of use, polydrug use, and the possibility of pharmacological interactions).
- Perform a thorough general medical screening that may include a complete blood count (CBC), coagulation profile, biochemistry, liver profile, serologies, ECG, and chest X-ray.
- Consider the administration of acute symptomatic treatment (benzodiazepines or antipsychotics) if needed.
- Rule out the possibility of having experienced sexual abuse or assault.
- Assess the need for post-exposure prophylaxis within the first 72 hours after a risky behaviour to acquire HIV.
- Coordinate with Internal Medicine for the treatment of major somatic complications such as traumatic injuries, acute sexually transmitted infections, and local and systemic infections.

The characteristics of the clinical environment in both emergency and liaison psychiatric consultations often make brief interventions focused on providing updated information about different clinical aspects of various substances and psychiatric conditions useful. Both brief versions of motivational interviewing and the FRAMES model are frameworks that can be helpful in addressing motivation for change, both in relation to substance use and in relation to compulsive or high-risk sexual behaviors, for acquiring sexually transmitted infections (STIs).

The principles of the FRAMES MODEL ²⁰³ are summarized below:

- The attending professional should provide adequate feedback to the user regarding information related to drug use, including expected effects and possible complications associated with both acute and chronic consumption.
- Foster user responsibility for their behaviour and decisions regarding substance use. In the case of chemsex, it is important to link drug use with its effects on sexuality.
- Offer clear, objective, and unbiased advice on how to reduce harm associated with the practice of chemsex. Effective harm reduction strategies based on models of harm reduction should be provided if the user does not wish to pursue abstinence ²⁶.
- Provide different strategies and therapeutic options. As described in this chapter, it is essential to have various pharmacological and psychotherapeutic tools that can be adapted to each user. In the context of chemsex, a combination of interventions from psychiatry, psychology, social work, and sexology is often necessary.
- Enhance perceived self-efficacy. Similar to other addictive processes, it is important to seize opportunities to identify the user's potential strengths and changes already made that can facilitate movement toward less problematic behaviours or increase control in such behaviours.





7. MULTIDISCIPLINARY APPROACH

7.1. The importance of an integrated approach

As we have seen earlier, chemsex is a complex phenomenon, and users engaging in these practices may have multiple associated problems. In general, addressing chemsex requires the involvement of various types of services and teams, which need to coordinate to provide integrated and interdisciplinary treatment. Hence, it is crucial for each professional to be aware of the other professionals involved and their role in joint care.

The entry points into the care circuit are usually those services where users seek their initial care, but there are also teams that screen for chemsex and detect cases, as is the case in many STI Centers, HIV Units, and rapid-testing programs of community entities, etc.

In the following sections, a list of different public and community resources that participate in the approach to chemsex is provided, including a brief description of the type of care they provide. Some of the challenges in multidisciplinary intervention are also discussed, along with proposals for best practices to carry out a comprehensive approach.

7.2. Approach to chemsex from different public services

The Technical Document on Chemsex Approach from the Ministry of Health of Spain ²⁶ identifies the following public healthcare resources involved in addressing the health needs of chemsex users:

- **Addiction Care Centers:** These are interdisciplinary services that specifically address both substance addictions and behavioural addictions. They can work with goals of both abstinence and risk reduction. Many centers provide personalized care for the user, extending their services to the user's partner or family, and some offer group therapy as well. It has been observed that intravenous drug use, as well as smoking methamphetamine, can lead to severe substance use disorder. In such cases, referral to therapeutic communities or detoxification centers in the drug network is indicated and is often beneficial for users, especially when addressing addictive pathology and other mental disorders comprehensively. These stays typically last 2-3 months and allow for the restructuring of various psychosocial aspects of the users. The addictions services also has supervised apartments and reintegration apartments that can benefit users with severe cases and precarious social situations.
- **STI Health Centers:** Due to their sexual practices, chemsex users may be especially exposed to contracting STIs and are among the group of GGMSM who may require more frequent STI testing. Many teams in these centers leverage their regular contact with users to ask questions and conduct assessments that can identify drug use in sexual contexts. Through their interventions, they can, among other actions, diagnose and treat STIs, conduct contact studies, facilitate access to Pre-Exposure Prophylaxis (PrEP), disseminate health messages, and assess the need to refer the user to other services whose intervention may be relevant to address their health needs.
- **Infectious Diseases Services / HIV Units:** A significant portion of the patients treated in these units are GBMSM. Additionally, evidence shows that chemsex is more prevalent among GBMSM with HIV. Since the emergence of this phenomenon, HIV unit teams expressed concern about the implications these practices could have on adherence to HIV treatments, drug interactions with antiretrovirals, and the general health of chemsex users. As these professional teams maintain periodic contact with patients, they serve as an ideal resource for detecting chemsex and addressing some of its facets. This includes closer monitoring, providing information and counseling, paying special attention to the risk of HCV infection or reinfection, identifying problematic drug use and practices, and facilitating referrals to other services that the patient may require.

- **Mental Health Services:** These services, whether in outpatient care or inpatient units, liaison services, and psychiatric emergency services, are responsible for managing psychiatric pathology that may be associated with chemsex practices. This can include affective disorders, psychotic conditions, suicidal ideation, and others.
- **Hospital Emergency Services:** Hospital emergency services can serve as the entry point to the healthcare system, primarily due to the health-related consequences of chemsex, such as mental health issues (psychotic symptoms in the context of substance use, suicidal ideation), physical health concerns (peripheral vein infection, GHB overdose), or sexual health issues (e.g., after high-risk sexual practices for HIV acquisition requiring PEP). In these services, detection, evaluation, brief intervention, acute medical pathology treatment, and referrals to resources can be carried out.
- **Primary Care:** The high accessibility and proximity of these centers can also make them a space for the detection of health problems related to chemsex, especially in urban environments where this phenomenon is more prevalent.

The document *Recommendations from Experts for the Improvement of the Comprehensive Approach to the Chemsex Phenomenon in Spain*²⁰⁴ describes the objectives of intervention in each type of healthcare resource.

7.3. Addressing chemsex through community-based organizations

Similar to decades ago with the challenges posed by the emergence of HIV, community-based organizations have been at the forefront of the response to the chemsex phenomenon. They were the first to implement specialized healthcare services to meet the health needs of these users and to publish informative materials aimed at prevention in this context. In Spain, contributions stand out from LGBTQ+ organizations such as Stop, organizations dedicated to HIV response like Apoyo Positivo, and others focused on risk reduction in consumption like Energy Control^{142,204}.

As several authors suggest ^{6,205}, these organizations promote the participation of the community itself in the design and implementation of prevention and treatment strategies based on their own needs ²⁶. The qualities that users value most regarding the care provided by community organizations their closeness, accessibility, and the confidence that their professionals have the appropriate LGBTQ+ cultural competencies to address sexual and consumption-related aspects naturally, with a judgment-free approach ¹⁹⁷. These are spaces that go beyond the classic biomedical approach that is often used in other healthcare centers and include a perspective on human rights, a gender perspective, and respect for sexual diversity.

The work carried out by these organizations in the field of chemsex varies widely, including interventions such as:

- Psychological counseling
- Sexological counseling
- Psychiatric care
- Sexual education and psychoeducation
- HIV, viral hepatitis, and other STI testing
- Therapeutic leisure activities
- Self-help groups and therapeutic groups
- Peer education and support
- Detection and assessment of cases with problematic use, referral, and coordination with other resources
- Professional training
- Information and awareness campaigns, organizing events and conferences
- Publishing preventive materials, brochures, videos, websites, etc.
- Prevention and risk reduction interventions
- Distribution of consumption paraphernalia, condoms, lubricants, etc.
- Research and scientific dissemination

The described approaches are personalized and tailored to the user's goals, whether they aim for abstinence or want to reduce the risks associated with these practices. Some of the actions carried out by community organizations, such as psychological counseling and risk reduction counseling, are also available in online formats. This includes the involvement of cybereducators who have profiles on gay dating apps.

In Spain the interventions conducted by the community organizations Apoyo Positivo and Stop Sida are particularly relevant. More information about these organizations is provided in the following profiles:

ChemSex Support Program (2016): This program was established in 2016 and provides a comprehensive approach to users engaged in chemsex practices. It collaborates with HIV units, mental health services, and addiction treatment centers. The program conducts interventions in training, prevention, and treatment, with a team of specialized professionals in mental health, addiction, sexology, therapeutic recreation, and social work. ²⁰⁶

Stop has been implementing the ChemSex Support program since 2015, offering individualized, confidential, and free psychological and social support. The program emphasizes peer intervention, incorporating a gender and sexual diversity perspective and considering experiences such as HIV diagnosis or migration. Grounded in a user-centered model, the program involves intensive coordination with other public resources. ²⁰⁷

7.4. Proposals for an integrated approach to chemsex

In many cities, there are still certain barriers that prevent chemsex users from accessing appropriate professional care when needed. Healthcare pathways are not adequately defined and advertised at the local level. Professionals may need to update and enhance their training. Moreover, a significant portion of the approaches taken requires an increase in collaboration and coordination among participating teams and establishment of formal protocols.

Below, these and other identified limitations are addressed, accompanied by proposals that could enhance the delivery of this care and move towards integrated approaches.

Table 22. Limitations detected in the chemsex approach and proposals to address them

| LIMITATIONS DETECTED | PROPOSALS |
|---|---|
| Need for proper training in LGBTQ+ cultural competencies, psychoactive substances used in the context of chemsex, and the management of related medical, psychiatric, and social complications. | Increase the availability of training to ensure that users are attended to by professionals with the appropriate preparation. This is more of a priority in cities where the chemsex phenomenon is more prevalent. |
| Feelings of shame on the part of users, fear of being judged, or not finding adequate support. Care that is limited to addressing aspects related to the sexual facet of chemsex. | Provide professionals working in addiction, mental health, etc., with appropriate training on addressing aspects related to sexuality. Incorporate sexologists into the teams of reference centers that serve a higher volume of chemsex users. |
| Lack of specific programs and a defined and easily locatable care circuit for chemsex users. | Study and define the care circuit in major cities, establish entry points, and disseminate through appropriate channels. |
| Existence of teams whose working approach only considers drug abstinence. | Diversify approaches, including the harm reduction perspective. Ensure professional care that is free from moral judgments. |
| Non-integrated approaches, carried out in parallel in different centers (mental health center, HIV unit, addiction treatment center, etc.) Difficulties in coordination among professionals from public resources and between these and community-based organizations. | Design formal intervention and coordination protocols among the different teams or services involved in addressing medical, psychiatric, sexual, socio-labor-related issues, etc., for chemsex users. Promote an integrated approach, avoiding uncoordinated parallel interventions. |
| Challenges in accessing services emerge due to their limited availability during morning hours, conflicting with the work schedules of many users. | Offer also appointments in the afternoons, thus reducing barriers for those who fear having to provide explanations if they take time off work to receive professional care. |
| Challenges for users to effectively participate in reflecting on how to address their situation and how to design and organize services to provide them with adequate care. | Expand options and channels for users participation in the design of services, especially with the collaboration of community-based organizations. Promote a user-centered approach focused on their health needs. |

Source: Author's elaboration



8. CLINICAL CASES

Below, two real clinical cases are presented, developed by the psychiatrists who are authors of this publication. We hope that their content helps illustrate some of the distinctive and specific clinical challenges we face with chemsex users, while also providing examples of interventions that could be beneficial for addressing chemsex issues.

8.1. CLINICAL CASE 1

Motivation for consult

A 27-year-old male of Latin American origin attends a psychiatry consultation at the community-based organization Apoyo Positivo.

Family history

No significant family history is reported.

Personal mental health history

No history of psychiatric conditions is mentioned.

Medical history

Diagnosed with HIV two years ago, with undetectable viral load and on antiretroviral treatment (ART), with adequate follow-up. Multiple sexually transmitted infections in the past year: three episodes of syphilis, one of gonorrhea, condylomas, HCV infection.

Drug use

He had never used drugs until two years ago when he started using dating apps to meet people and discovered chemsex sessions. Acknowledges active and daily intravenous use of mephedrone and methamphetamine for about three months, without specifying doses as it depends on availability. Shows tolerance, withdrawal symptoms, and significant craving. Unsuccessful attempts to quit. Has significant financial debts and is on the verge of losing his job due to frequent absences.

Notable biographical information

Has been living in Spain for 5 years “to live freely.” Emigrated alone and secured a job as a waiter with a permanent contract. Despite a conservative upbringing, his parents love and support him “despite being homosexual.” Experienced feelings of shame and discomfort during adolescence related to his homosexuality, with instances of bullying at school.

Current episode and progression

In 2017, the user first sought assistance from the community-based organization Apoyo Positivo and was evaluated by a psychiatrist. Attended three times, rejected referral to any other professional. Acknowledges active and daily intravenous use of mephedrone and methamphetamine. During all interviews, the user describes psychotic symptoms. Appears restless, sweaty, and highly suspicious. Quietly mentions that he is convinced his sexual partners have been recording him without his consent using hidden cameras on their body, such as on their nipples, which scares him and has led him to go out semi-naked on the street seeking help from the police.

When explained that this experience may be related to his drug use, he doubts it, although he occasionally admits it could be. However, he is unable to stop using and attending chemsex sessions because he cannot stand being alone. Antipsychotic medication is offered, explaining that it can help control his anxiety, but he claims “he doesn’t have money to buy it” and even rejects a blister of pills offered to him. In the fourth consultation, he leaves the waiting room, which is crowded, stating that “it was taking too long to see him.”

The user stops attending Apoyo Positivo. Returns in 2019. States that at the beginning of 2018, he went to an addiction treatment center (ATC), from which he was referred to a Detoxification Center for a 3-month inpatient program. In this center, he did not feel comfortable or integrated with the other users, with the feeling that his issues were different, and sexuality was never addressed in his treatment. During his stay, he was started on aripiprazole 10 mg daily, desvenlafaxine 100 mg daily, and clorazepate dipotassium 30 mg daily.

He experiences an almost immediate relapse after discharge, returning to intravenous slam use in sessions and sometimes alone at home, using a webcam. Therapeutic adherence needs to be addressed again. Inpatient admission to a psychiatric hospitalization unit for detoxification is offered.

Initially reluctant, he rejects it, arguing that he is alone in Spain and needs to find work. After several interviews, he admits to experiencing psychotic symptoms during drug use, which subside the next day, only to resume drug use. He agrees to start aripiprazole depot, helping him reduce drug use to three or four times a week (previously daily).

He agrees to start receiving psychological care and maintains close monitoring with two weekly appointments. Agrees to be admitted, agreeing to be called when a bed is available. After a few days, an appointment is scheduled, and he comes directly from a session for hospital admission.

During the initial assessment at the hospital, an abscess is observed in the arm, requiring urgent surgery and intravenous antibiotics. During the first week of admission, he appears very suspicious, dysphoric, and restless, requiring high doses of medication to alleviate withdrawal symptoms (gabapentin 2400 mg daily, clonazepam 6-8 mg daily, olanzapine 15 mg daily, and trazodone 200 mg daily). During the admission, he speaks with his parents via Skype, disclosing that he has been diagnosed with HIV and is admitted for drug use (he had not shared any of this with his family until then).

After three weeks, he is discharged, and intensive follow-up is conducted by the community organization Apoyo Positivo and the specific chemsex program at the addiction center. Temporary work disability is processed, and he is advised to change his phone number, deleting contacts and only using data to call his parents via Skype (who are in his home country).

He agrees to participate in therapeutic leisure activities, job orientation workshops, and group therapy. He progresses positively, allowing for a gradual withdrawal of all medication, maintaining desvenlafaxine 100 mg daily and trazodone 100 mg for hypnotic purposes after three months. Successfully finds a job and maintains substance abstinence (6 months), attending sexual therapy groups in a program conducted at an Action Support Center in coordination with Apoyo Positivo, focusing on aspects such as learning to enjoy sex without drugs.

Relapse in March 2020

Admitted to the acute psychiatry unit of a general hospital after experiencing episodes of psychomotor agitation at home, with suicidal threats (threatening to jump out of the window). He refers that since the coronavirus lockdown, he has practically isolated himself in his room and engages in slam with methamphetamine at a dose of 0.5 grams daily. This time, consumption occurs while watching pornography, entering chats where videos and images of users practicing slam are shared, and forums with webcams.

He begins to develop induced psychotic symptoms, which disappear sometimes after ceasing the use of psychoactive substances. He comes to believe that “the lockdown is a lie” and is surprised when he goes out one day to buy substances and is arrested by the police, concluding that there is a conspiracy against him because “he is the coronavirus.”

An agitation episode occurs in the context of withdrawal when he asks his housemate for money and she refuses. Eventually, he is evicted from the house. He also loses his job and subsequently his subsidy for not attending the corresponding appointment. He becomes homeless and goes to the hospital presenting withdrawal symptoms from methamphetamine.

Detoxification is carried out, and after a month of hospitalization, through coordination with an addiction center, he secures a place in a treatment support apartment.



8.2. CLINICAL CASE 2

Reason for Consultation

29 year old male, attending outpatient psychiatry consultations referred by the HIV unit for “drug-related issues.”

Family history

Sister diagnosed with borderline personality disorder.

Personal mental health history

Suicide attempt and depressive episode at 27 years old. No consultation with mental health professionals or treatment received.

Medical History

Diagnosed with HIV infection three years ago with good control. Antiretroviral treatment (ART): elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide fumarate. Reports having had syphilis on three occasions (in 2011, 2013, and 2017) for which he received antibiotic treatment with a good response. Hepatitis A diagnosed in 2011. Hepatitis C cured, treated in 2017.

Drug use:

- Cannabis use from age 16 to 26, with an abuse pattern (0.5 grams per month), restricted to weekends. Stops using cannabis after HIV diagnosis.
- Alcohol consumption from age 16 to 26, around 8 liters of beer per week, mainly on weekends.
- From age 26 to the present, reduces alcohol consumption to twice a month, in a recreational context, with approximately 3 liters of beer per month.
- MDMA use from age 23 to 26. Does not specify the exact amount, around one pill per month. No serious intoxications associated with consumption.
- Mephedrone use: Started nine months ago to the present. Initially used once a month, around 1 gram per episode. Initially only snorted only.
- Last three months: Mephedrone injected intravenously once a month, snorted once a week (average consumption of 1 gram per week). GHB use: She began using GHB nine months ago, at the same time as mephedrone, “a quarter of a bottle per session.” Three episodes of low consciousness; on two occasions, required medical evaluation. Also reports inhalation of ethyl chloride in sexual context (around 5 inhalations per session, unknown dose). He doesn’t report any problems associated with ethyl chloride use. He mentions using poppers and sildenafil during mephedrone use.

Biographical Information

He mentions that his childhood passed without complications or traumatic events. Subsequently, during his adolescence, he recalls many arguments between his parents at home. His parents divorced when he was 14 years old. He experienced bullying in high school, which he attributes to being shy and having a non-normative gender expression.

At the age of 15, he begins to engage in his first sexual relationships through internet contacts. He describes these initial sexual experiences as very impulsive; “I would do anything to not be at home.” “Things at home were awful, with lots of shouting, and I preferred not to be there.”

He has been using gay dating apps for seven years. He mentions using dating apps “as an escape route: “I feel overwhelmed and I get into the app”, “I have a lot to study, so I arrange to meet someone”, “I argue with a friend, so to get away, I meet with someone”.

He mentions that he currently uses dating apps every day for an average of two hours. He usually meets for sexual encounters once a week. He describes feelings of sadness or frustration after using the apps, sometimes stating that “it helps alleviate his loneliness.” He alternates between some sexual relationships defined as compulsive “to calm anxiety.” “If I don’t meet someone, I can’t stop thinking about sex” and others that he identifies as more pleasurable.

He reports regular use of condoms in anal sexual encounters. He mentions having engaged in both insertive and receptive anal sex without using a condom at least five times in the last few months. Currently, he has been living with his partner for several months, has no income, lost his last job as a waiter two months ago, and is pursuing various training courses in visual arts.

Current episode and evolution

He comes to the consultation seeking help “to control drug use.” The user reports that 9 months ago, he tries mephedrone for the first time when another man offers it to him after meeting on a dating app. He describes that initially, sex was intensely pleasurable, “very fun, and much longer than usual”. During the last month, he has used mephedrone and GHB whenever he meets someone for sexual encounters through the dating apps.

He also enjoys sex without drugs, but he finds it less intense and more boring. He reports a feeling of loss of control over the last eight weeks. He goes to the emergency room for infections in his arm, requiring intravenous antibiotics and surgery.

Although he has difficulty specifying when the symptoms began, he explains that in recent months, he has progressively felt more lack of energy. He mentions that he has stopped having contact with friends, distanced himself from family, and hardly engages in leisure activities. He can't enjoy activities he used to like, such as going to the cinema or reading. He recently lost his job.

In the past few weeks, he has had the sensation that he is being recorded during sessions, an impression that lasts for a few days and then this sensation subsides after about a week. He doesn't exhibit psychotic symptoms in the first consultation.

Following the assessment, a therapeutic plan tailored to his needs is agreed upon. Initially, it is diagnosed as a recurrent depressive disorder with current depressive symptoms. Although he doesn't meet criteria for a disorder due to the use of mephedrone, GHB, or ethyl chloride in terms of temporality, he does exhibit significant severity criteria, such as intravenous use and psychotic symptoms induced by consumption that persist for a longer time than intoxication but resolve without professional or pharmacological intervention. He also has problematic use of gay dating apps.

The user agrees to undergo a general medical checkup and coordinate with Internal Medicine for the following interventions (electrocardiogram, screening for sexually transmitted infections such as syphilis, HIV, HCV, gonococcus, and chlamydia; complete blood workup including blood count, biochemistry, liver profile, and thyroid profile) and evaluation of changing antiretroviral therapy due to the high risk of toxicity from the use of cobicistat, as it increases the potential toxicity of mephedrone and GHB. There is no scientific evidence regarding interactions between ethyl chloride and ART.

A decision is made to change the antiretroviral therapy to another regimen (bictegravir sodium / emtricitabine / tenofovir alafenamide fumarate).

The user agrees to start escitalopram at a gradually increasing dose up to 20 mg as an antidepressant treatment. Gabapentin is added at a dose of 900 mg daily for anxiolytic purposes. When informing the user about potential benefits and side effects, he identifies the potential beneficial side effect of decreased libido secondary to SSRIs. Both medications are maintained at the current doses for 12 months.

The user agrees to meet with a psychiatrist monthly, utilizing motivational interviewing strategies.

In addition, due to the user's request to address risk reduction aspects, several interventions are carried out, including:

- Psychoeducation on the main effects of drugs, focusing on the expected effects based on doses and routes of administration. Several interviews are dedicated to the psychopathology related to each substance and strategies for minimizing the associated risks to be employed before, during, and after chemsex sessions. He is advised seeking help from friends and family for particularly serious situations, such as intoxications with low consciousness and associated psychotic symptoms.
- Potential complications of drug use in the context of depressive pathology and possible uses of drugs as self-medication.
- Possible medical complications associated with the intravenous use of mephedrone, combined use of poppers and sildenafil, as well as various depressants at the same time (use of GHB and ethyl chloride).
- Use of geolocation-based gay dating apps and potential consequences on mental, sexual health, and associated drug use. He begins psychological treatment and group therapy with the organization Apoyo Positivo in addition to an assessment with a social worker to design a therapy plan. In the end, he only has one individual appointment with the social worker.

For a year, he receives follow-up from psychiatry and psychology. After four weeks of psychopharmacological treatment, there is a significant improvement in depressive pathology and anxiety control. After six months of reducing substance use, he manages to adopt a pattern of using only poppers and snorted mephedrone once a month, with a dose of 1 gram per episode.

Following a breakup related to escalating arguments regarding his drug use and being expelled from a job training program for absenteeism, he decides to consider abstinence. Since then, therapy has focused on a relapse prevention model. After six months of follow-up, he has only had two isolated relapses and is currently on a psychopharmacological treatment reduction plan if mood stability is maintained.

9. ACRONYMES



| | |
|-----------------|---|
| Alfa-PVP | α -Pyrrolidinopentiophenone |
| App | Dating apps |
| BD | 1,4-butanediol |
| ACC | Drug dependency/ addiction care centers |
| PCC | Primary care centers |
| CD4 | CD4 T lymphocytes |
| COVID-19 | Infectious disease caused by the SARS- CoV-2 coronavirus |
| DSM | Diagnostic and Statistical Manual of Mental Disorders |
| MI | Motivational Interview |
| EMIS | European MSM Internet Survey |
| G | Slang term for GHB |
| GABA | Gamma-aminobutyric acid |
| GBMSM | Gays, bisexual and other men who have sex with men |
| GBL | Gamma-butyrolactone |
| GHB | Gamma-hydroxybutyric acid or gamma-hydroxybutyrate |
| MSM | Men who have sex with men |
| SSRI | Selective Serotonin Reuptake Inhibitors |
| STD | Sexually Transmitted Disease |
| IV | Intravenous |
| LGBTQ+ | Lesbian, gay, transexual, bisexual, queer or other sexual non-normative identities and orientations |
| MAO | monoamine oxidase enzyme |
| MDMA | 3,4-methylenedioxymethamphetamine, known as ecstasy |



| | |
|----------------|---|
| Mg | Milligrams |
| NPD/NPS | New Psychoactive Drugs/ New Psychoactive Substances |
| PPE | Post-exposure Prophylaxis |
| PrEP | Pre-exposure Prophylaxis |
| SPNS | Secretariat of the National Plan on AIDS |
| ART | Antiretroviral Treatment |
| PTSD | Post-Traumatic Stress Disorder |
| ICU | Intensive Care Unit |
| HAV | Hepatitis A virus |
| HBV | Hepatitis B virus |
| HCV | Hepatitis C virus |
| HIV | Human Immunodeficiency Virus |
| 3-MMC | 3-methylmethcathinone |
| 4-MEC | 4-methylethcathinone |
| 2-CB | 2.5-dimethoxy-4-bromophenethylamine |
| 5-FDE | phosphodiesterase-5 enzyme |



10. GLOSSARY



| | |
|----------------------------|--|
| Bareback | Intentional seeking of sex with penetration without a condom. |
| Bears (Osos) | Gay subculture. According to Javier Sáez (2005), “the bear culture is nourished by some traditional values of masculinity: beard, body hair, strong, large body...” |
| Clubbers | Regular attendees of electronic music clubs or discos, or related to club culture. |
| Crossdresser | This concept includes various terms such as transvestite, trans performer, or drag queen, which generally involve the wearing of clothing traditionally associated with a gender different from the one the person identifies with. |
| Empathogenic effect | A term coined by psychologist Ralph Metzner in 1983 (Dolengevich H 171, p. 26) to refer to the experience with MDMA, defining a feeling of closeness with others, a deep sense of emotional connection, feelings of well-being, and self-acceptance; it is used synonymously with entactogen. |
| Fetish | Fetishism / fetishist |
| Fisting | Introduction of the hand or fist into the rectum. |
| Gender expression | According to the World Health Organization (WHO) 210, “gender refers to the roles, characteristics, and opportunities defined by society that are considered appropriate for men, women, boys, girls, and non-binary individuals”; gender expression may include behaviours, appearance, or clothing used to manifest the gender identity with which the person identifies themselves. |
| Non-binary person | A person whose gender identity does not align with the binary model of male or female. |
| Trans person | Those who do not identify with the sex they were assigned at birth. |



| | |
|--------------------------------|---|
| Psychonauts | Term coined by Ernst Jünger, referring to navigators of the mind or consciousness; it refers to individuals who use psychoactive substances (or other methods like meditation) to alter consciousness and explore the human experience and existence. |
| Serophobia | Stigma and discrimination towards people with HIV. |
| Setting | Refers to the context or environment, both physical and interpersonal, and the specific circumstances under which psychotherapeutic intervention is carried out. |
| Slam, slamming, slamsex | Sexualized use of drugs via intravenous administration. |
| Swinger | Individuals, a social phenomenon, or a lifestyle that involves consensual sexual activity in couples with third parties, usually in the presence of the other member of the couple 211. |
| Cruising zones | Locations where casual outdoor sexual encounters take place. |





11. LINKS TO EXPAND INFORMATION ABOUT CHEMSEX

Technical document: Approach to the phenomenon of chemsex. National HIV Strategy. Ministry of Health. Spain. 2020.

English version: https://www.sanidad.gob.es/ciudadanos/enfLesiones/enfTransmisibles/sida/chemSex/docs/Documento_tecnico_fenomeno_chemsex_final_tob1.pdf

Spanish version: https://www.sanidad.gob.es/ciudadanos/enfLesiones/enfTransmisibles/sida/chemSex/docs/CHEMSEX._ABORDAJE.pdf

Preguntas y respuestas sobre chemsex. National HIV Strategy. Ministry of Health. Spain. 2020.

https://www.sanidad.gob.es/ciudadanos/enfLesiones/enfTransmisibles/sida/chemSex/docs/Documento_preguntas_chemsex.pdf

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Created: november, 2020

ISBN: 978-84-09-55925-1

English version: June 2024