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Health, social, and violence profiles of women in treatment for psychoactive substance use in Madrid

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ARTICLE INFO	A B S T R A C T
<i>Keywords:</i> Women Treatment Psychoactive substances Quantitative research Social characteristics Health	Objectives: This study aimed to describe the profile of women seeking treatment for the use of psychoactive substances in the city of Madrid. The study used a sample of 1968 women who sought treatment at the Addiction Care Centers (CAD) of the Madrid City Council in the year 2022, which accounted for 22.9 % of the total population attended. Study design: This quantitative study used secondary data provided by the Institute of Addictions (General Subdirectorate of Addictions, Madrid Salud). The analyses included bivariate analysis, correspondence analysis, K-means clustering, and ANOVA. Methods: Bivariate analysis was conducted to determine the association between the principal psychoactive substance and sociodemographic characteristics. Statistically significant results were employed to develop a correspondence analysis and used to conduct a K-means clustering analysis. The objective was to determine the profile of the women who sought treatment at the CAD of the Institute of Addictions (General Subdirectorate of Addictions of Madrid Salud). Results: The results revealed three profiles of women: 1) women who use cocaine and heroin, were unemployed with children, and had lower education; 2) women who used acanabis were not working, had no children, and had intermediate education; 3) women who used alcohol had children, higher education, and were working. All three profiles were associated with situations of domestic violence, where the percentages were very high in each of the profiles, regardless of the principal substance of use and the sociodemographic and health characteristics. Conclusions: The results highlight the need for tailored addiction treatment approaches that address the distinct
	social and health profiles of women in Madrid, including challenges such as motherhood, drug-related infections, and violence. These findings emphasize the importance of providing specialized services to approach the complex needs of women undergoing addiction treatment.

1. Introduction

According to the data on drug use in Spain, 72,915 people were admitted for treatment for psychoactive substance use problems in 2022 (excluding those with tobacco dependence alone. The substances for which most people sought treatment were, alcohol (36.2 %), cocaine (29.9 %), cannabis (17.2 %) and opioids (11.7 %). Differences between genders can be observed in the demand for treatment for problematic use. Men were more likely to request treatment for problematic use of substances such as cocaine and opioids, while women were more likely to seek treatment for alcohol, painkillers and cannabis.^{1–5}

In Madrid, as a response to the heroin crisis in Spain, the first

Addiction Care Center (CAD) was opened in 1987. In 1988, the First Municipal Plan against Drugs was approved. Since most users were males, the treatment programs had an androcentric approach, i.e., they did not consider the specific characteristics and treatment needs of women who use drugs.⁶ The specific characteristics and treatment needs of the 20th century. Subsequently, the issues linked to psychoactive substance use among women became an important research subject, and it revealed that women have different needs and characteristics in the use and abuse of psychoactive substances. In recent years, the focus has been on the need to incorporate a more equal gender perspective in research as well as interventions aimed at people who use drugs.^{7–11}

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Original Research





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According to the European Union Drugs Agency,¹² women represent 25% of the people with psychoactive substance use disorder. However, only one-fifth of them seek treatment. The reasons for this are diverse: one of the main reasons is the stigma and the experience of guilt and shame associated with drug use, often resulting from social and cultural expectations about their gender roles; another reason is fear of consequences, such as losing custody of their children. These factors negatively impact the uptake of treatment for drug dependence among women.^{10,12,13}

Several studies have highlighted the need to address psychoactive substance use disorder from a gender perspective. The demands and characteristics of women who use psychoactive substances should be considered, both when designing research and in the treatment intervention for psychoactive substance use disorder. Research and interventions should include adapted approaches that aim to ensure women do not feel judged, or re-victimized and to achieve a realistic, effective, and efficient intervention.^{7,10,14–18}

Women who use psychoactive substances have particular experiences that men do not have, such as the experience of domestic violence. As stated in article 3 of the Istanbul Convention, domestic violence is defined as "all acts of physical, sexual, psychological or economic violence that occur within the family or domestic unit or between former or current spouses or partners, whether or not the perpetrator shares or has shared the same residence with the victim".¹⁹

Violence and drug use in women form a reciprocal relationship where each can exacerbate the other. The prevalence of intimate partner violence cases is two to five times higher than in the general population. Furthermore, the cumulative risks of drug use and intimate partner violence are amplified when both occur together.²⁰

Several studies have found an association among women who use drugs between the consumption of psychoactive substances and being a victim of violence, where violence can either precede or follow drug consumption. However, the causal relationship between drugs and violence is not easily defined. On one side, the context in which drugs are used is characterized as an environment of violence, that poses certain risks for women due to their subordination in the gender systems of such an environment. On the other hand, women may use drugs as a way of coping with the experience of being subjected to violence, and the relationship between women's drug use and the experience of violence is reflected in the high percentage -between 40-70%- of women in treatment who are victims of domestic violence. ^{11,15,17,21-24}

Other studies have shown that women who use drugs experience domestic violence at a rate of 2 and 5 times higher than the general population. Furthermore, women who have experienced this violence are 15 times more likely to use psychoactive substances than those who have not. In particular, the impact of sexual aggression is three times greater among women who use psychoactive substances.^{17,23,24}

In consideration of the above, this study aims to determine the sociodemographic, health and violence profile of the women who attended the Addiction Care Centres (CAD) of the Addictions Institute (General Subdirectorate of Addictions of Madrid Salud), to identify the social and healths needs of women. Specifically, the aim is to a) describe the principal sociodemographic characteristics associated with women in addiction treatment, b) present the health status of this women, and c) examine the domestic violence they have experienced throughout their lives.

2. Methods

The study utilised data from the treatment records for psychoactive substance use disorder in the city of Madrid for the year 2022 (data provided by the Institute of Addictions General Subdirectorate of Addictions of Madrid Salud).

The information about individuals attending the CAD is recorded using SUPRA Madrid (Sistema Unificado Para Registro Adicciones, Madrid). This system compiles all user data and clinical records from different professionals.

Additionally, it includes a specific drop-down section for documenting domestic violence, covering both past incidents and current situations for all female clients. All women who begin treatment are asked about it. During the intervention process, the professionals inquire about possible domestic violence to detect it, following the protocol for handling cases of gender-based violence in the CAD.

The clinical records of indiviual treated in the CAD of the City of Madrid in 2022 (General Subdirectorate of Addictions of Madrid Salud) have provided us with data for analysis. These seven publicy funded centres serve both the local population and residents from the other areas of the Community of Madrid.

2.1. Sample

In 2022, 8584 people were assisted in Madrid: 77.1 % (6616) were men and 22,9% (1968) were women.

Of the women helped, 80.1 % (1576) were of Spanish nationality, 19.9 % (392) were of other nationalities, of which 12.9 % (252) were from Central and South America. The ages of the women ranged from 14 to 86 years. The average age was 45 (SD = 13.85), and 3.2 % (62) of women were 18 years or younger.

2.2. Method

The Institute of Addictions (General Subdirectorate of Addictions of Madrid Salud) was contacted to request access to anonymized data collected in treatment of the women assisted in 2022 for analysis purposes. Once the databases were provided, the variables were reviewed, adjusted and operationalized for the analysis. The Ethics Committe of Comillas Pontifical University supervised the research.

2.3. Analysis

Initially, a bivariate analysis was conducted to measure the relationship between the type of psychoactive substance used by women and sociodemographic characteristics. This analysis was performed using the chi-square test with a significance level of 5%. The relationships between variables were explored using a multivariate statistical analysis. The correspondence analysis was performed to visualize the main relationship between the principal psychoactive substance of use, children, level of education, and employment situation. Subsequently, Kmeans clustering analysis was used to verify through ANOVA if the differences in the sociodemographic variables between the groups were statistically significant. Statistical analysis was performed using SPSS software, version 28.0.

2.4. Limitations

The limitations of this research included that women are grouped homogeneously, while each woman has specific characteristics. Furthemore, only variables with a statistically association were considered in the analysis. However, this study provides valuable insights to guide future interventions for addiction treatment in women.

3. Results

3.1. Description of the sample

In 2022, 38.6 % (759) of women were discharged from the service due to treatment abandonment (41.5 %; 315) or voluntary discharge (31.1 %; 236). Of the 1968 women, 24 % (472) had previously sought treatment for the same or a different principal psychoactive substance.

Of the 1968 women, 47 % (924) sought treatment for alcohol, 16.1 % (317) for cannabis, 15.5% (305) for heroin and other opioids, and 15.2% (300) for cocaine use.

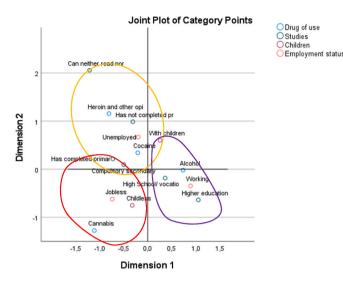


Fig. 1. Joint plot of category points.

3.1.1. Profiles of women by sociodemographic characteristics

The results of the correspondence analysis and the K-means cluster analysis offer us three consumption and sociodemographic profiles for women: 1) a group made up of women who use cocaine and heroin, were unemployed with children, and had lower education; 2) women who used cannabis, and were not working, had no children, and had intermediate education; 3) women who used alcohol had children, higher education, and were working (see Fig. 1.)

The model explained 74.19 % of the relationships between the variables of principal drug use, children, level of education and employment status (see Table 1).

The results of the correspondence analysis reveal that the first dimension is explained by the variables level of education and principal drug use. This dimension accounts for 37.43% of the total sample. illustrates how, depending on the level of education completed, women tend to use different psychoactive substances. Specifically, women with higher education used alcohol as their principal substance, while those who had not completed primary school used cocaine, heroin, or other opioids.

The second dimension of the correspondence analysis reults is explained by the relationship between principal drug consumption and having children. This dimension accounts for 36.75 % of the total sample. Specifically, not having children is associated with cannabis use, while having children is associated with alcohol use (see Table 2).

Based on the correspondence analysis, a K-means clustering was performed (see Table 3), identifying three groups of women.

A one-way analysis of variance (ANOVA) was conducted to assess the differences among the three groups identified through K-means clustering analysis (see Table 4).

3.1.2. Drug-related infections

Drug-related infections were significantly correlated with women who use heroin and other opioids (see Table 5). These women exhibited much higher rates of HIV, Hepatitis C, and other sexually transmitted infections compared to women who used other substances.

Table 1

Model Overview.						
Dimension	Cronbach's alpha	Variance accounted for				
		Total (eigenvalue)	Inertia	% variance		
1	.443	1.497	.374	37.436		
2	.426	1.470	.368	36.758		
Total		2.968	.742			
Media	.435 ^a	1.484	.371	37.097		

^a The mean Cronbach's alpha is based on the mean Eigenvalue.

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Table 2

Discrimination measures.

	Dimension 1	Dimension 2	Mean
	Discrimination	Discrimination	
Drug of use	.559	.487	.537
Level of education	.440	.209	.270
Children	.083	.453	.152
Employment status	.415	.321	.410
Active total	1.497	1.470	1.484
% variance	37.436	36.758	37.097

3.1.3. Domestic violence

The following analysis statistically examines the relationship between the three profiles of women and the variable of experiencing

Table 3

K-means clustering analysis based on correspondence analysis.

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$\begin{array}{cccc} \mbox{High School}/ & 12.7\ (96) & \mbox{40.6\ (324)} & 27.2\ (106) \\ \mbox{vocational} \\ training \\ \mbox{Higher education} & 1.2\ (9) & \mbox{40.6\ (324)} & 10.8\ (42) \\ \mbox{Employment} & & & & & \\ \mbox{situation} & & & & & \\ \mbox{Working} & 8.7\ (65) & \mbox{61.7\ (498)} & 15.2\ (59) \\ \mbox{Jobless} & 20.7\ (155) & 12.4\ (100) & \mbox{71.6\ (277)} \\ \end{array}$	secondary				
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training Higher education 1.2 (9) 40.6 (324) 10.8 (42) Employment $\chi^2 =$ situation 1016.684* Working 8.7 (65) 61.7 (498) 15.2 (59) Jobless 20.7 (155) 12.4 (100) 71.6 (277)	High School/	12.7 (96)	40.6 (324)	27.2 (106)	
Higher education 1.2 (9) 40.6 (324) 10.8 (42) Employment $\chi^2 =$ situation 1016.684* Working 8.7 (65) 61.7 (498) 15.2 (59) Jobless 20.7 (155) 12.4 (100) 71.6 (277)	vocational				
Higher education 1.2 (9) 40.6 (324) 10.8 (42) Employment $\chi^2 =$ situation 1016.684* Working 8.7 (65) 61.7 (498) 15.2 (59) Jobless 20.7 (155) 12.4 (100) 71.6 (277)	training				
situation 1016.684* Working 8.7 (65) 61.7 (498) 15.2 (59) Jobless 20.7 (155) 12.4 (100) 71.6 (277)		1.2 (9)	40.6 (324)	10.8 (42)	
Working 8.7 (65) 61.7 (498) 15.2 (59) Jobless 20.7 (155) 12.4 (100) 71.6 (277)	Employment				$\chi^2 =$
Jobless 20.7 (155) 12.4 (100) 71.6 (277)	situation				1016.684*
Jobless 20.7 (155) 12.4 (100) 71.6 (277)	Working	8.7 (65)	61.7 (498)	15.2 (59)	
Unemployed 70.5 (527) 25.9 (209) 13.2 (51)					
	Unemployed	70.5 (527)	25.9 (209)	13.2 (51)	

Note. *p < 0.001.

violence (see Table 6). The results indicate that between 70% and 80% of women in each profile have experienced violence, regardless the principal substance of use or sociodemographic characteristics.

Out of the 1968 women treated at the CAD of the Institute of Addictions (General Subdirectorate of Addictions of Madrid Salud), data on

Table 4ANOVA of K-means clustering analysis.

Variable	Mean	Standard deviation	F	Р
Drug of use	3.68	0.945	517.871	< 0.001
Level of education	4.24	1.267	534.196	< 0.001
Children	1.55	0.497	389.483	< 0.001
Employment Status	2.09	0.848	356.740	< 0.001

Table 5

Bivariate analysis of principal psychoactive substance and drug-related infections.

Variable	Heroine and other opioids % (N)	Cocaine % (N)	Alcohol % (N)	Cannabis % (N)	Statistic
Sexually transmitted diseases					$\chi^2 = 30.016^{**}$
Yes	16.4 (36)	6.9 (10)	4.4 (18)	4.8 (5)	
No	83.6 (184)	93.1 (134)	95.6 (388)	95.2 (100)	
HIV					$\chi^2 = 157.316^{**}$
Positive	30.3 (80)	6.1 (11)	2.1 (10)	4.8 (6)	
Negative	69.7 (184)	93.9 (169)	97.9 (467)	95.2 (118)	
Hepatitis C					$\chi^2 = 362.116^{**}$
Positive	60 (144)	7.1 (12)	4.9 (23)	5 (6)	
Negative	40 (96)	92.9 (157)	95.1 (450)	95 (114)	
Hepatitis B					$\chi^2 = 79.943^{**}$
Immune	70.9 (117)	47.1 (74)	31.4 (138)	51.4 (56)	
Non- immune	29.1 (48)	52.9 (83)	68.6 (302)	48.6 (53)	

Note. **p < 0.001.

Table 6

Bivariate analysis of women by principal psychoactive substance and violence.

Variable	Cluster 1	Cluster 2	Cluster 3	Statistic
	% (N)	% (N)	% (N)	
Violence				$\chi^2 = 3.926$
Yes	83.7 (339)	80.2 (340)	77.5 (183)	
No	16.3 (66)	19.8 (84)	22.5 (53)	

their experiences of violence by a family member or partner/ex-partner are available for 1296 (65.85%) of them. This experience of violence has generated a specific intervention with a subsample of several variables related to violence.

Out of the total number of women (65.85%; 1296), 43.8% (862) have a record of experiencing violence. In this group, 33.8% (666) experienced violence from their partner or ex-partner, 6.1% (120) from their family members (father, stepfather, mother's partner, sibling, or other relative), and 3.9% (76) from both.

4. Discussion

The women in treatment at the CAD of the Institute of Addictions (General Subdirectorate of Addictions of Madrid Salud) presented different profiles according to the principal psychoactive substance for which they sought treatment. The first group is made up of women who use heroin or other opioids and cocaine, which could be associated with the use happening in the 1980s and 1990s; another group is women who use alcohol, who have been present over time with greater or lesser visibility; and, finally, a third group is women who use cannabis, which had a significant increase in recent decades among women.

These profiles allow us to adjust addiction treatment to the social and health needs of women who use psychoactive substances in response to the needs of these women and this will have benefits for both the women served and the addiction care resources, e.g. there is a high percentage of women who come to treatment with children. Care centres should be able to anonymize care because of women's fear of losing custody of their children. Additionally, offering services to pregnant and parenting women can benefit both mother and child by enhancing parenting skills and positively influencing child development.¹²

In this context, addressing the distinct health needs of women who use psychoactive substances is crucial for fostering a supportive environment that enhances their overall well-being. While women represent only approximately 20 percent of the global population of people who inject drugs, they are disproportionately vulnerable to drug-related infections -particularly HIV.^{25–27} El-Bassel et al.,¹⁸ Folch et al.,¹¹ Marshall et al.,²⁸ and Hurtado et al.²⁹ identify various risk factors that contribute to the transmission of these infections such as sharing drug use equipment; engaging in risky sexual relations (e.g., inconsistent and incorrect

condom use); situations of violence (e.g., sexual assault); power inequalities generated with their partners (which hinder women's ability to negotiate safer practices); or involvement in sex work. These findings align with the results of this study, in which women with the highest incidence of drug-related infections were those who used heroin and other opioids, as intravenous injection is the primary method of consumption (16.4%; 36).

The characteristics of these women seeking treatment in Madrid are consistent with the national data obtained from previous research. Some of the characteristics found in this study, such as educational level, age, or having children, match with those found in the 2024 Report, "Alcohol, tobacco and illegal drugs in Spain"² of the Spanish Observatory on Drugs and Addictions. In both cases women who use cannabis were younger; women who use opioids and alcohol were more likely to have children. Additionally, women who use alcohol had a higher level of education than those who used cocaine, heroin, or other opioids.

It has been found that women tend to consume legal psychoactive substances as opposed to illegal ones.^{6,30} In this sense, it is not surprising that alcohol is the most frequent substance of dependence among women. At the national level, 45.2% (6,533) of the women have sought alcohol treatment, which is very similar to the percentage of women seeking treatment in Madrid, where it is 47% (924). The preference for this substance may be motivated by its less noticeable consumption, which carries a lower likelihood of facing rejection, stigma, or social punishment.^{7,14} In addition, it is legal, easily accessible, private, and goes unnoticed.

Additionally, a social problem that affects women who use psychoactive substances is violence. In this regard, a higher percentage of victimization has been found among these women than among women who are not drug users. The interrelationship between drug use and violence is embodied reciprocally in their lives, with violence being a constant transversal, especially accentuated for those who use psychoactive substances.^{11,15,31–33} At the European level, according to the European Union Drugs Agency,¹² there is a necessity to implement an intervention with the specific needs of women who use psychoactive substances: pregnant or parenting women, victims of domestic violence or sex trade, women in prison, and those who belong to ethnic minorities.

Women who use psychoactive substances are three times more likely to suffer domestic violence than women in the general population.²⁴ In the case of women in treatment in the CAD of Madrid, the prevalence of gender violence in all its forms (victims of violence by their family or partner or ex-partner) is 43.8% (862). However, this percentage doubles in each group based on the results obtained (raging 70%-80%), which aligns with the findings of different studies that have been carried out in Spain^{11,15,24} on violence in women who seek treatment for psychoactive substance use.

Addiction treatment needs to address the specific characteristics of women, especially those who have experienced violence. These women face unique challenges, such as feelings of guilt and shame associated with their experiences, which can make it difficult for them to verbalize. 34

In 2017 The Institute of Addiction created a protocol called "Intervention of domestic violence in CAD", which aims to guide professionals working in the field of addictions. This protocol provides consensual and standardized guidelines for detecting, assessing, and intervening in cases of domestic violence, as well as for coordinating referrals to specialized resources and preventing further violence against women.³⁵ In Madrid, there is no simultaneous attention to violence and psychoactive substance use; rather, the CAD addresses the substance use disorder in coordination with other services that attend to women victims of domestic violence.

At the international level, organizations in the U.S. and Canada^{36–38} agree that there is a lack of simultaneous intervention addressing both domestic violence and psychoactive substance use among women. There is a need for organizations, policies, and practices to simultaneously address these two social issues through a gender-responsive, trauma-informed approach, along with motivational interventions.

This research establishes the particularities of women who use psychoactive substances in Madrid for the first time and encourages reflection on the actions taken in treatment for psychoactive substance use disorder, particularly regarding the facilitation of women's initiation and retention in addiction services.

Author statements

Ethical approval

The name of the ethics committee that approved the study: Ethics Committee of the Comillas Pontifical University

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A statement confirming the approval: Vice-Rector for Research and Faculty, Comillas Pontifical University.

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Competing interests

None

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