

Descriptive analysis of chemsex users undergoing treatment for addictions in the city of Madrid

Estudio descriptivo de las personas en tratamiento por adicciones que practican chemsex en la ciudad de Madrid

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Resumen

Introducción: La práctica de chemsex constituye un problema de salud pública con múltiples consecuencias para la salud -física, psicológica, sexual y social- de quien lo practica, tanto derivadas de las prácticas sexuales de riesgo como del consumo de sustancias. El objetivo de este estudio ha sido analizar el perfil sociodemográfico, clínico, de consumo, y los antecedentes potencialmente traumáticos, de las personas en tratamiento por uso de sustancias en contexto chemsex. Metodología: Estudio transversal retrospectivo descriptivo en una muestra de 529 personas en tratamiento entre el 1 de enero de 2021 y el 30 de junio de 2022 en los CAD de Madrid Salud. Resultados: Perfil sociodemográfico: Hombres Cis (99,1%), 39,1 años de media, españoles (60,9%), con estudios superiores (53,9%), empleados (62,4%). Perfil clínico: VIH + (59,8%), VHC (22,2%), ITS (75,5%), diagnóstico de salud mental (56%), PrEP (45,5%). Violencias: antecedente de violencia (37,2%): violencia de odio (20,6%), violencia intrafamiliar (13,4%), violencia de pareja (10,6%), violencia sexual (10,4%); ejercicio de prostitución (10,6%). Consumo de sustancias: policonsumo (65%), mefedrona (76,9%), GHB (41,8%), anfetaminas y derivados (29,3%); vía intravenosa (49,7%), abscesos (18,1%), consumo en soledad (35,1%), sobredosis previa (17,5%). Conclusiones: Los resultados obtenidos sugieren la necesidad de recoger de forma sistemática información sobre el perfil y situación de las personas en tratamiento por consumo en contexto chemsex, así como de diseñar intervenciones específicas desde la perspectiva de las adicciones, con el fin de mejorar la atención y adaptarse a las necesidades de este grupo.

Palabras clave

Chemsex; Adicción; ITS; VIH; Violencia.

Abstract

Background: Chemsex has become a public health issue due to its consequences on physical, psychological, sexual, and social health. These stem not only from high-risk sexual activities, but also from substance use. The aim of this study has been to analyse the profile of chemsex users undergoing treatment for addiction, including sociodemographic and clinical characteristics, as well as information about substance use and potentially traumatic events. Methods: A cross-sectional, retrospective, descriptive analysis was conducted in a sample of 529 people undergoing treatment between 1st January 2021 and 30th June 2022 in the Centres for Addiction Treatment (CAD) of Madrid City Council. Results: Sociodemographic profile: Cis Men (99,1%), 39,1 years (mean), Spanish (60,9%), higher education (53,9%), employed (62,4%). Clinical profile: HIV + (59,8%), HCV (22,2%), STIs (75,5%), mental health diagnose (56%), PrEP (45,5%). Violence: history of violence (37,2%): hate violence (20,6%), intra-family violence (13,4%), intimate partner violence (10,6%), sexual violence (10,4%); sex work (10,6%). Substance use: polydrug use (65%), mephedrone (76,9%), GHB (41,8%), amphetamines and its derivatives (29,3%); intravenous use (49,7%), abscesses (18,1%), solitary drug use (35,1%), history of overdose (17,5%). Conclusion: The results obtained suggest that information about the profile and situation of chemsex users undergoing addiction treatment be systematically collected, and specific addiction-oriented interventions be designed in order to better adapt the treatment to their needs.

Keywords

Chemsex; Addiction; STIs; HIV; Violence.



INTRODUCTION

The sociodemographic characteristics of chemsex users, according to studies conducted in Spain, include Spanish men, average age between 30 and 40 years, single, highly educated, and employed (Ballesteros López et al., 2016; Curto Ramos et al., 2020; González-Baeza et al., 2018; Ramos et al., 2021; Zaro et al., 2016).

Although it may vary between countries, the substances most frequently consumed in Spain are mephedrone (and other cathinones), GHB/GBL (gamma-hidroxybutyrate/ gamma-butyrolactone), methamphetamine (and other derivatives), ketamine, cocaine, poppers, and erection stimulants, with polydrug use being common (Curto Ramos et al., 2020; Zaro et al., 2016).

The multiple consequences of chemsex on physical, psychological, sexual, and social health have been noted, having been considered a public health issue (Bolmont et al., 2022). These consequences stem not only from high-risk sexual activities, but also from substance use and intravenous injection. These include HIV and HCV infections, STIs, as well as overdose and abscesses (Bourne et al., 2015; Curto Ramos et al., 2020; Grupo de Trabajo de chemsex del Plan Nacional sobre el SIDA., 2019). Some studies have linked chemsex with potential traumatic events in the lifespan, such as sexual abuse, hate crimes or suicide attempts (Edmundson et al., 2018; European Centre for Disease Prevention and Control. et al., 2019; Lopez-Patton et al., 2016).

Since a specific intervention programme for chemsex users with addictions started in the Centres for Addiction Treatment (CAD)

of Madrid Salud in 2017, there has been an exponential increase in the number of people demanding treatment, going from 50 to 351 in 2021 (602% increase) (Madrid Salud & Ayuntamiento de Madrid, 2017, 2022).

This challenge that addiction professional teams have encountered has highlighted the need for information and training in order to provide adequate attention to this group. Identifying relevant aspects within this group can facilitate both tailoring and developing interventions that address their specific characteristics and needs.

Therefore, the aim of this study has been to characterise the sociodemographic, clinical and substance use profile, as well as the potentially traumatic history, of the people undergoing treatment for the use of substances in the context of chemsex in the CAD of Madrid Salud.

METHODS

Cross-sectional, retrospective, and descriptive study of a sample of 529 chemsex users treated between January 1, 2021, and June 30, 2022, at the Centres for Addiction Treatment (CAD) of the Institute of Addictions in the city of Madrid.

The data were exported from the Unified System for Addictions Record (SUPRA) and reviewed in July 2022, obtaining the information recorded up to that month. Although a large part of the sample had a specific record of “chemsex programme”, some cases of people with no specific record who were undergoing treatment for addiction to substances commonly used in the context of chemsex (mephedrone, GHB, amphetamines, ketamine, etc.) were also added to the sample by reviewing their clinical history.



When there were duplicates, the most recent one was kept in order to have the most up-to-date sociodemographic information.

Apart from the intervention-related sociodemographic, clinical, and substance use variables that are commonly recorded in SUPRA, new variables that are considered relevant for this group were included, such as the use of PrEP, the history of violence or prostitution, previous suicidal attempts, or specific aspects of drug use, like solitary use, overdose, or abscesses from intravenous injection. A review of the records was carried out to obtain information on the new variables, as well as to update or correct the initial ones. The variable “Sex” included was replaced by “Gender” after its review. The variables of HCV, STIs and abscesses include episodes that were recorded during the addiction treatment.

The data processing, descriptive analysis and frequency obtention were conducted using the statistical software SPSS version 17 and R version 4.2.2.

RESULTS

As shown in Table 1, between January 1, 2021, and June 30, 2022, 529 people were treated (524 cis men, 4 trans women, and 1 non-binary person), with an average age of 39,1 years. The most frequent age group was the one from 35 to 45 years, followed by 25 to 34 years (40,6% and 34,6%, respectively). 22,1% were over 45 years-old, and less than 3% were younger than 25 years-old. Regarding the country of origin, we found that 60,9% were Spanish. Out of the 207 foreign people, 85% came from the American continent -mostly Latin America-

and 12,6% from other European countries. More than a half of the people were highly educated (53,9%), 39,9% had completed secondary education, and almost 6% were uneducated or had completed elementary education. Approximately two thirds of the people were employed at the moment of the analysis, 30,1% were unemployed, and 3,2% were students. We found that 42% were living by themselves, 21,4% with friends, and less than 20% were living with their partner and/or children. Most of the people were single (80,5%), 12,3% were married or in a civil partnership, and 7,2% were separated, divorced or widowed.

Regarding the clinical profile (Table 2), almost 60% had been diagnosed of HIV. Among the people with a negative record of HIV, 45,5% were using Pre-Exposure Prophylaxis (PrEP). More than 20% had been diagnosed of Hepatitis C (HCV), and 75,5% of an ITS. 67% had had at least one episode of syphilis, and almost half of them gonococcal infection (45,5%). 56% had a mental health diagnose, being mood disorders (29,8%) and anxiety disorders (25,6%) the most frequently observed. Others, such as psychotic or personality disorders, were recorded in less than 10% of the sample. Out of the 466 people for whom this information was available, 9,9% had had at least one previous suicidal attempt, with hospitalisation being required in 17 of them.

Table 3 includes the information that could be collected about the history of violence of the people in the sample. Among these, 37,2% had suffered some form of violence in their lifespan. The type of violence most frequently suffered was hate violence, based on their sexual orientation (20,6%) – 17,8% had suffered it during

**Table 1.** Sociodemographic profile

	n	%
Gender		
Male Cis	524	99,1%
Trans woman	4	0,8%
Non-binary identity	1	0,2%
Age (mean 39,1; SD 8,7)		
< 25 years	14	2,6%
25-34 years	183	34,6%
35-45 years	215	40,6%
> 45 years	117	22,1%
Origin		
Spain	322	60,9%
Foreign	207	39,1%
Educational level (unknown 2)		
No education/primary education	31	5,9%
Secondary education	211	39,9%
Higher education	285	53,9%
Employment status (unknown 6)		
Employed	330	62,4%
Unemployed	159	30,1%
Student	17	3,2%
Other	17	3,2%
Living situation (unknown 1)		
Only	222	42,0%
With own family	95	18,0%
With family of origin	77	14,6%
With friends	113	21,4%
Institutions/other	21	4,0%
Marital status		
Single	426	80,5%
Separated/divorced/widowed	38	7,2%
Married/detached/partnered	65	12,3%
Total	529	



their childhood or adolescence-, followed by intra-family violence (13,4%). 10,6% had suffered intimate partner violence, and 10,4% sexual violence throughout their lives (7,8% during their childhood or adolescence). 10,6% had engaged in sex work throughout their lives.

As shown in Table 4, the average age for starting substance use were 32,2 years (SD 9,3). Almost 65% of the people used two or more substances, being mephedrone the most frequently used (76,9%). This is followed by GHB – used by almost 42% of the people-, and amphetamines and its derivatives (29,3%).

Another substance frequently used in the context of chemsex, ketamine, was used by 5,5% of the people. Cocaine and alcohol were used by 16,4% and 19,5%, respectively.

Almost half of the people had engaged in intravenous drug use throughout their lives (49,7%), 18,1% of them presenting abscesses as a result. 35,1% of the people in the sample had had solitary drug use, and 17,5% had history of overdose. The average age for starting the treatment were 38 years (SD 8,6), with almost 23% of the people presenting previous treatment attempts.

Table 2. Clinical profile

	Total (n= 529)	
	Yes, n	%*
HIV (unknown 27)	300	59,8%
HCV (unknown 60)	104	22,2%
STIs (unknown 55)	358	75,5%
Syphilis (unknown 60)	314	67,0%
Gonorrhea (unknown 73)	224	49,1%
PrEP	92	45,5%**
Dual Pathology (unknown 45)	271	56,0%
Mood disorders	144	29,8%
Anxiety tr.	124	25,6%
Psychotic disorder	40	8,3%
Self-harm attempt (unknown 63)	46	9,9%

* Percentages are shown excluding missing values ** Percentage of total HIV-negative (n=202)

**Table 3.** Violences

	Total (n= 529)	
	Yes, n	%*
Violence	197	37,2%
Sexual violence	55	10,4%
In childhood/adolescence	41	7,8%
Hate violence	109	20,6%
In childhood/adolescence	94	17,8%
Intimate partner violence	56	10,6%
Domestic violence	71	13,4%
Prostitution Practice	56	10,6%

* Percentages are shown without excluding missing values.

Table 4. Use and treatment profile

	Total (n= 529)	
	Yes, n	%
Substances used		
Mephedrone	407	76,9%
GHB	221	41,8%
Amphetamine and derivatives	155	29,3%
Ketamine	29	5,5%
Cocaine	87	16,4%
Alcohol	50	9,5%
Polydrug use (2 or more substances)	341	64,5%
Intravenous route (unknown 6)	260	49,7%*
Derived abscesses	47	18,1%**
Lone use (unknown 27)	176	35,1%*
Overdose (unknown 61)	82	17,5%*
Age of onset of use (mean 32,2; SD 9,3)		
Age at start of treatment (mean 38; SD 8,6)		
Previous demand for care	120	22,7%

* Percentages are shown without excluding missing values. ** Percentage of total injecting drug user.



DISCUSSION

Cis men being the predominant group, along with the low percentage of trans women and non-binary people, match the reported in available studies of chemsex users' profiles (Blomquist et al., 2020; Íncera et al., 2022; Somos LGTBI+ Aragón, 2017). However, the reported low percentage of individuals who are not cis men could be related to lack of records that contemplate gender in a non-binary way. In this study, the decision was made to contemplate non-binary gender, as some other recent studies do (Reyes et al., 2023).

The age distribution is similar to that observed in other publications (Íncera et al., 2022; Leyva-Moral et al., 2023; Maviglia et al., 2023). Although the definition of the age groups may differ, we found that most users were between 25 and 45 years old. As for the country of origin, it is not surprising that our data coincide with other studies published in this country (Grupo de Trabajo de chemsex del Plan Nacional sobre el SIDA., 2019; Íncera et al., 2022; Leyva-Moral et al., 2023), with individuals being of Spanish origin predominantly. The fact that most foreign people undergoing treatment came from Latin America is also consistent with general population studies, being the most frequent place of origin for migrant population in Spain (Gavín et al., 2021; González-Baeza et al., 2023; Íncera et al., 2022; INE. National Institute of Statistics., 2023). More than half of the people in our sample were highly educated, and were employed, which is in line with what other studies point out (Curto Ramos et al., 2020; Leyva-Moral et al., 2023; Maviglia et al., 2023). Regarding the cohabitation situation and civil status, we do

not know the percentage of people who had a partner at the time of the study, since we only have information on which people lived as a couple or were in a legal partnership, whose percentage was under 15%.

The observed high percentage of people with a positive diagnose of HIV (60%) is striking, albeit consistent with that found in other available studies (González-Baeza et al., 2023; MacGregor et al., 2021; Nevendorff et al., 2023; Vallecillo et al., 2022; Whitlock et al., 2021). Given the limitations in our type of study and the way of collecting information, we are unable to point out whether the HIV diagnose is pre or post chemsex practices. Among the people without HIV diagnose, almost half of them were using PrEP, which matches the reported in studies about PrEP use and chemsex (De La Mora, Ugarte, et al., 2022; Moreno-García et al., 2023). The percentage of people with a diagnose or history of HCV in our sample is higher than that observed in GBMSM (Fernández Dávila et al., 2015; González-Baeza et al., 2023; Chemsex Working Group of the National AIDS Plan., 2019; MacGregor et al., 2021), which could be explained not only by the potential high-risk sexual practices, but also by high-risk practices in substance use, such as sharing injection material. However, as with the information on HIV, we do not know if chemsex practice started before the diagnose.

The high percentage of people with history of STIs observed (75.5%) is in line with other publications, which associate a high prevalence of STIs with the practice of chemsex (Biała & Ingot, 2023; Blomquist et al., 2020; García-Pérez et al., 2022; Leyva-Moral et al., 2023; MacGregor et al., 2021), and is higher than that observed in studies



in GBMSM that do not practice chemsex (European Centre for Disease Prevention and Control. et al., 2019; García-Pérez et al., 2022). More than half of the people had some mental health diagnose, mainly mood and anxiety disorders, which coincides with other available studies (Díez López, 2022; Leyva-Moral et al., 2023; Maviglia et al., 2023; Strasser et al., 2023). The association between mental health disorders and belonging to the LGBTI+ collective, the discrimination suffered as a result of it, and the HIV infection, has been well established (Cesida, 2023; European Centre for Disease Prevention and Control. et al., 2019; Íncera et al., 2022; Soler Terrones, 2023; Somos LGTBI+ Aragon, 2017). It is necessary to note a possible overestimation in the percentage of people who are considered to have a psychotic disorder, since it can be often mistaken with toxic psychosis due to substance use -information that has not been collected because it is not systematically registered. Despite this limitation, the percentage of people with this particular diagnosis does not reach 10% of the sample. It is also important to point out that almost 10% of the people had a history of suicide attempts which, albeit coincident with data reported in studies of the LGBTI+ collective (Díez López, 2022; Strasser et al., 2023), is alarming.

Despite the likely underestimation coming from the lack of records, we have found a high proportion of people who have suffered some form of violence throughout their lives (37,2%), in line with the association found in studies (Strasser et al., 2023) between traumatic history, like sexual abuse or hate crimes, and chemsex. It is not surprising that one in 5 people in our sample had suffered hate violence in their lifetime,

mainly during childhood or adolescence (17,8%), which coincides with available data on history of discrimination and hate crimes in the LGBTI+/GBMSM collective (European Centre for Disease Prevention and Control. et al., 2019; González-Baeza et al., 2023; Muniesa Tomas et al., 2022). Furthermore, we could consider the intra-family violence suffered by 13,4% of the people to have a strong component of hate violence and homophobia. The observed percentage of sexual abuse during childhood resembles that mentioned in other publications (González-Baeza et al., 2023; Somos LGTBI+ Aragon, 2017), while that of sexual violence during lifetime is higher than that identified in other studies (Leyva-Moral et al., 2023; Somos LGTBI+ Aragon, 2017). In our sample, just over 10% had suffered intimate partner violence. However, it is worth noting that this phenomenon is being increasingly reported and researched in the LGBTI+ collective (Kar et al., 2023; Otero et al., 2017; Reyes et al., 2023), although presently it has not been studied in relation to chemsex. The observed percentage of people who have done sex work in their lifetime was 10.6%. It is necessary to mention that, in this group, sex work works as both a means of financing drug use, and a risk factor for forced drug use when clients ask them to (Fernández Dávila et al., 2015; Wang et al., 2023).

The patterns of substance use observed in our sample coincide with other publications available at a national level (Curto Ramos et al., 2020; De La Mora, Ugarte, et al., 2022; Leyva-Moral et al., 2023; Vallecillo et al., 2022). Two thirds of the people presented polydrug use (2 or more substances), being the most common ones



mephedrone, GHB, and amphetamines and its derivatives. Due to the fact that it is not specifically recorded, we do not know the exact percentage of people using methamphetamine (included in the amphetamines group), although we can affirm that its frequency of use is lower than in other regions or countries (EMCDDA & Europol, 2022; Fernández-Dávila, 2017; Gavín et al., 2021; Wang et al., 2023). The percentage of people in our sample that had alcohol (almost 20%) might be underestimated, because it only includes people who consider their alcohol intake problematic and are also undergoing treatment for it. Therefore, it is likely that more people in the sample might have alcohol without addiction criteria. It is necessary to note it because alcohol is both a trigger factor and a facilitating substance for the use of other substances and the practice of chemsex itself (Gavín et al., 2021; Rodríguez-Seijas et al., 2023).

It is remarkable that half of the people of the sample had had intravenous use. However, this cannot be necessarily extrapolated to the whole of chemsex users, because the fact that they had asked for addiction treatment could be associated with higher levels of severity. More than one third of people had had solitary use, which raises the issue that the use of substances would not just be limited to facilitating sexual relationships in a context of sex addiction as had been suggested (De La Mora, Laguno, et al., 2022; De La Mora, Ugarte, et al., 2022; Fernández-Dávila, 2017). This supports the idea that chemsex use can potentially lead to a substance use disorder, since drug use can eventually be completely dissociated from sexual activity. Furthermore, it has been noted that the consequences on health for chemsex users are not limited to

those derived from high-risk sexual activities, such as STIs. Thus, 17,5% of the people in the sample had history of overdose at least once in their lives, and almost 20% of intravenous users presented abscesses derived from injections, in line with other available studies (Fernández-Dávila, 2017; Leyva-Moral et al., 2023; Vallecillo et al., 2022).

The average age for starting chemsex use in our study (32,2 years) was higher than the starting age for other substances (Plan Nacional sobre Drogas, 2022). When compared to the average age for starting treatment (38 years), a difference of roughly 6 years was noted, which was higher than the 17 months observed in the first study conducted in a CAD with chemsex users (Ballesteros López et al., 2016).

Given the scarcity of studies conducted from an addictions-based perspective on chemsex users in Spain (Ballesteros López et al., 2016; Gavín et al., 2021), to our knowledge this is one of the first studies to include information about the history of traumatic events that can act as risk factors to chemsex practices, as well as sociodemographic, clinical and substance use variables.

In addition to interventions aimed at promoting a healthy and positive sexuality with specific recommendations for preventing the transmission of infections – like the use of PrEP or vaccines-, our results suggest the necessity of an integral treatment of substance use and its consequences. Harm-reduction interventions, such as the use of substances with lower risk of toxicity and overdoses, the change to safer methods of use, or safer injection practices, could be highly beneficial for this group.



Limitations

Certain limitations need to be considered when interpreting the study.

Firstly, the cross-sectional design and the collection of information in a specific date implies that, if the same population was studied at a different time, the data obtained might be different.

The low availability of specific studies for this group of population, and the lack of an addictions-based approach, has led to a design and selection of variables based fundamentally on the technical criteria of experienced professionals in the field of addictions.

We have encountered difficulties to collect information on variables not included in SUPRA, because of the variability in the way that professionals – and centres- record intervention-related information. Furthermore, despite the effort in defining the variables and finding a consensus on their collection, we cannot ignore the potential inter-observer variability.

CONCLUSIONS

As noted in this study, chemsex is a public health issue, which consequences on physical, sexual, psychological, and social health not only stem from high-risk sexual activities. The use of highly addictive substances, and the potential development of an addiction, justifies the necessity for the design of interventions following an addictions-based approach.

In addition to the existence of multidisciplinary teams, and the coordination between the different levels of intervention and the third sector organisations involved, an in-depth knowledge of the profile of people

who practise chemsex facilitates a better adjustment of the treatment to their needs. It is therefore necessary to systematically collect and record information about the practices and health conditions of this group, as well as variables which association with chemsex is well-known, in order to assess potential changes throughout time, and specifically target them when needed.

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