TECHNICAL REPORT ON CANNABIS

2022

USE AND CONSEQUENCES

Revised edition September 2022

CONTENTS

01

EXECUTIVE
SUMMARY

This document contains the most relevant information on cannabis consumption published by the Government Delegation for the National Plan on Drugs (DGPNSD). This information comes from the Spanish Monitoring Centre for Drugs and Addictions (OEDA) survey programmes and indicators of problems associated with consumption and addictions supplemented with other official sources on specific issues.

From this diversity of sources, an overview of the characteristics as well as the consequences of cannabis use is obtained.

Cannabis use

According to the **Survey on Drug Use in Secondary Education (ESTUDES), conducted among** students aged 14 to 18, in 2021 cannabis was the third most used psychoactive substance in all time frames, behind alcohol and tobacco. A total of 28.6% of students used cannabis at some time in their lives (29.2% for boys and 27.9% for girls), 22.2% used cannabis sometime during the last year (22.6% for boys and 21.8% for girls), 14.9% used cannabis sometime during the last month (15.7% for boys and 14.1% for girls) and 1.6% reported daily cannabis use. In 2021, the prevalence of cannabis use declined in both sexes and in all age groups. This decline in prevalence in 2021 is likely to be due to the global pandemic caused by Covid-19 and the resulting restrictions on people's mobility and nightlife.

Prevalence increased progressively until 2004 in all time periods for both boys and girls and declined thereafter. Between the ages of 14 and 18, it increases with age. On average, the first time cannabis is used is at the age of 14.9, a similar age for boys and girls. This situation is historically repeated.

Almost half of those who consumed in the last month smoked marijuana, 33.5% used both marijuana and hashish and 16.7% used only hashish. The joint is the most prevalent form of use (91.4%) and cannabis is mostly consumed mixed with tobacco (87.7%). In relation to the quantity consumed, students who have smoked cannabis in the last month admit that, on the day they use it, they smoke an average of 3.3 joints per day (3.7 for boys compared with 2.7 for girls).

88.7% of students considered that regular cannabis use can significantly affect people's health. As for the perception of availability, 61.1% think that it is easy or very easy to acquire cannabis within 24 hours. In 2021, this perception fell compared with 2019, reaching 1998 levels.

Cannabis use was associated with risky behaviours. Thus, 1.5% of students reported having driven a vehicle under the influence of cannabis and 6.9% reported having travelled as a passenger in a vehicle driven by someone under the influence of cannabis. In addition, 42.7% of students who reported having consumed in the last month had sex without a condom, a figure that rose to 58.4% among those with possible problematic consumption (CAST≥4).

In Spain, **according to the European ESPAD survey**, in 2019 the prevalence of lifetime cannabis use among students aged 15-16 was 23% (24% for boys and 22% for girls) and 12% in the last 30 days (with the same prevalence of 12% for boys and girls). Both prevalences were higher than the European average (16% and 7.1%, respectively). For Spanish students, the perceived availability of cannabis was 41%, higher than the European average (32%). In addition, the prevalence of problematic cannabis use was 5.6% (6% in boys and 5.3% in girls), which is higher than the European average (4%).

According to the **Survey on Alcohol and Drugs in the general population in Spain (EDADES)**, in 2020, 37.5% (46.3% in men and 28.7% in women) used cannabis in their lifetime, 10.5% (14.6% in men and 2.6% in women) in the last year and 8% (11.4% in men and 4.7% in women) in the last month, while 2.9% reported daily use. Men's consumption exceeds that of women in all age groups and in all time periods. Consumption in both men and women decreases with increasing age in all time periods.

Both men and women used mostly marijuana (48.7%), 30.8% used both marijuana and hashish and 20.6% only hashish. Cannabis is mostly used mixed with tobacco (86.9%) and 89.8% of cannabis users are also smokers.

85.3% considered that regular cannabis use, once a week or more, can cause quite a lot/a lot of health problems and only 66.3% considered that occasional use, once or less per month, could be quite or very harmful to health.

Perceived availability, at 59.4%, shows a decrease compared with that recorded in 2018 (63.3%) and is slightly higher for men than for women (64.9% and 53.6% respectively).

The measures with the highest levels of support for tackling the problem of drug use among the population are education in schools (89.2%) and police and customs control (82.6%). 36.5% of individuals think that the legalisation of cannabis would be an important solution to solve the drug problem.

In 2020 the working population aged 16-64 shows slightly higher figures for cannabis use than the general population, with higher prevalence of last month use among the unemployed than among the employed (11.4% and 7.8%, respectively).

According to the **Survey on Alcohol and Drugs and other Addictions in People over 64 years of age in Spain (ESDAM) in** 2020, 4.6% have used cannabis in their lifetime, 0.5% in the last year and 0.5% in the last month, which is significantly lower than in the population aged 15-64. In terms of sex, lifetime cannabis use is higher among men (7.1%) than among women (2.8%).

Cannabis use declined in the population aged 15-64 during the **COVID-19** pandemic, from 7.8% (10.6% in men and 4.9% in women) before the pandemic to 6.5% (8.5% in men and 4.4% in women) during the pandemic. During the pandemic, the decline in use was most significant among young men, who were nonetheless the heaviest users. In addition, a reduction in the prevalence of cannabis use was observed in all age groups, with the largest reduction occurring in those under 25 years of age.

Cannabis was the most commonly used illegal drug among **the prison population**. 19.4% of the prisoners used cannabis in the last 30 days, of whom 32.5% used cannabis daily or almost daily. Use is more widespread among men under the age of 25. From 2011 to 2016, a downward trend in cannabis use in prison was observed.

Problematic use

In 2021, 51,788 **students aged 14-18** had a possible problematic use of cannabis (CAST≥4), accounting for 3% of all students and 17.8% of those who used cannabis in the past year. This percentage has increased by more than two percentage points compared with the previous edition, making it the highest prevalence in the historical series.

Problematic drug use is more prevalent in males (21.0% compared to 14.8% in females) and increases with increasing age (13.5% in the 14-year-old age group to 24.2% in the 18-year-old age group). The most common way of using cannabis was to prepare it mixed with tobacco, and the average number of joints consumed per day was 5.1.

1.9% of the **population aged 15-64** had a possible problematic use of cannabis (22.5% of those who used in the last year). This type of consumption is more widespread among men than among women. The prevalence of problematic cannabis use has seen an upturn in 2020.

Consequences of use

■ **Cannabis-related treatment admissions**

In 2019, 14,202 people entered treatment for cannabis abuse or dependence, 10,372 of them for the first time. Cannabis use is the second reason for treatment in the general population for illicit drug use, after cocaine, but the first among minors (95.2% of all under-18s admitted to treatment). The majority of those admitted to treatment for cannabis are men, but the weight of admissions to treatment for cannabis abuse or dependence is higher among women.

Cannabis treatment admissions have shown a clear upward trend, from generating 1,300 first admissions in 1996 to 10,372 in 2019.

■ **Hospital emergencies related to non-medical or non-therapeutic cannabis use**

A sample of 5,352 emergency episodes was collected in 2019. In almost half of them, cannabis was related to the reason for the emergency. This implies that cannabis together with cocaine are the substances that generate the most emergencies (50.6% and 50.7% respectively). The average age of those seen in this emergencies sample for cannabis use was 30.9 years. By sex, cannabis was found to be present in almost the same percentage of episodes in men (50.8%) as in women (50.2%).

As with treatment admissions, there is also a clear upward trend in cannabis-related emergencies over the entire historical series of the indicator, from being related to 6.2% of episodes in 1996 to being related to 50.6% in 2019, a steady increase that has not been observed for any of the other substances analysed by this indicator.

■ **Mortality from acute reaction to psychoactive substances**

Over time, cannabis has shown an increasing presence among deaths due to acute reactions to psychoactive substance use, stabilising over the last 10 years. It is usually detected together with other substances such as hypnosedatives, opioids, cocaine and/or alcohol. In 2019, cannabis was detected in 209 deaths with a toxicology report, which is 25.5% of the total.

■ **Cannabis-related road accidents**

According to the report of the National Institute of Toxicology and Forensic Sciences in 2020, road mobility has fallen as a result of the pandemic caused by the SARS-CoV-2 virus, which has led to a decrease in the number of traffic accidents and, therefore, of fatalities, reaching a historic low of 873 deaths within 24 hours of an accident on interurban roads, a decrease of 21% compared to 2019.

Among the 597 drivers killed in road accidents and autopsied, 120 tested positive for drugs. Of these, 60.8% tested positive for cocaine and 53.3% for cannabis.

Of the 136 pedestrian road traffic fatalities, 56 tested positive for drugs. Approximately 54% tested positive for alcohol and 25% for other drugs (64.3% cocaine and 57.1% cannabis).

Synthetic cannabinoids

In 2020, the lifetime prevalence of spice use is 0.6% in the population aged 15-64, with higher use among men and those under 35 (1.0%), and especially among those aged 25-34. In terms of the evolution of spice consumption, since 2011 the prevalence of consumption has been decreasing, reaching an all-time low in 2018, with a slight increase in 2020 compared to 2018.

Spice was responsible for 14 treatment admissions in 2019. Among the deceased, it was detected for the first time in 2019 in one case (together with other substances in this deceased, namely opiates, cocaine, hypnosedatives and cannabis).

Control measures

The **average concentration of tetrahydrocannabinol** (THC) in seized resin was 12.4% in 2002, reaching an all-time high of 28.9% in 2020. In the case of seized marijuana, this increase was even greater, rising from 4.5% in 2002 to almost triple (12%) in 2020 (all-time high in 2019 at 13.6%).

There is an upward trend in the **average price per gram** of hashish resin, from 3.87 euros in 2000 to 5.57 euros in 2020. Marijuana, in the same period, has risen from 2.49 euros to 5.09 euros.

Total **charges** for illicit drug use or possession increased from 225,909 in 2006 to 337,772 in 2020. The majority were due to cannabis, which in 2006 accounted for 77% of charges and in 2020 for 74%, with an all-time high in 2012 and 2014 with 87% of charges.

Drug trafficking **arrests** since 2006 (16,805) have increased to 24,114 in 2020. Most of them are due to cannabis-related charges (46% of all arrests in 2006 and 59.6% in 2020 when it reached an all-time high).

Analysis of cannabis in samples obtained from sewage treatment plants

The time evolution of cannabis use over the last 10 years has been estimated by measuring its main metabolite, 11-Nor-9-carboxy-delta-9-THC (THC-COOH) in wastewater. According to the results obtained at stations in 4 Spanish locations (Bajo Llobregat, Valencia and its metropolitan area, Santiago de Compostela and Castellón de la Plana) that have been applying this methodology since 2011, there is a statistically significant upward trend in the Bajo Llobregat area, which also results in a higher THC-COOH load than in the other 3 locations. In contrast, in the other locations, consumption seems to be stabilised, with no statistically significant trend in standardised THC-COOH loads detected over the time series.

The results of the analysis of 9 locations (Valencia and its metropolitan area, Toledo, Lleida, Tarragona, Reus, Bilbao and its metropolitan area, Santiago de Compostela, Castellón de la Plana and the city of Madrid) show no significant overall change in cannabis use between 2021 and 2018.

02

OBJECTIVES
OF THIS REPORT

The general objective of this report is to provide an overview of the situation of cannabis use and its consequences, as well as its supply in the Spanish population, reviewing the characteristics of this use, the evolution it has shown and the consequences it generates. This information facilitates the assessment of social and public health problems associated with cannabis use and the design of policies aimed at preventing cannabis use.

From this general objective, the following specific objectives are set:

- **To establish the characteristics of cannabis use in different population groups:**

  - Prevalence of drug use in different population groups (students, general population, population over 64 years old, prison population and working population).
  - Relevant consumption patterns.
  - Relationship between cannabis use and certain socio-demographic characteristics.
  - Prevalence of problematic cannabis use.
  - Time evolution of the above-mentioned aspects.

- **To identify the consequences of cannabis use:**

  - Admissions to treatment for psychoactive substance use.
  - Hospital emergencies related to the use of psychoactive substances.
  - Mortality due to acute reaction to psychoactive substance use.
  - Road accidents related to cannabis use.

- **To examine the availability of cannabis:**

  - Perceived accessibility of cannabis as expressed in surveys.
  - Seizures and arrests in Spain.
  - Detection of synthetic cannabinoids in Spain.

- **To ascertain the population's perception of various situations:**

  - Risk perception of cannabis use.
  - Perception of the importance of the drug use problem and visibility of the problem.
  - Assessment of the importance of various actions to try to solve the problem of drug use.

03

METHODOLOGY
OF THIS REPORT

This document contains the most relevant information on the use of cannabis and synthetic cannabinoids published by the Government Delegation for the National Plan on Drugs (DGPNSD) from the different sources of information available to the OEDA (surveys and indicators) complemented by official sources from other agencies on specific issues.

From this diversity of sources it is possible to obtain an overall vision that allows for a multifaceted analysis of both the characteristics and situation of cannabis use and the consequences derived from it.

3.1. Surveys on the use of psychoactive substances

- **National Surveys:** promoted and financed by the DGPNSD, with the collaboration of the Autonomous Regions and, in the case of the survey in prisons, in collaboration with the General Secretariat of Penitentiary Institutions of the Ministry of the Interior, the Directorate General of Penitentiary Services of the Department of Justice of the Regional Government of Catalonia and the Directorate of Justice of the Regional Ministry of Equality, Justice and Social Affairs of the Basque Country:

  - **Survey on Drug Use in Secondary Education in Spain (ESTUDES):** carried out by means of a self-administered questionnaire among secondary school students aged 14-18, every two years since 1994.

  - **Survey on Alcohol and Drugs in Spain (EDADES):** carried out by personal interview in the home population aged 15 to 64 years, every two years, since 1995.

  - **Survey on psychoactive substance use in the workplace in Spain:** carried out by personal interview every 6 years since 2007, as a specific module within the EDADES survey.

  - **Study on Alcohol, Drugs and other Addictions in People over 64 years of age (ESDAM):** carried out by personal interview in the home population over 64 years of age, it was carried out for the first time in 2020.

  - **OEDA-COVID survey. Impact of the COVID-19 pandemic during 2020:** This was carried out by means of a telephone survey of the population over 15 years of age.

  - **Survey on Health and Drug Use among Prisoners (ESDIP):** carried out by means of personal interviews with inmates in Spanish prisons, every five years since 2006. The latest available is from 2016 and another is in progress at the time of writing this report.

- **International Surveys in which OEDA participates, funded by the DGPNSD:**

  - **European School Survey Project on Alcohol and Other Drugs (ESPAD):** conducted via self-administered questionnaire in secondary school students aged 15-16 in 2019.

The following tables summarise the main methodological aspects of the surveys used for this report:

■ **ESTUDES 2021**

GENERAL ASPECTS	
Name	ESTUDES. Survey on Drug Use in Secondary Education in Spain.
Description of the survey	Survey of students (14-18 years old), carried out in schools.
Body responsible for the survey	Spanish Monitoring Centre for Drugs and Addictions (Spanish acronym: OEDA). Government Delegation for the National Plan on Drugs (Spanish acronym: DGPNSD). Ministry of Health.
SCOPE OF THE SURVEY	
Geographical scope	The survey is conducted nationwide. The results are nationally representative.
Population scope	Population: Students, ages 14 to 18 years, living in Spain and enrolled in Secondary Education (3rd and 4th year of High School and Basic or Intermediate Vocational Training).
Time scope. Periodicity.	ESTUDES has been carried out every 2 years since 1994. The data collection period was from 8 March to 18 May 2021.
SAMPLE DESIGN AND CHARACTERISTICS. WEIGHTING	
Sampling frame	The population of students enrolled in educational centres with 3rd and 4th year of Compulsory Secondary Education (ESO), 1st and 2nd year of Baccalaureate, 1st and 2nd year of Basic Vocational Training Cycles and Intermediate Vocational Training Cycles in Spain.
Sampling procedure	Two-stage cluster sampling, in which, in the first instance, educational centres (first-stage units) and secondly classrooms (second-stage units) were randomly selected, providing the questionnaire to all students present in them.
Weighting	Depending on the Autonomous Region, ownership of the centre (public, private) and type of studies (ESO, Baccalaureate, Basic Vocational Training Cycles, Intermediate Vocational Training Cycles), in order to adjust the proportionality of the sample with respect to the universe.
Sample size	Results are obtained from 531 schools and 1,324 classrooms, with a final valid sample of 22,321 students.
Sampling error	The maximum sampling error for a confidence level of 95.5% and p=q=0.5 is 0.6% for Spanish students aged 14-18.
FIELDWORK. COLLECTION OF INFORMATION	
Method of collection. Questionnaires	Standardised and anonymous questionnaire administered in the classroom. Due to the pandemic, the interviewer did not enter the classroom and it is the teacher who hands out the questionnaires to the students. The questionnaire is self-administered and is completed in writing (paper and pencil) by all students in the selected classrooms during a normal class (45-60 minutes). Questionnaire available in the official languages of Spain.
Response rate	88.7% of the selected centres participated in the survey.
NEWS	
Specific Modules	The questionnaire includes a module on "new substances" (since 2010), a module on "problematic cannabis use" (since 2006), a module on internet use (since 2014), a module on gambling (since 2014), a module on performance-enhancing stimulants (since 2016) and a module on video games (since 2019).

NOTE: Prevalences in this report with values below 1% should be interpreted with caution
as they may be affected by high sampling error.

EDADES 2020

GENERAL ASPECTS	
Name	EDADES. Survey on Alcohol and Drugs in Spain.
Description of the survey	Household survey of the general population (15-64 years old), conducted at home.
Body responsible for the survey	Spanish Monitoring Centre for Drugs and Addictions (Spanish acronym: OEDA). Government Delegation for the National Plan on Drugs (Spanish acronym: DGPNSD). Ministry of Health.
SCOPE OF THE SURVEY	
Geographical scope	The survey is conducted nationwide. The results are nationally representative.
Population scope	Universe: Population resident in Spain aged 15 to 64 years old, both inclusive.
Time scope. Periodicity.	EDADES has been held every 2 years since 1995. The data collection period ran from 7 February to 13 March 2020.
SAMPLE DESIGN AND CHARACTERISTICS. WEIGHTING	
Sampling frame	Urban and rural population (municipalities with fewer than 2,000 inhabitants) of all the Autonomous Regions and the Autonomous Cities of Ceuta and Melilla, resident in family households.
Sampling procedure	The sample design took into account the latest data published at the time of the research design (2018). Three-stage cluster sampling without replacement. The first-stage units are the census sections (36,288), corresponding to 8,123 municipalities. In this edition, 1,793 census sections corresponding to 744 municipalities were selected. Second-stage units are family dwellings (households). In the third stage, one individual within each household was selected.
Weighting	The weighting for the analysis of results is carried out according to Autonomous Region (19 groups), size of municipality (7 groups), age (7 groups) and sex (2 groups) to correct for the disproportionality of the sample with respect to the universe.
Sample size	17,899 valid questionnaires.
Sampling error	Maximum sampling error (95% confidence level for p=0.5) of 0.8%, ranging from 2.1% for Valencia to 8.6% for Melilla.
FIELDWORK. COLLECTION OF INFORMATION	
Method of collection. Questionnaires	Personal interview at home. The interviewer remains present during the entire process and collects the questionnaire once it is completed. The questionnaire consists of two parts: interviewer questionnaire and self-administered questionnaire. The questionnaire is completed in writing (pencil-and-paper). Questionnaire available in the official languages of Spain.
Response rate	The effective response rate in 2020 was 37.2%.
NEWS	
Specific Modules	Alcohol module (including AUDIT scale), cannabis module (including CAST scale), new substances module, opioid analgesics module, gambling module (including DSM-V scale) and internet module (including CIUS scale).

■ **LABORAL 2020**

GENERAL ASPECTS	
Name	LABORAL. 2020 Survey on psychoactive substance use in the workplace in Spain.
Description of the survey	Household survey of the employed (currently working or temporarily absent) or unemployed (previously employed) population aged 16 to 64. It is included as a specific module in the EDADES 2020 survey (laboral module).
Body responsible for the survey	Spanish Monitoring Centre for Drugs and Addictions (Spanish acronym: OEDA). Government Delegation for the National Plan on Drugs (Spanish acronym: DGPNSD). Ministry of Health.
SCOPE OF THE SURVEY	
Geographical scope	The survey is conducted nationwide. The results are nationally representative.
Population scope	Universe: Population resident in Spain aged 16 to 64, both inclusive, who are employed (currently working or temporarily absent) or unemployed (with previous job) who have participated in the EDADES 2020 survey.
Time scope. Periodicity.	The specific employment module has been included in the EDADES survey every 6 years, since 2007. The data collection period ran from 7 February to 13 March 2020.
SAMPLE DESIGN AND CHARACTERISTICS. WEIGHTING	
Sampling frame	Urban and rural population (municipalities with fewer than 2,000 inhabitants) of all the Autonomous Regions and the Autonomous Cities of Ceuta and Melilla, resident in family households.
Sample size	11,743 questionnaires with the laboral module filled in correctly are analysed.
Sampling error	Maximum sampling error (95% confidence level for p=0.5) of 0.8%.
FIELDWORK. COLLECTION OF INFORMATION	
Method of collection. Questionnaires	Personal interview at home. The interviewer remains present during the entire process and collects the questionnaire once it is completed. The questionnaire consists of two parts: Interviewer questionnaire, which collects socio-demographic and occupational information, together with a self-administered questionnaire that, based on the interviewee's opinions, explores the use of psychoactive substances. The former is carried out by means of a face-to-face interview, while the latter is completed in writing in paper format and is available in the official languages of Spain.
SPECIFIC MODULES	
Specific Modules	Employment module: Questions on the sector of activity, occupational category, work group, working hours and risks in the working environment are included.

ESDIP 2016

GENERAL ASPECTS	
Name	ESDIP 2016. Survey on health and drug use among prisoners.
Description of the survey	Survey included in the National Statistical Plan which is carried out periodically five-yearly (started in 2006), through personal interviews with inmates in prisons in Spain.
Body responsible for the survey	**Responsible**: Spanish Monitoring Centre for Drugs and Addictions (Spanish acronym: OEDA). Government Delegation for the National Plan on Drugs (Spanish acronym: DGPNSD). Ministry of Health. **Contributors**: General Secretariat of Penitentiary Institutions of the Ministry of the Interior (SGIIPP) and Directorate General of Penitentiary Services of the Regional Government of Catalonia (DGSP).
SCOPE OF THE SURVEY	
Geographical scope	The survey is conducted nationwide. The results are nationally representative.
Population scope	Universe: Inmate population in prisons in Spain.
Time scope. Periodicity.	ESDIP has been held every 5 years since 2006. The data collection period took place between 2 November and 2 December 2016.
SAMPLE DESIGN AND CHARACTERISTICS. WEIGHTING	
Sampling frame	The sample consisted of 50,671 inmates, distributed in 71 prisons. Men and women over 18 years of age with sufficient knowledge of Spanish, Arabic or Romanian to answer the questionnaire are included. According to their penal classification, they include pre-trial detainees, second-degree convicts, convicts awaiting further sentencing and unclassified convicts.
Sampling procedure	Sampling, using a table of random numbers, was proportional to the number of inmates in each centre and their nationality, and proportional by sex, with women over-represented (weighted by sex to return proportionality to the sample).
Sample size	The final sample was 5,024 inmates.
Sampling error	Maximum sampling error: 1.4% (95% confidence level for p=0.5%).
FIELDWORK. COLLECTION OF INFORMATION	
Method of collection. Questionnaires	Face-to-face personal interview through an anonymous, pre-coded paper questionnaire completed by the interviewer. The questionnaires are administered to the inmates in the prisons themselves, in a separate room and ensuring the absolute confidentiality and anonymity of their answers. The duration of the interview is 30 to 45 minutes. Questionnaire available in Spanish, Arabic and Romanian. Translated into English for scientific purposes.
Response rate	The response rate was 98.0%.

3.2. Indicators of the State Information System on Drugs and Addiction (SEIDA)

The State Information System on Drugs and Addictions (SEIDA) is made up of four key indicators (admissions to treatment for the use of psychoactive substances, admissions to treatment for behavioural/non-substance addictions, hospital emergencies related to the use of psychoactive substances, and mortality due to acute reaction to psychoactive substances) and two cross-cutting indicators that are obtained by crossing information on these indicators from surveys and other sources of information (problematic use of psychoactive substances and infectious diseases related to the use of psychoactive substances).

The key indicators collect information on an annual basis and are managed within the framework of the National Plan on Drugs as an inter-institutional collaboration in which the Autonomous Regions play a very active role, as well as the institutions from which the information comes (centres in the addiction care network, hospitals, institutes of legal medicine and toxicological laboratories).

The indicators that collect information on cannabis are as follows:

- **Indicator Admissions to treatment for the use of psychoactive substances**: reports, since 1987, the number and characteristics of people receiving health care for drug use in outpatient centres of the public and subsidised network of the Autonomous Regions. The collection of data on cannabis has been carried out systematically at the national level since 1996.

- **Indicator on hospital emergencies related to the use of psychoactive substances:** reports, since 1987, the characteristics of hospital emergencies related to the non-medical or non-therapeutic use of psychoactive substances in Spain by analysing a sample of emergencies in the main hospitals in the country. The collection of data on cannabis has been carried out systematically since 1996.

- **Indicator on mortality due to acute reaction to psychoactive substances:** This is a specific mortality record initiated in 1983 that collects information on court-involved deaths, where the direct and fundamental cause of death is an acute reaction to the non-medical and intentional use of psychoactive substances. The collection of data on cannabis has been carried out systematically since 1996.

3.3. Other relevant sources of information

The information on cannabis use in the general population recognised through the surveys has been complemented by information on cannabis supply from the general population:

- **Seizures and arrests provided by the Centre for Intelligence against Terrorism and Organised Crime (CITCO), part of the Ministry of the Interior.**

Information on synthetic cannabinoid use has been supplemented by:

- **Information from the detection of new synthetic cannabinoids in Spain, through the Spanish Early Warning System (SEAT) network[1], which in turn is part of the EU Early Warning System[2]. The SEAT network has nationwide coverage and works at two levels: at the national level, mainly through the General State Administration (AGE), and at the regional level.**

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1   https://pnsd.sanidad.gob.es/profesionales/sistemasAlerta/home.htm
2   https://www.emcdda.europa.eu/publications/topic-overviews/eu-early-warning-system

Information on drug testing of road traffic fatalities in 2020 is from the following report:

● *Hallazgos Toxicológicos en Víctimas Mortales de Accidente de Trafico (2020)* **[Toxicological Findings in Mortal Victims of Traffic Accidents], National Institute of Toxicology and Forensic Sciences, Ministry of Justice.**

Information on the analysis of cannabis in wastewater comes from:

● **The Spanish Network of Wastewater Analysis for Epidemiological Purposes (ESAR-Net).**

INTRODUCTION

In order to be able to carry out interventions aimed at preventing and reducing cannabis use, it is necessary to have rigorous and accurate information that allows us to infer the magnitude of the problem in Spain, both on the characteristics of use and its consequences.

Since 1994, the OEDA has had different sources of information that provide an overall view of the situation of cannabis use in Spain, knowing the characteristics of use in certain populations from biennial surveys of the general population and students (EDADES, ESTUDES) and other periodic surveys of specific populations (laboral and prison surveys), as well as knowing the consequences caused by this use through the indicators of admissions to treatment, drug-related emergencies, specific mortality, infections related to use and problematic use. All this information is the result of inter-institutional collaboration between the Monitoring Centre (OEDA) and the Autonomous Regions and Autonomous Cities, which contribute annually to each of the indicators.

All available information to date shows that cannabis policies need to be cross-sectoral. Moreover, to be effective and to avoid unintended consequences, such policies should be directed not only at the individual care and rehabilitation of people who consume, but also at the consumption environment and the health system in general and other sectors directly involved in health promotion and prevention of drug use.

The Government Delegation for the National Plan on Drugs (DGPNSD) promoted the preparation of the National Strategy on Addictions (ENA) 2017-2024[3] and the Action Plan on Addictions 2021-2024[4], in line with the European Union (EU) Drugs Strategy (2021-2025)[5], the EMCDDA Strategy 2025[6], as well as the Strategies of other neighbouring countries.

The ENA is a participatory and consensus document, agreed between all Public Administrations, non-governmental organisations in the sector, scientific societies, research centres, and all those public and private bodies that are part of the National Plan on Drugs. The objectives of the ENA and its Action Plans include:

● Reducing the unjustified perception in society, and especially among minors, of the "normality" of drug use, mainly cannabis and alcohol.

● Reaching out to and engaging problem users who do not seek treatment, especially those who use cannabis.

● Reducing the supply and trafficking of cannabis, and associated criminality.

This technical report on cannabis aims to support the implementation of these actions by providing up-to-date information based on science and knowledge from accredited and legitimised sources that can contribute to the knowledge of professionals, which are accessible to the public and which serve as a reference, displacing sources interested in generating confusion and opacity.

3   National Strategy on Addictions 2017-2024. Government Delegation for the National Plan on Drugs. Ministry of Health. Available at:
    https://pnsd.sanidad.gob.es/pnsd/estrategiaNacional/docs/180209_ESTRATEGIA_N.ADICCIONES_2017-2024__aprobada_CM.pdf
4   Action Plan on Addiction 2021-24. Government Delegation for the National Plan on Drugs. Ministry of Health. Available at: https://pnsd.sanidad.gob.es/pnsd/planAccion/docs/PlanASA_2021-24_aprobado.pdf
5   EU Drugs Strategy 2021-2025 https://www.boe.es/doue/2021/102/Y00001-00014.pdf
6   European Monitoring Centre for Drugs and Drug Addiction (2017), EMCDDA Strategy 2025, Publications Office of the European Union, Luxembourg. Available at: https://www.emcdda.europa.eu/system/files/publications/4273/2017.1998_EMCDDA_STRATEGY_2025_web-1.pdf

4.1. General cannabis concepts

Cannabis is a drug extracted from the *Cannabis sativa* plant, whose leaves, stems, flowers and resins are used to make the most widely consumed illegal drugs in Spain, Europe and the world: marijuana and hashish.

Cannabis sativa is a plant that contains more than 400 chemical components, of which at least 60 cannabinoids are known to be unique to this species. The three most important cannabinoids, in terms of their psychoactive effects, are THC, cannabidiol (CBD) and cannabinol. While THC is responsible for most of the effects, cannabinol is ten times less active than THC, and cannabidiol has a different profile, exhibiting anxiolytic and sedative activity[7].

The effects of this drug on the brain are due to its active ingredient, THC, which is found in different proportions depending on the preparation used:

1. Marijuana: refers to the substance obtained by crushing the dried leaves, flowers or small stems of the plant.

2. Hashish: refers to the substance obtained from the resin stored in the flowers of the female plant.

3. Hashish oil: this is the dissolved and concentrated hashish resin.

These preparations are usually smoked in a rolled cigarette, most of the time mixed with tobacco, although they can also be smoked without tobacco, receiving different names that change with the generations of adolescents: joint, reefer, spliff, etc. Less frequently, it is smoked in water pipes, vaporised with electronic cigarettes or ingested directly.

When smoked, its effects can be felt almost immediately and last for two to three hours. Of the total THC contained in a cigarette, between 10-25% reaches the bloodstream. The final amount of THC absorbed into the body depends on the depth and number of puffs and the strength of the cigarettes. THC is detected in the blood immediately after the first puff (1-2 minutes) and peak concentrations are reached within 3-10 minutes.

By oral route (oils, cakes, infusions, etc.) absorption is slower. Its bioavailability may vary between 5 and 10% because it is partially destroyed by gastric juice and undergoes significant first-pass metabolism in the liver. The maximum plasma THC concentration appears at 2-4 hours and the onset of effects is between half an hour and 2 hours post-administration and may last for up to 6 hours. The presence of food can delay THC absorption. It has been estimated that the same intensity of effect requires doses three to four times higher than those used by the pulmonary route.

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7   Fusar-Poli P, Crippa JA, Bhattacharyya S, Borgwardt SJ, Allen P, Martin-Santos R, Seal M, Surguladze SA, O'Carrol C, Atakan Z, Zuardi AW, McGuire PK. Distinct effects of {delta}9-tetrahydrocannabinol and cannabidiol on neural activation during emotional processing. Arch Gen Psychiatry. 2009;66:95-105.

THC, the main psychoactive ingredient in cannabis, is a very fat-soluble substance and quickly reaches the brain, where it accumulates and from which it is eliminated very slowly. THC has a half-life of approximately one week, which means that, one week after consumption, the body has not managed to eliminate more than 50%. Even if a person only uses at weekends, there will not be enough time for it to be completely eliminated and it will accumulate in the brain, producing effects.

In recent years, due to the increase in cannabis use in the general population and the exponential increase in demand for treatment for cannabis use, there has been a growing interest in studying and understanding the implications of cannabis use on the body and its impact on public health.

Survey data indicate that the majority of cannabis users are experimental or occasional users. However, for a proportion of users, the pattern of use leads to serious socio-health consequences, such as mental health problems, school failure, family and work problems and/or dependence.[8,9,10,11,12]

Regardless of the pattern of use, the DGPNSD surveys[13] show that cannabis use is associated with other risk patterns, such as the use of other substances, which increases the risk of this behaviour.

4.2. Effects on the organism

The endogenous cannabinoid system is the brain's own system that performs functions related to behaviour, learning, reward, food intake, pain and emotions, among others.

When cannabis is consumed, this endogenous system is activated externally and artificially and many of its functions are altered. At low doses the effect can be pleasant, while at high doses it can produce anxiety. Immediately after consumption, there is what is known as "cannabis intoxication", with dry mouth, reddening of the eyes, tachycardia, uncoordinated movements, uncontrolled laughter, drowsiness, impaired memory, attention and concentration.

The cannabinoid system plays a key role in the area of memory and naturally causes the modification of the memory and what able to remember. On the other hand, the cannabinoid system also controls attention and perception.

It is also involved in the regulation of motor activity, which explains why cannabis use leads to a decrease in the level of activity and greater difficulty in coordinating movements.

8   Hall W, Solowij N. Adverse effects of Cannabis. Lancet 1998; 352:1611-6.
9   Laumon B, Gadegbeku B, Martin JL, Biecheler MB. Cannabis intoxication and fatal road crashes in France: population based case-control study. BMJ 2005; 331: 1371.
10   Macleod J, Oakes R, Copello A, Crome I, Egger M, Hickman M et al. Psychological and social sequelae of Cannabis and other illicit drug use by young people: A systematic review of longitudinal, general population studies. Lancet 2004; 363: 1579-88.
11   Moore TH, Zammit S, Lingford-Hughes A, Barnes TR, Jones PB, Burke M et al. Cannabis use and risk of psychotic or affective mental health outcomes: A systematic review. Lancet 2007; 370: 319-28.
12   Zammit S, Moore TH, Lingford-Hughes A, Barnes TR, Jones PB, Burke M et al. Effects of Cannabis use on outcomes of psychotic disorders: Systematic review. Br. J. Psychiatry 2008; 193: 357-63.
13   https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/home.htm

■ **Efectos del cannabis**

SYSTEM Effects	Clinical consequences
Central Nervous System (CNS)	
Psychological	Euphoria, well-being, relaxation, anxiety, easy laughter, talkativeness, paranoid symptoms, panic, schizophrenia, psychosis.
Cognitive	Impaired short-term memory, difficulty in concentration. Poorer performance in studies, increased conflict.
On psychomotor performance	Worsening of reaction time and attention.
On motor function	Muscle relaxant. Increased motor activity followed by motor inertia and incoordination, ataxia, dysarthria, tremors, weakness and muscle spasms.
On driving vehicles	Worsening of driving and operation of machinery. Increased risk of accidents.
Sedatives	Generalised CNS depressant. Drowsiness.
On eating behaviour	Increased appetite. Antiemetic.
On sensitivity	Decreased pain, increased thermal sensitivity.
On sensory perception	Increased visual, auditory, tactile perception. Distortion of space and time. Hallucinations.
Cardiovascular	Increased heart rate. Increased blood pressure. Increased cardiac output.
Respiratory	Cough, expectoration, chronic obstructive pulmonary disease. Exposure to tobacco smoke and carcinogens.
Ocular	Conjunctival redness. Reduction in intraocular pressure.
Digestive	Dry mouth. Antiemetic.
Immunological	Disruption of cell-mediated immunity.
Endocrine and reproductive	Decreased sex hormones. Increase in prolactin (galactorrhoea). Increased obstetric and testicular tumour risks.
Pregnancy and breastfeeding	Increased risk of low birth weight. Passage of cannabinoids into milk.

Source: Prepared by the Clinical Commission[14] and reviewed by the OEDA
Government Delegation for the National Plan on Drugs.

■ **Long-term effects**

Smoking cannabis is associated with respiratory symptoms such as cough and expectoration and chronic obstructive pulmonary disease[15]. It has been associated with increased risk of cardiovascular diseases such as myocardial infarction, transient ischaemic attack and stroke[16]. However, the evidence is limited to conclude this association[17].

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14 Cannabis II Report 2009. DGPNSD Clinical Commission. Ministry of Health.
15 Aldington S, Williams M, Nowitz M, Weatherall M, Pritchard A, McNaughton A et al. Effects of Cannabis on pulmonary structure, function and symptoms. Thorax 2007; 62: 1058-63.
16 Volkow N, Baker RD, Compton WM, et al. Adverse health effects of marijuana use. N Engl J Med. 2014;370(23): 2219-2227. https://www.nejm.org/doi/pdf/10.1056/NEJMra1402309?articleTools=true
17 National Academies of Sciences, Engineering, and Medicine. (2017). The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: The National Academies Press. https://doi.org/10.17226/24625

Cannabis use is also associated with an increased risk of mental disorders such as depression, schizophrenia and other psychoses.[18,19] The risk increases as the frequency of use increases and the potency of the cannabis used increases[20], which is worrying in view of the progressive increase in THC concentration detected in seizures in Spain (section 8.2). Similarly, the risk increases the earlier the starting age, and is four times higher when starting at 15 years old (current average age of starting consumption in Spain) than if starting at 26 years old. In addition, it is estimated that up to 8% of the incidence of schizophrenia in the population may be related to cannabis use in young people[21]. The brain is most vulnerable to the effect of cannabis use at the peak of development, from the prenatal period, childhood and adolescence until about the age of 21[22].

THC decreases the secretion of sex hormones, with a reduction in testosterone secretion and in the number and motility of spermatozoa. In women, cannabis use leads to a reduced menstrual cycle, elevated prolactin levels that may be associated with the development of galactorrhoea, and lower androgen levels. It seems, therefore, that THC may reduce fertility, although this has not been definitively proven.[23,24] A study published by Daling et al. (2009) found that cannabis use could increase the risk of developing a testicular tumour by up to 70%. The risk increases if use is continued, at least weekly, and if use begins in adolescence[25]. The IARC Advisory Group report[26] has recommended to study the carcinogenic effect of cannabis smoke among the priorities for 2020-2024 on finding in in vitro studies of marijuana smoke condensates similar effects to tobacco smoke in terms of mutagenicity and cytotoxicity, as well as the existence of studies linking it to lung cancer and testicular cancer[27].

Acute reactions in the cognitive-emotional sphere, including anxiety and attention problems, are also important and are related to an increased risk of accidents, so their relationship with road accidents is a particularly relevant aspect. Cannabis use impairs driving skills for at least 4.5 hours in most individuals. There is a statistically significant relationship between cannabis use and increased risk of traffic accidents[28].

18 Gage SH, Hickman M, Zammit S. Association between cannabis and psychosis: epidemiologic evidence. Biol Psychiatry 2016; 79: 549-56.
19 Mustonen A, Niemela S, Nordstrom T, et al. Adolescent cannabis use, baseline prodromal symptoms and the risk of psychosis. Br J Psychiatry 2019; 212: 227-33.
20 Di Forti M, Quattrone D, Freeman TP, et al, and the EU-GEI WP2 Group. The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. Lancet Psychiatry 2019; 6: 427-436. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7646282/pdf/main.pdf
21 Volkow ND, Swanson JM, Evins AE, DeLisi LE, Meier MH, Gonzalez R, Bloomfield MA, Curran HV, Baler R. Effects of Cannabis Use on Human Behavior, Including Cognition, Motivation, and Psychosis: A Review. JAMA Psychiatry. 2016 Mar; 73(3):292-7.
22 Gogtay N, Giedd JN, Lusk L, et al. Dynamic mapping of human cortical development during childhood through early adulthood. Proc Natl Acad Sci U S A 2004;101:8174-9.
23 Ranganathan M, Braley G et al. The effects of cannabinoids on serum cortisol and prolactin in humans. Psychopharmacology (Berl.). 2009 May;203(4):737-44.
24 Brown TT, Dobs AS. Endocrine Effects of Marijuana. J Clin Pharmacol. 2002;42:90S-96S.
25 Daling JR, Doody DR, Sun X et al. Association of marijuana use and the incidence of testicular germ cell tumors. Cancer. 2009 Mar 15;115(6):1215-23.
26 https://monographs.iarc.who.int/wp-content/uploads/2019/10/IARCMonographs-AGReport-Priorities_2020-2024.pdf
27 https://monographs.iarc.who.int/wp-content/uploads/2019/10/IARCMonographs-AGReport-Priorities_2020-2024.pdf
28 Rogeberg, O., and R. Elvik. 2016. The effects of cannabis intoxication on motor vehicle collision revisited and revised. Addiction 111(8):1348-1359.

4.3. Uses of cannabis

Cannabis has been used since ancient times for many different purposes, such as the use of its fibres to make fabrics and ropes, or as a food additive, making use of its oil and hempseed as a nutrient. It has also been used for its psychoactive properties for religious and/or recreational purposes and occasionally to treat certain diseases[29].

Cannabinoids are substances found in the cannabis plant that act on specific receptors in the brain. The two most studied are tetrahydrocannabinol (THC) and cannabidiol (CBD), but some of the other 102 cannabinoids and terpenoids in cannabis may also have medical uses[30].

THC is the cannabinoid that produces the psychoactive effects sought by social users, such as euphoria, relaxation and intense sensory experiences. There is also evidence to support the medical use of THC to control nausea and vomiting, stimulate appetite and reduce pain. CBD can moderate the psychoactive effects of THC and has medicinal properties, e.g. it reduces epileptic seizures[31].

Several medicines containing cannabinoids have been authorised for marketing. Those consumed for medical purposes can come from the cannabis plant (plant-derived cannabinoids, also known as phytocannabinoids) or be synthesised in a laboratory (synthetic cannabinoids). The main ones are:

- ®Sativex. Active ingredient: nabiximol (THC and CBD in similar amounts). It is authorised for the treatment of muscle spasticity secondary to multiple sclerosis. This medicine was authorised for marketing in Spain on 16 July 2010.

- ®Epidiolex. Active ingredient: CBD. It is indicated for the treatment of seizures associated with two rare and severe types of epilepsy - Lennox-Gastaut syndrome and Dravet syndrome (severe myoclonic epilepsy of infancy), in patients two years of age and older. This medicine was authorised for marketing in Spain on 5 December 2019.

In other countries, the use of drugs containing cannabinoids has been authorised in certain cases, in accordance with current regulations, on an ad hoc basis. In Spain, these medicines have been authorised for import as foreign medicines in exceptional cases of multiple sclerosis or as an anti-emetic in cancer treatment. These medicines are:

- ®Marinol and Syndros. Active substance: dronabinol (synthetic THC). Dronabinol is indicated to treat anorexia associated with weight loss in patients with acquired immunodeficiency syndrome (AIDS) and to reduce nausea and vomiting associated with cancer chemotherapy, usually after failure of previous treatments.

- ®Cesamet and Canemes. Active substance: nabilone (synthetic cannabinoid similar to THC). The main indication is to reduce nausea and vomiting associated with chemotherapy, usually after failure of previous treatments.

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29 Una revisión histórica sobre los usos del Cannabis y su regulación. Eva Candela García, José Pedro Espada Sánchez. Salud y drogas. 2006, 6(1).

30 Russo, E. B. and Marcu, J. 2017. "Cannabis pharmacology: the usual suspects and a few promising leads", Advances in Pharmacology 80, pp. 67-134.

31 NASEM. 2017. The health effects of cannabis and cannabinoids: the current state of evidence and recommendations for research, National Academies Press for the National Academies of Sciences Engineering and Medicine, Washington, DC.

4.4. Situation worldwide

According to the 2021 World Drug Report published by the United Nations Office on Drugs and Crime (UNODC), cannabis remains the most widely used illegal drug **worldwide[32].**

UNODC estimates that almost 4% (between 2.8 and 5.1%) of the global population aged 15-64 used cannabis at least once in 2019, the equivalent of about 200 million people (between 141 million and 256 million). The total number of people who have used cannabis in the past year is estimated to have increased by almost 18% over the past 10 years (2010-2019), partly reflecting a global population increase of 10% over the same period. Since 2010, past-year prevalence of cannabis use has thus increased by almost 5%. This increase in the number of people using cannabis and the prevalence of cannabis use should be interpreted with caution, due to the large margins of error in the estimates. Despite these limitations, qualitative information on trends in cannabis use, reported by an average of 67 Member States per year, confirms the increase in cannabis use.

In **Africa**, the annual prevalence of cannabis use in 2019 is estimated at 6.4% of the population aged 15-64 (range 3.8-8.8%), corresponding to 47 million past-year users (range 28 million-64 million). The estimated annual prevalence of cannabis use in **Asia** is much lower than in other regions, at 2% but because of the size of the population, almost a third (61.5 million) of the estimated global number of cannabis users reside in the region. In the absence of survey data, the cannabis use perception index indicates that cannabis use increased in Africa and Asia over the period 2010-2019.

Past-year prevalence of cannabis use in the **Caribbean, Central America and South America** is lower than the global average, at 3.4 per cent, 3.1 per cent and 3.5 per cent, respectively, of the adult population, corresponding to more than 12 million people who used cannabis in the past year in these subregions.

The evolution of the cannabis market in the **United States** over the last decade has resulted in more cannabis users, consumed more frequently and in greater quantities. While the prevalence of past-year and past-month cannabis use among the adult population (aged 18+) in the United States has increased by 60% and 75%, respectively, the prevalence of daily or near-daily use increased almost two-fold over the period 2010-2019. In 2019, more than 29 million people aged 18 and over were estimated to have used cannabis in the past month, of whom 45%, or 13.8 million people, were estimated to be daily or near-daily cannabis users.

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32 https://www.unodc.org/res/wdr2021/field/WDR21_Booklet_3.pdf

**Prevalence of cannabis use in the last 12 months in the general population
and in the last available year in the world (%), 2019.**

Source: Data are reported by national authorities through the Annual Reports Questionnaire (ARQ).
United Nations Office on Drugs and Crime (UNODC).

The annual prevalence of cannabis use in **Australia and New Zealand** is estimated at 12.1% of the adult population. In both countries, past-year cannabis use has remained stable over the past 10 years, with some increase in 2019.

4.5. Situation at European level

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is the body responsible for providing the EU and its Member States with an objective overview of the drug problem in Europe and a solid basis on which to base the debate on this issue.

The EMCDDA compiles a number of cannabis-related indicators, which serve as the basis for the annual European drug reports.

According to the European Drug Report (EDR) 2021[33], cannabis is the most widely used illegal drug; 78.5 million people aged 15-64, 27.2% of the population have used it at least once in their lifetime. It is consumed more by men than by women (47.6 million and 30.9 million respectively). In the last year it was consumed by 22.2 million (7.7%), of which 15.8 million were young adults between 15-34 years of age.

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33 European Monitoring Centre for Drugs and Drug Addiction (2021), European Drug Report 2021: Trends and developments, Publications Office of the European Union, Luxembourg. Available at: https://www.emcdda.europa.eu/system/files/publications/13838/2021.2256_ES0906.pdf

Estimates of cannabis use in the European Union in 2021.
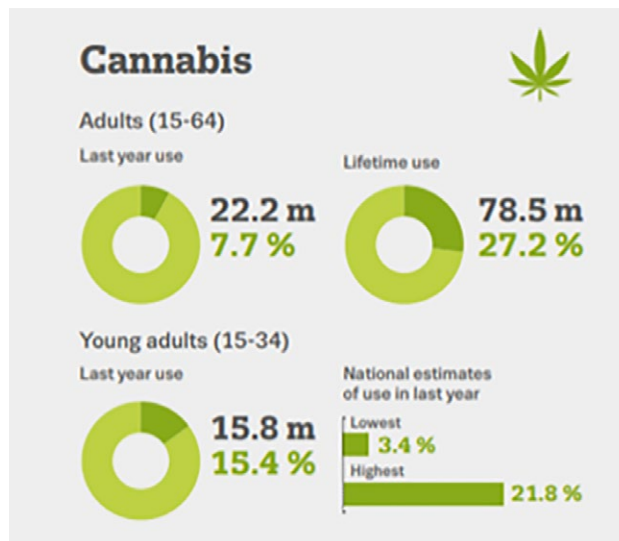
Source: European Drug Report 2021. EMCDDA.

General population surveys indicate around 1.8% of adults aged 15-64 have used the drug daily or almost daily in the last month, most of whom (61%) are under 35. Estimates of lifetime prevalence of drug use in the population aged 15-64 differ considerably between countries, as does the year of the last survey they present. Spain with 37.5% (2020 data) is above the European average (27.2%) and ranks third behind France (44.8%, 2017 data) and Denmark (38.4%, 2017 data). The situation is similar when comparing the prevalence of cannabis use in the last 12 months among young adults (15-34), Spain's prevalence (19.1% in 2020) is above the European average (15.4%), ranking fourth this time behind France (21.8% in 2017), Italy (20.9% in 2017) and Croatia (20.3%, 2019 data).

**Prevalence of cannabis use in the last 12 months among the population
aged 15-34 in Europe (%), 2019.**

Source: European Drug Report 2021. EMCDDA.

4.6. Regulatory bodies and commissions

The main bodies and commissions active at the global or European level in the field of drugs are the following:

- **The United Nations Commission on Narcotic Drugs (CND)** is a functional commission of the Economic and Social Council (ECOSOC) that functions as the main decision-making body of the United Nations system dealing with all drug-related issues. It was established in 1946 and meets annually. The Commission assumes a number of functions including advising the Council on the implementation of the international drug control conventions, advising on any matter relating to the control of narcotic drugs, psychotropic substances and substances used in their manufacture or deciding, on the basis of WHO recommendations, the inclusion of new narcotic drugs and psychotropic substances in the Schedules (annexed to the 1961[34] and 1971[35]Conventions), to modify their scheduling, as well as to amend, on the recommendation of the International Narcotics Control Board (INCB), Tables I and II (annexed to the 1988 Convention) of precursors frequently used in the manufacture of controlled substances.

  Regarding the classification of cannabis in international treaties, cannabis is included in Schedule I of the 1961 Convention and is therefore considered a narcotic drug, and its production, manufacture, export, import, distribution, trade, use and possession must be limited to medical and scientific purposes. In December 2020, the CND removed cannabis from Schedule IV[36] to allow for scientific research into its potential medicinal properties, but it remains on Schedule I because of its addictive potential and because it poses significant public health risks that must remain controlled under international conventions.

- **The United Nations Office on Drugs and Crime (UNODC)** was established in 1997 through a merger between the United Nations Drug Control Programme (UNDCP) and the Centre for International Crime Prevention (CICP). UNODC is the specialised administrative unit of the United Nations Secretariat dealing with drugs, crime prevention and criminal justice, transnational organised crime, including its multiple activities and manifestations, corruption and the prevention of terrorism. UNODC publishes the annual World Drug Report[37], which compiles estimates on the prevalence of drug use, as well as other indicators related to illicit drugs (cultivation, trafficking), based on information submitted by UN member states.

- The **WHO Expert Committee on Drug Dependence (ECDD)**[38] consists of an independent group of experts in the field of drugs and medicines. The WHO was established in 1948 as a specialised agency of the United Nations to act as the directing and coordinating authority on international health matters and public health. The WHO convenes the Committee approximately once a year to review the public health impact of psychoactive substances and make recommendations to the international community. In 2018, it produced several documents on cannabis[39, 40].

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34 1961 Single Convention on Narcotic Drugs. United Nations. https://www.unodc.org/pdf/convention_1961_es.pdf

35 https://www.incb.org/documents/Psychotropics/conventions/convention_1971_es.pdf

36 https://www.unodc.org/documents/commissions/CND/CND_Sessions/CND_63Reconvened/Press_statement_CND_2_December.pdf

37 United Nations Office on Drugs and Crime. World Drug Report 2021. United Nations publication; 2021. Available at: https://www.unodc.org/unodc/en/data-and-analysis/wdr2021.html

38 WHO Expert Committee on Drug Dependence (ECDD) https://www.who.int/groups/who-expert-committee-on-drug-dependence

39 WHO Expert Committee on Drug Dependence: forty-first report. Geneva: World Health Organization; 2019 (WHO Technical Report Series, No. 1018). Licence: CC BY-NC-SA 3.0 IGO. https://www.who.int/groups/who-expert-committee-on-drug-dependence/forty-first-ecdd-documents

40 WHO Expert Committee on Drug Dependence Critical Review. Cannabis and cannabis resin. World Health Organization. https://cdn.who.int/media/docs/default-source/controlled-substances/cannabis-and-cannabis-resin.pdf

- The **International Narcotics Control Board** (INCB) is the independent monitoring body for the implementation of the United Nations international drug control treaties. It was established in 1968 under the Single Convention on Narcotic Drugs of 1961. The INCB publishes an annual report on the drug control situation in various parts of the world. In January 2022, it published a new List of Psychotropic Substances under International Control and forms[41] for reporting on substances controlled under the 1971 Convention on Psychotropic Substances.

- **European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)**. Community Agency based in Lisbon, established by Council Regulation (EEC) No 302/93 of 8 February 1993. Its objectives include providing the European Union and its Member States with objective, reliable and comparable information at European level on the phenomenon of addiction and its consequences. The EMCDDA publishes an annual European Drug Report (EDR) which presents an overview of the drug phenomenon in Europe, covering supply, use and public health issues, as well as drug policy and responses.

- **The Council of Europe International Cooperation Group on Drugs and Addictions[42] (Pompidou Group**) was created in 1971, by French President Georges Pompidou who alerted the Prime Ministers of the other five European Community countries at the time, as well as the Prime Minister of the United Kingdom, to the dangers of increasing drug use, especially among young people. It proposed the creation of a European framework for cooperation to combat the emerging trade. Its geographical scope currently covers 42 states, extending beyond the borders of Europe. It is a forum for the exchange of information and opinions of a multidisciplinary nature (reduction of the supply and demand of drugs) that fosters cooperation at the government level. Its main objective is to provide practical assistance to drug policy makers, professionals and anyone working in this field. It pays particular attention to relations with the countries of Central and Eastern Europe.

- **Inter-American Drug Abuse Control Commission**[43]. Currently comprising 32 member states, it was created by the Organisation of American States (OAS) in 1986 to promote and facilitate multilateral cooperation among member countries in the control of drug trafficking, production and consumption. This Commission collects statistical data on illicit crops and coca eradication, seizures of drugs and chemicals seized, laboratories discovered and persons arrested for drug-related offences.

41 https://www.incb.org/documents/Psychotropics/forms/greenlist/2021/Green_list_SPA_V21.pdf
42 https://www.coe.int/en/web/pompidou
43 http://www.cicad.oas.org

05

CANNABIS
USE

5.1. Use among secondary school students

5.1.1. Survey on Drug Use in Secondary Education in Spain (ESTUDES 2021)

The survey on Drug Use in Secondary Education in Spain (ESTUDES 2021) was conducted among students aged 14 to 18 from public and private schools. This survey, which has been carried out every two years since 1994, is promoted and financed by the DGPNSD and has the collaboration of the Autonomous Regions/Cities.

The data collection period was from 8 March to 18 May 2021. The sample is nationally representative. The questionnaire and methodology used for this survey are quite similar to those used in other EU countries and the United States, allowing for international comparisons.

More detailed information on this survey can be found at the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/encuestas_ESTUDES.htm

The main data on cannabis use are summarised below.

■   **Prevalence of cannabis use**

Among secondary school students aged 14-18, cannabis ranks third as the most commonly used psychoactive substance in all time frames. It is also the most widely used illegal drug in all time periods.

In 2021, **lifetime** prevalence of cannabis use was 28.6%, breaking the upward trend that started in 2016. 22.2% of students reported having used it in the **last year**, and for the most recent use, i.e., **within the last 30 days,** the prevalence was 14.9%. 1.6% reported themselves as **daily** cannabis users. Prevalence of use in all 4 time periods showed a significant drop of more than 4 percentage points compared to 2019.

Figure 5.1.1. Prevalence of cannabis use among secondary school students aged 14-18 (%). Spain, 1994-2021.

	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016	2019	2021
Sometime in life	20.9	26.4	29.5	33.2	37.5	42.7	36.2	35.2	33.0	33.6	29.1	31.1	33.0	28.6
Last 12 months	18.2	23.4	25.7	28.8	32.8	36.6	29.8	30.5	26.4	26.6	25.4	26.3	27.5	22.2
Last 30 days	12.4	15.7	17.2	20.8	22.5	25.1	20.1	20.1	17.2	16.1	18.6	18.3	19.3	14.9
Daily last 30 days	1.0	1.4	1.8	3.7	3.8	5.0	3.1	3.1	3.0	2.7	1.8	2.0	2.3	1.6
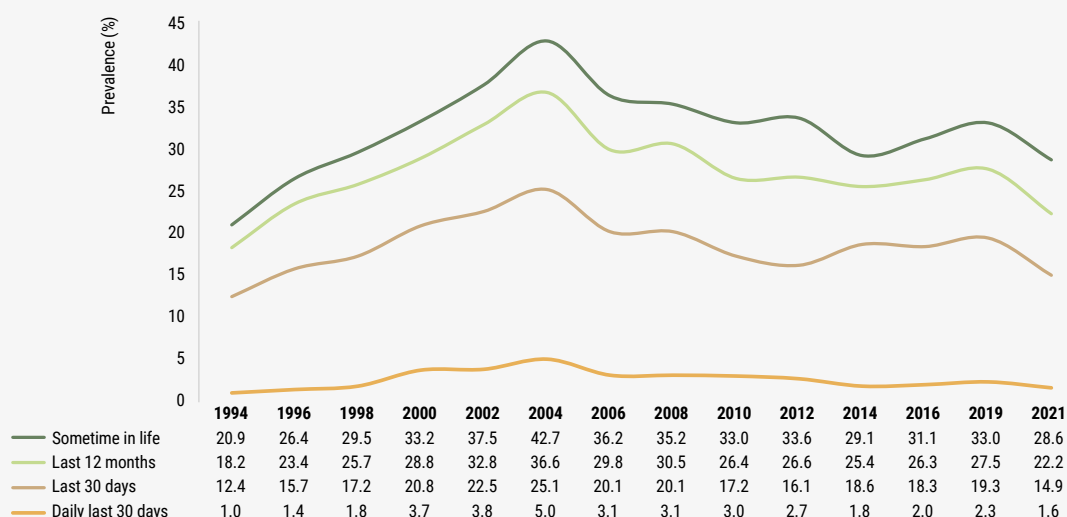
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Average age of onset of use**

On average, the first time cannabis is used is at the age of 14.9, a similar figure for boys and girls (only 0.1 points difference: 14.8 and 14.9 years respectively). This situation is historically repeated.

■ **Prevalence of consumption by age and sex**

Overall, it can be concluded that cannabis use is more prevalent among boys in most of the age groups considered (Figure 5.1.2). However, girls aged 14 and 15 showed a slightly higher prevalence in all time periods than boys in this age group. For example, 12.4% of girls aged 14 admitted to having ever used the drug, compared to 11% of boys aged 14.

The prevalence of drug use rises progressively with age in all time periods for both boys and girls. Thus, at the age of 18, 51.5% of boys and 48.5% of girls have used cannabis at one time.

Considering the time span of the last month, the prevalence of drug use among students aged 14 was 6.0%, which increased to almost 5 times higher in the 18-year-old group (28.2%). For girls, use increased from 6.5% at the age of 14 to 22.0% at the age of 18.

The prevalence of past-month cannabis use among students aged 14-18 was 22.2%, as indicated above, 87.7% of them being minors.

Figure 5.1.2. Prevalence of cannabis use among secondary school students aged 14-18, by sex and age (%). Spain, 2021.

	Man	Woman	Man	Woman	Man	Woman
	Sometime in life		Last 12 months		Last 30 days	
14	11.0	12.4	7.9	9.9	6.0	6.5
15	19.4	19.7	15.5	16.3	10.1	10.2
16	32.6	29.4	26.2	23.9	18.2	15.6
17	42.3	41.2	32.0	31.2	22.3	20.2
18	51.5	48.5	39.3	33.7	28.2	22.0
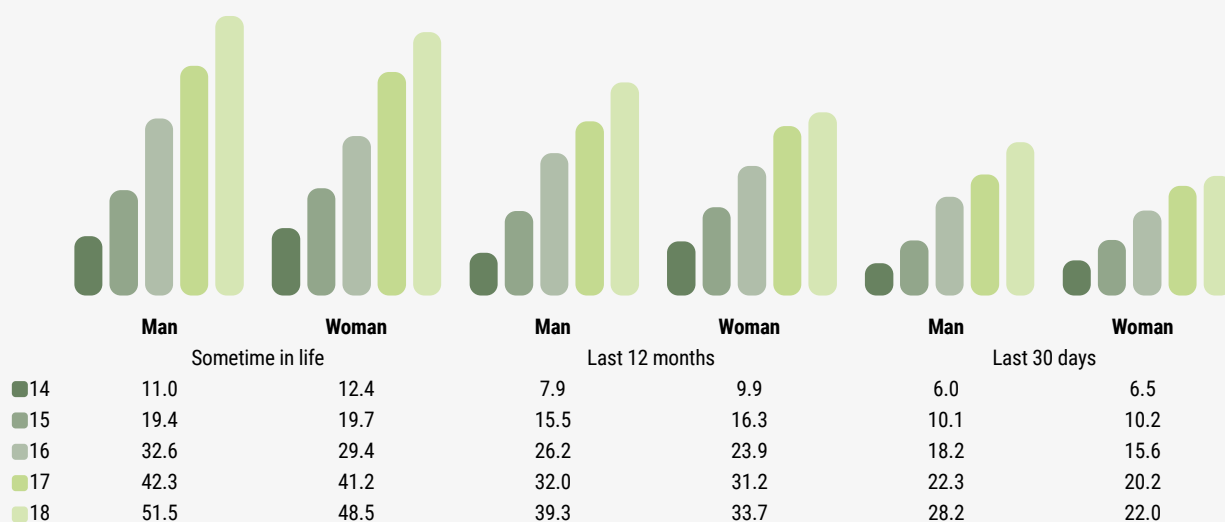
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Table 5.1.1. General characteristics of cannabis use among secondary school students aged 14-18, by sex (%). Spain, 1994-2021.

	1994		2000		2006		2008		2010		2012		2014		2016		2019		2021	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Respondents (No.)	10,415	10,374	10,147	9,777	12,598	13,856	14,951	15,232	15,595	16,372	13,769	13,734	18,405	19,081	17,649	17,720	18,489	19,521	11,116	11,205
Average age at first use (years)	15.1	15.2	14.8	15.0	14.5	14.6	14.6	14.7	14.6	14.8	14.8	15.0	14.8	14.9	14.8	14.9	14.9	15.0	14.8	14.9
Prevalence (%) ever in lifetime	23.8	18.0	36.2	30.1	38.0	34.6	37.8	32.8	34.9	31.1	36.3	30.7	31.5	26.8	33.2	28.9	34.5	31.5	29.2	27.9
Prevalence (%) last 12 months	21.2	15.2	32.2	25.2	31.6	28.2	33.5	27.5	26.8	23.3	29.7	23.3	28.0	23.0	28.1	24.4	29.2	25.9	22.6	21.8
Prevalence (%) last 30 days	15.1	9.8	24.5	16.9	22.3	18.0	23.0	17.2	18.6	14.6	18.9	13.3	21.4	15.8	20.8	15.9	21.5	17.3	15.7	14.1
Frequency of use in the last 30 days																				
Never	84.9	90.2	75.5	83.1	77.7	82.0	74.7	82.5	80.3	84.7	81.1	86.7	83.1	87.9	84.2	88.2	82.3	86.6	87.6	89.1
1 to 2 days	6.9	5.1	8.6	8.8	7.4	7.4	7.9	7.1	6.9	6.8	7.1	6.2	6.5	6.0	5.7	5.5	7.0	6.5	5.1	5.4
3 to 5 days	3.0	2.1	4.7	3.5	5.3	4.8	5.0	4.6	3.9	3.7	3.9	3.0	3.9	2.8	3.6	2.7	3.8	3.1	2.6	2.2
6 to 9 days	2.1	1.4	3.1	1.9	2.5	1.8	2.6	1.8	2.2	1.4	2.1	1.3	2.0	1.1	1.8	1.3	1.5	1.2	1.2	1.0
10 to 19 days	1.5	0.6	3.5	1.3	2.9	1.8	3.6	2.0	2.5	1.6	2.0	1.3	1.9	1.2	1.9	1.1	2.1	1.2	1.3	1.2
20 to 29 days	1.5	0.6	4.7	1.4	4.2	2.2	4.5	1.9	4.3	1.8	3.8	1.5	2.6	1.0	2.7	1.3	3.3	1.4	2.1	1.1

M: Man; W: Woman.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Over time, the prevalence of cannabis use among boys is always higher than among girls, whatever the time period analysed, except in 2021 among girls aged 14 and 15. In 2021, there was a decline in the prevalence of cannabis use in both sexes and in all age groups.

Looking at the frequency of use in the last month, both boys and girls tend to use cannabis sporadically (1 or 2 days) and only a few use cannabis on 20 or more days (2.1% for boys and 1.1% for girls).

■ **Incidence**

The incidence of use aims to find out how many students aged 14-18 started using cannabis in the last year (Table 5.1.2).

In order to calculate the incidence, we start from the base of students who have never used cannabis and those who started using it in the last 12 months, in order to measure the rate that the latter represent on that base. Under this premise, it is concluded that during 2021, 114 students started using cannabis out of every 1,000 who did not use it, with a higher number of females, as in the previous edition. In addition, fewer students started using cannabis in 2021 than in 2019, which breaks the upward trend that had been registered since 2014.

Table 5.1.2. Estimated incidence of cannabis use in the last 12 months among secondary school students aged 14-18, by age and sex (‰). Spain, 2014-2021.

	2014			2016			2019			2021		
	T	**M**	**W**	**T**	**M**	**W**	**T**	**M**	**W**	**T**	**M**	**W**
Incidence estimation	**120**	123	117	**139**	147	131	**169**	174	164	**114**	107	121

T=Total, M: Man; W: Woman.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Characteristics of cannabis use: quantity and type**

In relation to the **quantity consumed**, students who have smoked cannabis in the last month admit that, on the day they use it, they smoke on average 3.3 joints per day (Table 5.1.3). By sex, boys smoke, on average, one more joint than girls (3.7 versus 2.7 respectively). By age, the average amount of joints consumed ranged from 3 joints at the age of 14 to 4 joints in the 18-year-old age group.

In terms of the **form in which cannabis was used in the last month,** half smoked mainly marijuana (mostly girls and in the youngest age group), 33.5% used both marijuana and hashish (mostly boys and 17-year-old users) and 16.7% have mainly used hashish (especially girls). In 2021, compared to the data recorded in 2019, there was an increase in the use of mainly marijuana, to the detriment of users who mainly use hashish or those who use both types of marijuana and hashish interchangeably. It is important to note that nearly 9 out of 10 students (87.7%) tend to mix cannabis with tobacco when they smoke it. This habit is implemented in both sexes and at all ages.

Table 5.1.3. Cannabis use characteristics of secondary school students aged 14-18 who have used cannabis in the last 30 days, by sex (%). Spain, 2016-2021.

		2016	2019	2021		
				Total	**Man**	**Woman**
Type of cannabis use	**Mainly marijuana (weed)**	51.1	43.8	49.8	47.7	52.2
	Mainly hashish (resin, chocolate)	12.2	19.3	16.7	15.3	18.4
	Of the 2 types	36.7	37.0	33.5	37.1	29.4
Mixing cannabis with tobacco	**Yes**	82.4	87.1	87.7	86.4	89.2
	No	17.6	12.9	12.3	13.6	10.8
Average number of joints consumed on the day cannabis is consumed		3.4	3.4	3.3	3.7	2.7

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

With regard to the **way in which cannabis is consumed**, it was concluded that the joint or spliff was the most prevalent form of consumption (91.4%), followed, far behind, by the use of water pipes, bongs, hookahs or shishas (10.3%). The other two forms of cannabis use are of lesser importance: 5.3% use electronic cigarettes and 1.4% use them orally (cakes, biscuits, etc.). In line with the general prevalence rates, cannabis use in all its formats is decreasing, with e-cigarettes being the only mode that has remained stable compared to 2019.

**Table 5.1.4. Mode of cannabis use among secondary school students
aged 14-18 who have used cannabis in the last 30 days, by sex (%). Spain, 2016-2021.**

	2016	2019	2021		
			Total	Man	Woman
In the form of a joint or spliff	97.7	98.9	91.4	90.8	91.9
Using waterpipes, bongs, hookahs or shishas	17.9	11.9	10.3	14.3	5.8
Orally: cakes, biscuits…	5.7	2.0	1.4	2.0	0.7
Using electronic cigarettes	1.8	5.4	5.3	6.7	3.7

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

When asked, "If it were legal to consume hashish or marijuana, would you try it?" (Table 5.1.5), 81.8% of students aged 14-18 say they would not be willing to try it, but 18.2% of students would try it, which would be 2.8 percentage points higher than in 2019.

Although the differences between sex and age are not notable, it is girls who are more likely to try cannabis if it were legal (19.6% compared to 16.8%).

**Table 5.1.5. Percentage of 14-18 year-old students who say they would or
would not try hashish or marijuana if it were legal, among 14-18 year-old students
who have never tried it, by sex (%). Spain 2016-2021.**

		2016	2019	2021		
				Total	Man	Woman
If it were legal to consume hashish or marijuana, would you try it?	Yes	12.5	15.4	18.2	16.8	19.6
	No	87.5	84.6	81.8	83.2	80.4

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Contrasting students' daily tobacco use with their cannabis use, interesting results are obtained. Thus, only 1.4% of non-users of cannabis mentioned smoking tobacco on a daily basis for both men and women, but when they use cannabis the relationship grows substantially, as 38.2% of those who used it in the last month (36.4% boys and 40.2% girls), have also smoked tobacco on a daily basis.

Figure 5.1.3. Prevalence of daily tobacco use among secondary school students aged 14-18 according to use of cannabis at some time in life, past 12 months and 30 days and by sex (%). Spain, 2021.
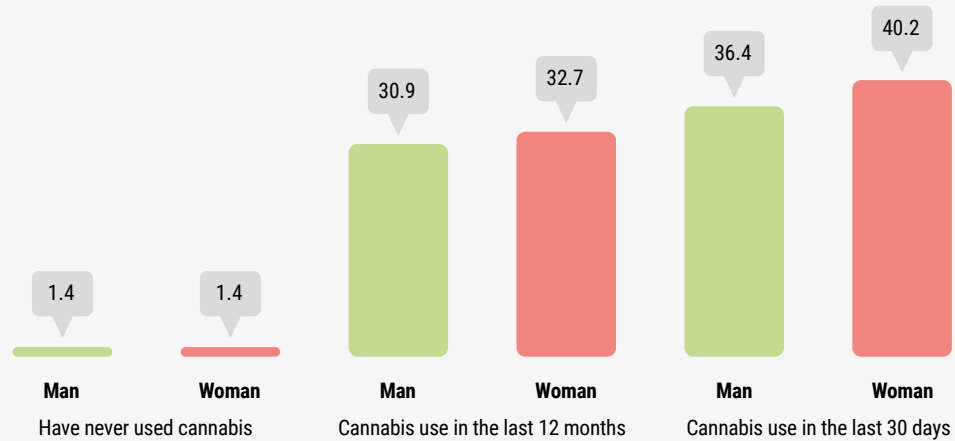
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Perceptions and opinions of the population regarding cannabis use**

Risk perception gives an idea of the extent to which students think that a certain behaviour may cause problems. In this regard, the risk associated with use behaves as a protective element against use and acts as a deterrent to use, especially in students who are considering trying cannabis.

Figure 5.1.4. Perceived risk of regular use of psychoactive substances among secondary school students aged 14-18 (percentage of students who think that regular use, once a week or more often, can cause quite a lot or a lot of problems). Spain, 1994-2021.
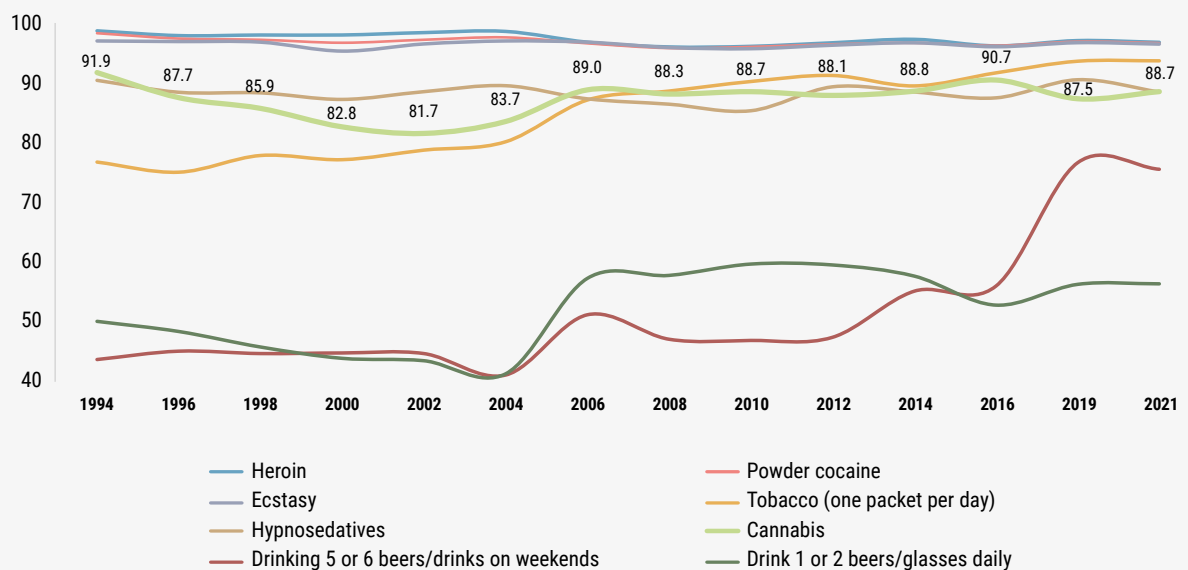
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Students expressed almost absolute agreement on the dangerousness of regular use of illegal substances such as heroin (97.0%), powder cocaine (96.8%) and ecstasy (96.7%).

In the case of **cannabis**, 88.7% of students considered that its **regular use** can have a significant impact on health (a similar percentage to that obtained in previous editions).

In general, female students have a higher risk perception of regular use of psychoactive substances compared to male students. Of all the behaviours assessed, those showing the greatest difference between the two groups are **regular smoking of cannabis** (91.9% in women and 85.4% in men: 6.5 percentage points) and having 5 or 6 beers/drinks at the weekend (59.4% for women and 53.5% for men: 5.9 percentage points).

By age, the highest risk perceptions are polarised: some behaviours are considered most dangerous at age 14 (smoking 1-5 cigarettes a day, drinking alcohol daily and **regular cannabis use**) and others at age 18 (smoking a pack of cigarettes daily, drinking 5-6 alcoholic drinks at the weekend or taking hypnosedatives regularly).

The perceived risk of **smoking cannabis on occasion** shows a downward trend, so that in 2021, 52.2% of students considered that it could have important consequences for their health, compared to 70.6% in 2006.

Regarding the perceived risk of smoking cannabis by age, unlike for other substances, the perception of risk decreases with increasing age.

The sense of ease of access to different psychoactive substances is what is known as the **perception of drug availability**.

Of all illegal substances, **cannabis** has the highest perceived availability: about 6 out of 10 students think it is easy or very easy to acquire. However, with respect to 2019, there is a decrease in this perception to 1998 levels, probably related to the mobility restrictions caused by Covid-19.

Figure 5.1.5. Perceived availability of psychoactive substances among secondary school students aged 14-18 (percentage of students who think it would be relatively easy or very easy for them to obtain each drug if they wanted to) (%). Spain, 1994-2021.
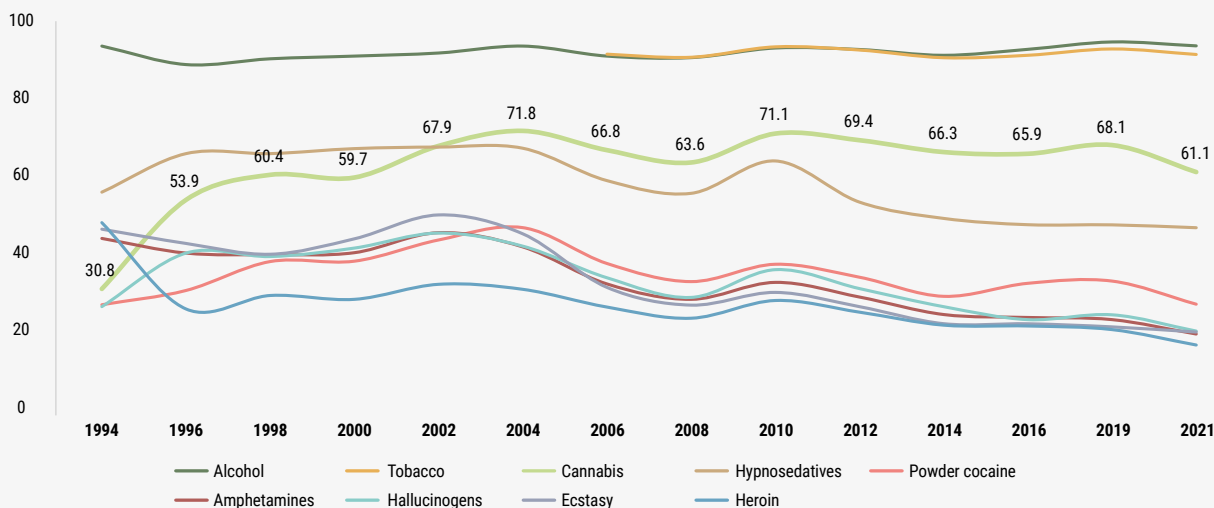
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Comparing the results by sex, girls believe, to a greater extent than boys, that they have easier access to alcohol, tobacco and, especially, to hypnosedatives. In contrast, boys have a higher perception of availability of illegal drugs than girls. The perceived availability of cannabis increases with age.

Table 5.1.6. Perceived availability of alcohol, tobacco, cannabis and hypnosedatives among secondary school students aged 14-18 (proportion of students who think it would be relatively easy or very easy to obtain each drug) by age and sex (%). Spain, 2021.

	Total	Sex		Age				
		Man	**Woman**	**14**	**15**	**16**	**17**	**18**
Alcoholic beverages	93.9	93.3	94.4	89.2	91.9	94.5	96.9	97.7
Tobacco	91.6	91.1	92.1	85.7	89.4	92.8	95.0	96.2
Cannabis	61.1	63.1	59.3	38.7	51.4	65.0	75.0	78.9
Hypnosedatives	46.7	44.3	48.8	35.4	40.5	47.3	55.2	63.1

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

The perceived availability of cannabis is greater in students who have been binge drinking or got drunk in the last 30 days compared to those who have not engaged in these behaviours.

Table 5.1.7. Perceived availability of cannabis among secondary school students aged 14-18 (percentage of students who think it would be relatively easy or very easy for them to get cannabis if they wanted to) (%). Spain, 2021.

	Has done binge drinking	Has not done binge drinking	Has been drunk	Has not been drunk
Perceived availability of cannabis	78.9	52.7	82.2	52.8

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Cannabis users acquire the drug mainly through two routes: through a friend/acquaintance or through a dealer (pusher).

Table 5.1.8. Different ways in which secondary school students aged 14-18 have obtained cannabis among students who have ever used cannabis (%) Spain, 2021.

Through a relative/friend/acquaintance	45.1
Through a dealer (pusher)	35.7
In a leisure area (festival, concert…)	9.1
Through a specialised shop (smart shop, herbalist…)	5.6
Through the internet	2.1

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

34.7% of students say that they **have been offered** cannabis either for **free or for purchase** at some point in the last year, almost equally among boys (34.2%) and girls (35.3%).

◼ **Opinion on various actions to try to solve the drug problem**

When it comes to assessing the importance of various measures or actions to try to solve the drug problem (Figure 5.1.6), almost all 14-18 year-old students agree that the priority is education in schools (96.3%), voluntary treatment for users (94.9%) and police and customs control (92.4%).

Measures that would also be effective for 9 out of 10 students are advertising campaigns (90.3%) and compulsory treatment of consumers (90.1%). In contrast, the actions that enjoy the least support from young people are those related to the legalisation of psychoactive substances (50.0% for cannabis and 27.6% for all drugs).

Figure 5.1.6. Opinions on various actions to solve the drug problem*
among secondary school students aged 14-18 (%). Spain, 2012-2021.

	Education in schools	Voluntary treatment of consumers	Police and customs control	Advertising campaigns	Compulsory treatment of consumers	Strict drug laws	Medical administration of methadone	Medical administration of heroin	Legalisation of cannabis	Legalisation of all drugs
2012	95.7	94.2	91.2	90.9	90.3	86.2	88.0	79.3	58.3	39.6
2014	96.8	96.0	93.1	92.5	93.0	88.4	91.2	84.1	59.9	40.6
2016	96.4	95.2	93.2	91.3	91.6	88.9	89.3	82.5	55.1	38.0
2019	96.2	95.0	92.6	90.1	91.0	87.5	89.0	81.7	54.3	31.9
2021	96.3	94.9	92.4	90.3	90.1	87.7	88.4	81.5	50.0	27.6

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).
* Somewhat important or very important.

Since 2014, actions related to the legalisation of cannabis and all drugs in general are progressively being given less consideration as measures of high importance in solving the drug problem. In this regard, the legalisation of cannabis went from being a very important action for 40.3% of students in 2014 to 28.4% in 2021; while the legalisation of all drugs dropped from 29.6% to 17.3% in the same period.

Over time, boys have always been more supportive of the move to legalise cannabis than girls. However, girls have attached more importance to the move to legalise all drugs than boys except in 2021.

With regard to age, as the students' age increases, there is a greater consensus that the legalisation of cannabis is very important.

Table 5.1.9. Percentage of Secondary School students aged 14-18 who rate as "very important" the legalisation of cannabis and the legalisation of all drugs to solve the drug problem, by sex and age (%). Spain 2012 - 2021.

			2012	2014	2016	2019	2021
Legalisation of cannabis	**Sex**	**Total**	37.7	40.3	36.4	34.2	28.4
		Man	39.3	40.9	36.7	35.7	29.1
		Woman	35.9	39.8	36.1	32.8	27.6
	Age	**14**	35.8	40.2	35.7	31.1	23.8
		15	36.3	39.2	35.5	32.1	26.0
		16	36.9	41.4	35.5	34.1	28.8
		17	38.4	39.7	36.8	36.7	31.5
		14-17	37.0	40.1	35.9	33.8	27.8
		18	41.1	42.7	43.1	40.4	34.8
Legalisation of all drugs	**Sex**	**Total**	27.0	29.6	26.8	20.8	17.3
		Man	25.7	27.5	25.3	20.4	17.3
		Woman	28.4	31.8	28.4	21.3	17.2
	Age	**14**	32.7	36.8	32.7	24.9	19.0
		15	28.9	31.5	28.7	21.2	18.3
		16	26.0	28.8	24.3	20.4	16.8
		17	24.4	24.1	22.1	18.2	15.9
		14-17	27.2	29.8	26.9	20.9	17.4
		18	25.7	27.0	26.1	20.0	16.0

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

It is noted that as use intensifies, the view that legalising cannabis would solve the drug problem grows.

Table 5.1.10. Percentage of secondary school students aged 14-18 who rate the legalisation of cannabis as "very important" in solving the drug problem, according to whether or not they have used cannabis in the last 12 months (%) Spain, 2014-2021.

	2014	2016	2019	2021
Have not used cannabis in the last year	22.6	19.5	18.0	22.7
Have used cannabis in the last year (CAST<4)	45.4	34.9	39.8	45.2
Have used cannabis in the last year (CAST ≥4 Problem use)	58.2	48.2	51.8	63.2

CAST: Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Cannabis use. Friends: Relationship/peer influence**

The social environment is a key element in understanding the phenomenon of drug use among students aged 14-18. 67.7% of those where all or most of their friends used cannabis in the last month also admitted to using cannabis in this period. However, in the group with few or none of their friends using, the prevalence of use fell to 11.6%.

Figure 5.1.7. Prevalence of cannabis use among secondary school students aged 14-18 according to the perception that all or only a few of their peers use cannabis (last 30 days) (%). Spain, 2021.

All/most of my friends use cannabis

32.3

67.7

Some/few/none of my friends use cannabis

11.6

88.4

■ They do use cannabis
■ They do not use cannabis
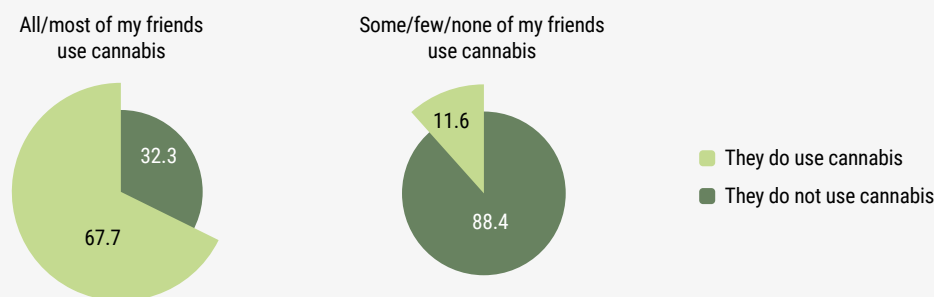
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Leisure environment: activities, nights out (frequency and timing) and money available**

Analysing cannabis use according to students' **activities** over the past year, we find that students who go out at night with friends, visit adult-only websites, do not read books for fun and have no other hobbies have higher prevalence of cannabis use in the past 12 months.

Table 5.1.11. Prevalence of cannabis use in the last 12 months among secondary school students aged 14-18 according to leisure activities (%). Spain, 2021.

	Cannabis use in the last 12 months
Has played any sport	22.1
Has not played any sport	23.9
Has read books for fun	18.2
Has not read books for fun	28.6
Has been out with friends at night	29.7
Has not been out with friends at night	8.4
Has been out with friends in the evenings	23.0
Has been out with friends in the evenings	7.5
Has other hobbies	20.5
Does not have other hobbies	25.2
Has used the Internet for fun	22.3
Has not used the Internet for fun	24.8
Has visited adult-only websites	29.0
Has not visited adult-only websites	14.9
Makes purchases online	23.4
Does not make purchases online	12.0

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

It should be noted that due to the global pandemic context caused by Covid-19 and its consequent mobility restrictions, the nightlife experienced in 2020 and 2021 was particularly affected. Consequently, in general most students indicate that they have either had less than one night out per month (17.5%), or even no night out at all in the period analysed (25.3%). In addition, "curfews" in certain months had an impact on the time of return home, with more than half of the students reporting that when they went out for a night out, they returned home before 12pm.

However, the correlation between the **frequency of nights out** and cannabis use in the last year is clear: only 6.3% of adolescents who have not been out at night have used cannabis in the last year. However, the prevalence increases progressively when a certain habit of going out at night starts to be registered, reaching 44.3% of the students who went out more than 4 nights a week.

Table 5.1.12. Prevalence of cannabis use in the last 12 months among secondary school students aged 14-18, by frequency of nights out in the last 12 months (%). Spain, 2021.

Frequency of nights out	Cannabis
Never	**6.3**
Less than one night per month	18.3
1 to 3 nights per month	26.8
1 night per week	27.9
2 nights a week	34.2
3-4 nights a week	41.2
More than 4 nights a week	44.3

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Furthermore, the later the students returned home, the higher the prevalence of cannabis use.

Table 5.1.13. Prevalence of cannabis use in the last 12 months among secondary school students aged 14-18 by time of return home (last weekend night out) (%). Spain, 2021.

Time back home	Cannabis
Has not gone out	6.9
Before 12 midnight	18.1
Between 12 midnight and 1 a.m.	21.7
Between 1 a.m. and 2 a.m.	27.0
Between 2 a.m. and 3 a.m.	32.2
Between 3 a.m. and 4 a.m.	43.1
Between 4 a.m. and 8 a.m.	52.1
After 8 a.m.	60.6

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

The **average weekly amount of money** that the students who used cannabis in the last year had (17.21 euros) was higher than the overall amount that students had (13.74 euros), but less than the amount that the students who did binge drinking (17.71 euros) or smoked tobacco daily (20.77 euros) had.

Figure 5.1.8. Money available (euros) per week for personal expenses among secondary school students aged 14-18 according to psychoactive substance use. Spain, 2021.

Alcohol last 12 months	14.64
Hypnosedatives last 12 months	15.95
Drunkenness in the last 12 months	16.03
Tobacco last 12 months	16.48
E-cigarettes last 12 months	16.56
Cannabis last 12 months	17.21
Binge drinking last 30 days	17.71
Tobacco on a daily basis	20.77
Cocaine last 12 months	27.3
Total students	13.74
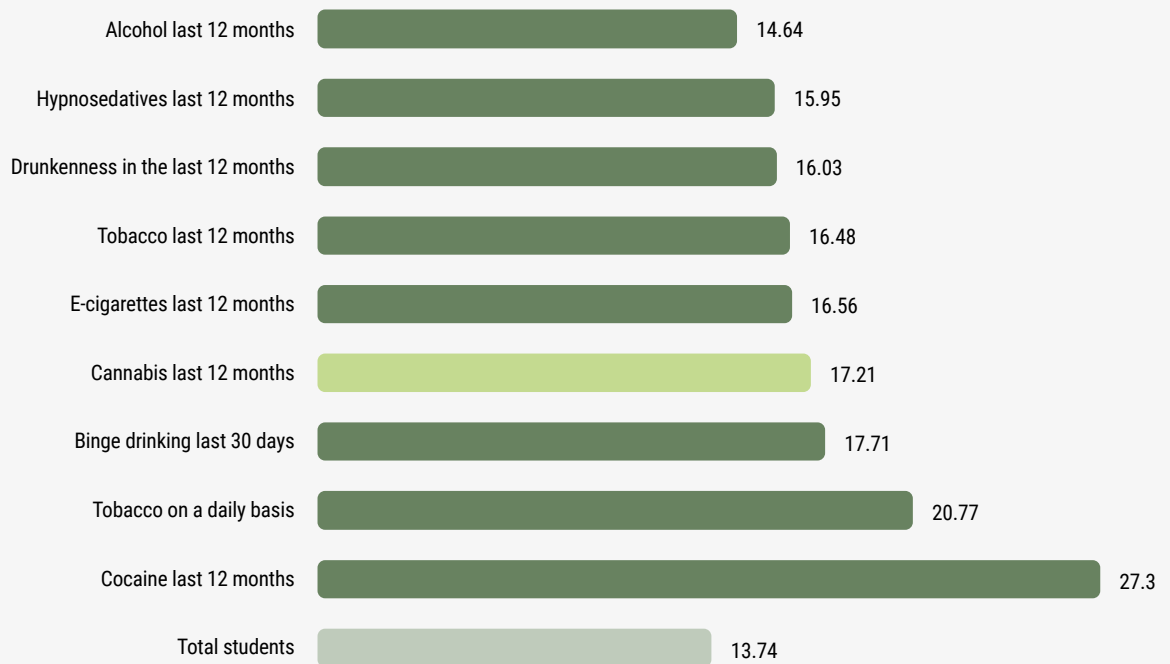
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

If students are asked about the economic situation they think their family is in, a similar distribution is found for students overall and those who reported using cannabis in the last 30 days.

Table 5.1.14. Family financial situation among secondary school students aged 14-18, according to substance use in the last 30 days. Spain, 2021.

	Total students 14-18 years	Alcohol	Tobacco	Cannabis	Cocaine
Above average	**12.7**	13.7	13.7	13.5	21.7
About average	**82.8**	81.7	80.7	79.7	64.5
Below average	**4.5**	4.5	5.6	6.8	13.7

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **School environment: School performance and conflicts**

When looking at academic performance as a function of cannabis use, the proportion of those who usually get B or A grades is significantly higher in the group that did not use cannabis in the last month (52.9%) compared to the group that did use cannabis (35.2%).

Only 22.5% of **problematic cannabis** users achieve A or B grades compared to those who do not use cannabis (52.9%).

Table 5.1.15. Academic performance among secondary school students aged 14-18 by cannabis use (%). Spain, 2021.

	Total	Grades you usually get			Has repeated academic year at some time	
		A/B	C/Pass	Fail	Yes	No
TOTAL STUDENTS		**50.1**	**43.3**	**6.6**	**20.9**	**79.1**
Has not used cannabis in the last 30 days	85.1	52.9	41.3	5.7	18.3	81.7
Has used cannabis in the last 30 days	14.9	35.2	53.5	11.3	33.8	66.2
Problematic cannabis use (CAST≥4)	3.0	22.5	62.7	14.8	51.0	49.0

CAST: Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Nearly half of the students who have used cannabis in the last month skipped class in that period. Students' concentration in class is highly affected by cannabis use: on average, 36% of students who used cannabis had problems paying attention in school the day after they went out.

Finally, 15% of students who used cannabis were expelled from school at some point in the past year as a disciplinary measure, a higher percentage than non-users.

Table 5.1.16. Prevalence of experiencing certain situations secondary school students aged 14-18 according to whether or not they have used cannabis (% of row). Spain, 2021.

	In the last 30 days, has skipped class	In the last 12 months, has not been able to concentrate in school the day after going out	In the last 12 months has been expelled from school
TOTAL STUDENTS	**21.4**	**17.2**	**5.9**
Has used cannabis in the last 30 days	46.7	36.0	15.0
Has not used cannabis in the last 30 days	16.9	13.9	4.3

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

■ **Negative consequences of consumption: Risk of motor vehicle accidents, fights/assaults and others**

In relation to cannabis use and driving a motor vehicle, 1.5% of students admit to having driven under the influence of this drug in the last 12 months, 1.3% if students aged 14-17 are considered and 4.1% if 18-year-olds are considered. On the other hand, the percentage of students who report having travelled as a passenger in a vehicle driven by someone under the influence of cannabis stands at 6.9%, a figure that rises to 15.1% among 18-year-old students.

Table 5.1.17. Driving a motor vehicle under the influence of psychoactive substances and travelling as a passenger in a motor vehicle driven by someone under the influence of cannabis in the last 12 months among secondary school students aged 14-18, by sex and age (%). Spain, 2021.

	Total	SEX		AGE					
		Man	Woman	14	15	16	17	18	14-17
I have driven a motor vehicle under the influence of hashish or marijuana	1.5	2.2	0.8	0.3	1.1	1.7	2.0	4.1	1.3
I have travelled as a passenger in a motor vehicle driven by someone under the influence of hashish or marijuana	6.9	7.4	6.4	1.9	4.2	7.1	10.7	15.1	6.2

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

On the other hand, 40.6% of students aged 14-18 report having had **a major conflict or argument with parents or siblings**, a proportion that increases considerably among cannabis users in the last 30 days (55.6%), with the highest percentage among problematic cannabis users (CAST≥4), where this figure is 65.4%.

Table 5.1.18. Prevalence of experiencing certain situations in the last 12 months among secondary school students aged 14-18 according to whether or not they have used cannabis (%). Spain, 2021.

	You have had a major conflict or argument with parents or siblings	You have not been able to remember what happened the night before after you went out	You have had a hangover	You have had sex without a condom
TOTAL STUDENTS	40.6	17.9	31.4	16.3
Has used cannabis in the last 30 days	55.6	42.9	66.9	42.7
Has not used cannabis in the last 30 days	38.0	13.7	25.3	11.8
Problematic cannabis use (CAST≥4)	65.4	56.4	74.5	58.4

CAST: Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

17.9% of students reported having problems **remembering what happened the night before after going out** some day in the last year. This circumstance increases significantly when they have used cannabis in the last month (42.9%), especially if they have used cannabis in a problematic way (56.4%). As for **unprotected sex**, the percentage of students who admit to having had sex **without a condom** is 16.3%, which also increases significantly among cannabis users in the last month (42.7%), especially if it was problematic use (CAST≥4), among whom the prevalence of having had unprotected sex is close to 60%.

■ **Prevalence of alcohol consumption by Autonomous Regions and Cities**

This section presents cannabis use in the different Autonomous Regions and Autonomous Cities in the different time periods. It should be borne in mind that the sample corresponding to Cantabria, Rioja, Ceuta and Melilla was small and the margin of error high, so that comparisons between the different Autonomous Regions should be made with caution.

The highest prevalence of lifetime and past 12-month cannabis use is found among students in Navarre, Valencia and the Basque Country. In these regions, the use of this psychoactive substance on some occasion exceeds 33%, while for the last 12 months it is around 27% (Table 19). At the other extreme is Andalusia, with a prevalence of cannabis use of 16.1% when the period analysed is the last 12 months.

Table 5.1.19. Prevalence of cannabis use among secondary school students aged 14-18 by Autonomous Region/City (%). Spain, 2021.

	Sample size	Sometime in life			Last 12 months		
		Prevalence	Lower 95%CI	Upper 95%CI	Prevalence	Lower 95%CI	Upper 95%CI
Andalusia	2,659	21.4	19.8	23.0	16.1	14.7	17.5
Aragon	952	26.6	23.8	29.4	20.4	17.9	23.0
Asturias	789	23.6	20.7	26.6	18.5	15.8	21.2
Balearic Islands	864	31.0	27.9	34.1	24.0	21.1	26.8
Canary Islands	1,150	28.2	25.6	30.8	21.8	19.4	24.2
Cantabria*	609	27.4	23.8	30.9	23.4	20.1	26.8
Castile and Leon	1,156	30.1	27.4	32.7	24.0	21.5	26.4
Castile La Mancha	1,195	28.2	25.6	30.7	22.2	19.8	24.5
Catalonia	2,493	32.3	30.5	34.2	25.6	23.9	27.3
Valencia	1,891	36.5	34.4	38.7	27.4	25.4	29.5
Extremadura	848	29.6	26.5	32.6	22.8	20.0	25.6
Galicia	1,244	28.9	26.4	31.4	23.7	21.3	26.1
Madrid	2,343	27.8	26.0	29.6	21.8	20.2	23.5
Murcia	1,131	24.5	22.0	27.0	17.4	15.2	19.6
Navarre	824	33.5	30.3	36.8	27.6	24.5	30.6
Basque Country	1,226	33.5	30.8	36.1	26.6	24.1	29.1
Rioja*	451	26.7	22.6	30.8	20.5	16.8	24.2
Ceuta*	251	15.4	10.9	19.9	12.2	8.1	16.2
Melilla*	245	11.4	7.4	15.4	7.1	3.9	10.3
Total	22,321	28.6	28.0	29.2	22.2	21.7	22.8

Source: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).
* The values for these Autonomous Regions and Cities should be interpreted with caution due to the small sample size.

Figure 5.1.9. Prevalence of cannabis use in the last 12 months among secondary school students aged 14-18 by region/city (%). Spain, 2021.

National average: 22.2%

> Average
= Average
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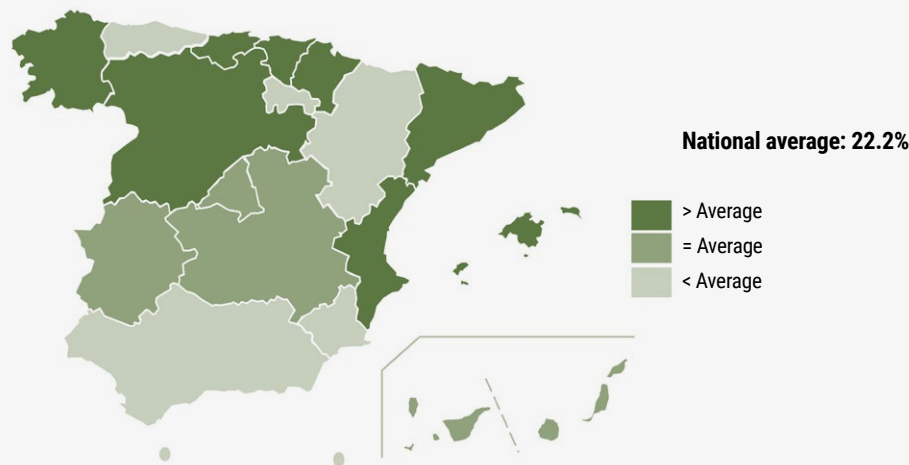
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

In most regions, consumption is more widespread among boys than among girls, with the highest differences observed in La Rioja, Navarra and Galicia.

Table 5.1.20. Prevalence of lifetime and past 12-month cannabis use among secondary school students aged 14-18 by Autonomous Region/City, by sex (%). Spain, 2021.

	Sometime in life		Last 12 months	
	Man	**Woman**	**Man**	**Woman**
Andalusia	22.6	20.0	17.0	15.1
Aragon	26.4	26.8	21.2	19.8
Asturias	25.2	22.1	19.9	17.3
Balearic Islands	33.0	28.5	26.8	20.6
Canary Islands	27.7	28.6	22.0	21.6
Cantabria*	28.7	26.1	24.9	22.0
Castile and Leon	32.6	27.5	25.7	22.2
Castile La Mancha	27.4	29.0	22.9	21.4
Catalonia	31.9	32.8	24.7	26.5
Valencia	38.2	34.9	28.4	26.5
Extremadura	32.9	26.6	25.3	20.6
Galicia	32.3	25.3	27.0	20.4
Madrid	26.1	29.4	20.2	23.4
Murcia	27.4	21.2	19.3	15.2
Navarre	36.8	30.0	31.4	23.5
Basque Country	34.0	33.0	25.9	27.3
Rioja*	31.9	22.0	24.5	16.8
Ceuta*	18.4	13.1	12.5	11.9
Melilla*	12.4	10.7	9.8	4.9
Total	**29.3**	**28.0**	**22.6**	**21.8**

Source: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).
* The values for these Autonomous Regions and Cities should be interpreted with caution due to the small sample size.

5.1.2. European School Survey Project on Alcohol and Other Drugs (ESPAD)

The ESPAD (European School Survey Project on Alcohol and Other Drugs) is an international research project on the use of psychoactive substances among adolescents worldwide, in which more than 40 European countries have participated since it was established in 1995. The overall aim of the project is to collect comparable data on psychoactive substance use among students aged 15 and 16 in Europe.

In 2019, the ESPAD survey was conducted, in which Spain participated for the first time as a member country, although Spain has provided comparable data from the ESTUDES survey since 1995. All information on the ESPAD project can be found on the following website:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/encuestas_ESPAD.htm

The main data on cannabis use are summarised below.

■ **Prevalence of cannabis use**

In terms of prevalence of use, cannabis is the most widely used illicit drug, with a large variability between ESPAD countries. Average lifetime prevalence among European adolescents remained stable at the same levels as in 2015 at 16%. On average, boys reported using cannabis more than girls (18% versus 13%).

The average prevalence of past 30-day use also showed a stable trend in the average for European countries (6.6% in 2015 and 7.1% in 2019). A large variability was observed between ESPAD countries, with the highest rate observed in Italy (15%) and the lowest in Kosovo (1.4%). More boys than girls reported using cannabis in the last 30 days (boys 8.5% versus girls 5.8% on average), with statistically significant sex differences found in more than two thirds of the ESPAD countries.

In Spain, the lifetime prevalence of cannabis use among students aged 15-16 was 23% (24% for males and 22% for females) and 12% in the past 30 days (with the same prevalence of 12% for males and females). Both values were higher than the European average (16% and 7.1% respectively).

Figure 5.1.10. Frequency of cannabis use in the last 12 months (average number of occasions among users). ESPAD, 2019.
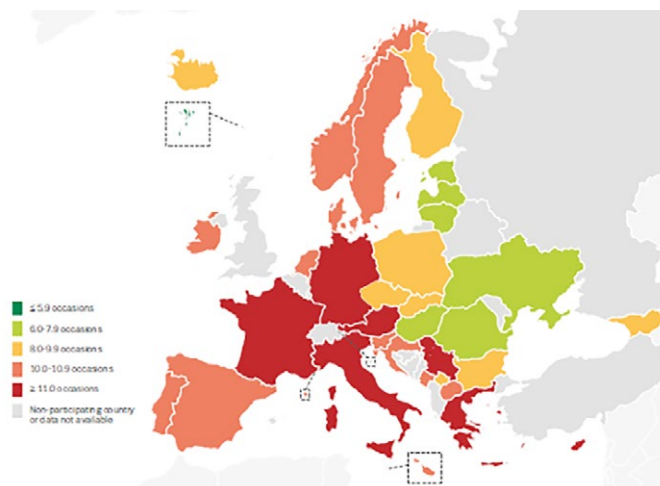
Source: European School Survey Project on Alcohol and Other Drugs (ESPAD).

Figure 5.1.11. Prevalence of cannabis use in the last 30 days (%). ESPAD, 2019.
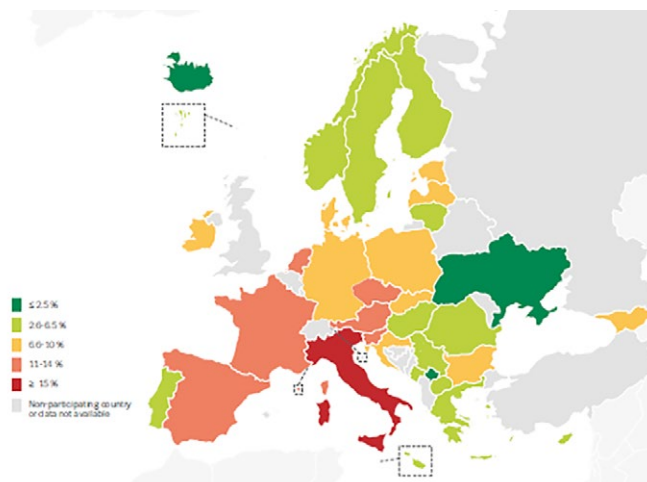
Source: European School Survey Project on Alcohol and Other Drugs (ESPAD).

■ **Perceived availability of cannabis**

Cannabis is considered among European students to be the easiest illicit psychoactive substance to obtain. About a third of ESPAD students (33% in 2019) consider cannabis easy to obtain (32% in 2015). It is observed that, over time, the trend in perceived availability of cannabis has increased between 1995 and 2019 from 27% to 35% among boys and from 31% to 32% among girls.

For Spanish students, the perceived availability of cannabis is 41%, which is higher than the European average.

■ **Problematic cannabis use**

Regarding problematic cannabis use, 4.0% of European students aged 15-16 are at risk of developing problems related to cannabis use. There is great variability between countries. To measure such behaviour, the CAST (Cannabis Abuse Screening Test) scale was used, defining potential problem users as those who qualified with a cut-off point of 2 or more on the scale.

In Spain, the prevalence of problematic cannabis use was 5.6% (6% in men and 5.3% in women). Value above the European average.

Figura 5.1.12. Prevalence of problematic cannabis use (%). ESPAD, 2019.
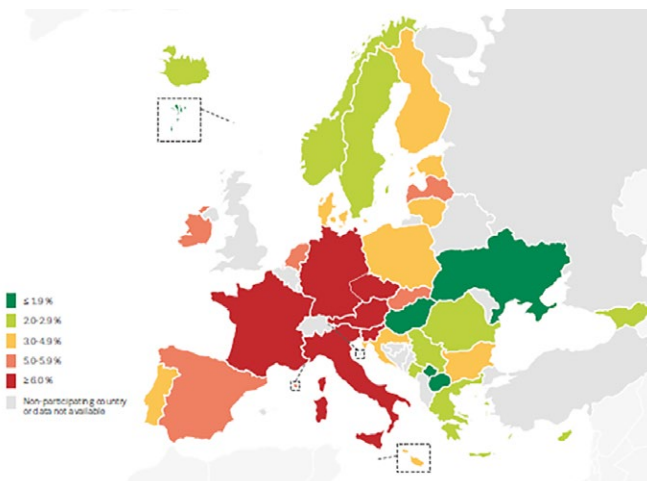
Source: European School Survey Project on Alcohol and Other Drugs (ESPAD).

Table 5.1.21. Percentage of students reporting cannabis use (%). ESPAD, 2019.

	Spain			ESPAD		
	Average	M	W	Average	M	W
Last 30 days	12.0	12.0	12.0	7.1	8.5	5.8
Problem use (a)	5.6	6.0	5.3	4.0	4.7	3.3

(a) Defining users with possible problematic use as those with a cut-off point of 2 or more on the CAST (Cannabis Abuse Screening Test) scale.
Source: European School Survey Project on Alcohol and Other Drugs (ESPAD).

5.2. Use in the population aged 15-64

5.2.1. Survey on Alcohol and Other Drugs in Spain (EDADES)

The Survey on Alcohol and other Drugs in Spain (EDADES 2020) was conducted among the general population aged 15-64 living in households. It has been carried out every two years since 1995 and is promoted and financed by the DGPNSD and has the collaboration of the autonomous regions and cities. The data collection period was from 7 February to 13 March 2020, prior to the start of the COVID-19 pandemic. The questionnaire and methodology used for this survey are quite similar to those used in other EU countries and the United States, allowing for international comparisons.

More detailed information on this survey can be found at the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/encuestas_EDADES.htm

The main results concerning cannabis use are summarised below.

■ **Prevalence of cannabis use**

In the population aged 15-64, cannabis ranks fourth as the most commonly used psychoactive substance behind alcohol, tobacco and hypnosedatives with or without prescription in all time periods except for lifetime use, which ranks third, ahead of hypnosedatives. It is also the most widely used illegal drug in all time periods.

In 2020, 37.5% reported having used cannabis at **some point in their lives**, a proportion that continued the upward trend that began in 2013 and which represented an increase of 2.3 percentage points compared to that recorded in 2018 (35.2%), reaching the highest in the historical series.

With regard to use in **the last year**, prevalence stood at 10.5%, and at 8.0% when looking at use in the **last month.** For both time periods, prevalence decreased slightly compared to 2018 (11.0% and 9.1%, respectively). 2.9% of the population reported using cannabis on a **daily basis,** reaching an all-time high in 2020.

Figure 5.2.1. Prevalence of cannabis use and average age of onset of cannabis use in the population aged 15-64 (%). Spain, 1995-2020.

	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2018	2020
Sometime in life	14.5	22.9	19.6	23.8	29	28.6	27.3	32.1	27.4	30.4	31.5	35.2	37.5
Last 12 months	7.5	7.7	7	9.2	11.3	11.2	10.1	10.6	9.6	9.2	9.5	11.0	10.5
Last 30 days		4.6	4.5	6.4	7.6	8.7	7.2	7.6	7.0	6.6	7.3	9.1	8.0
Daily in the last 30 days		0.7	0.8	1.5	1.5	2	1.7	2	1.7	1.9	2.1	2.1	2.9
Average age of onset of use	18.3	18.9	18.7	18.5	18.5	18.3	18.6	18.6	18.7	18.6	18.3	18.4	18.5
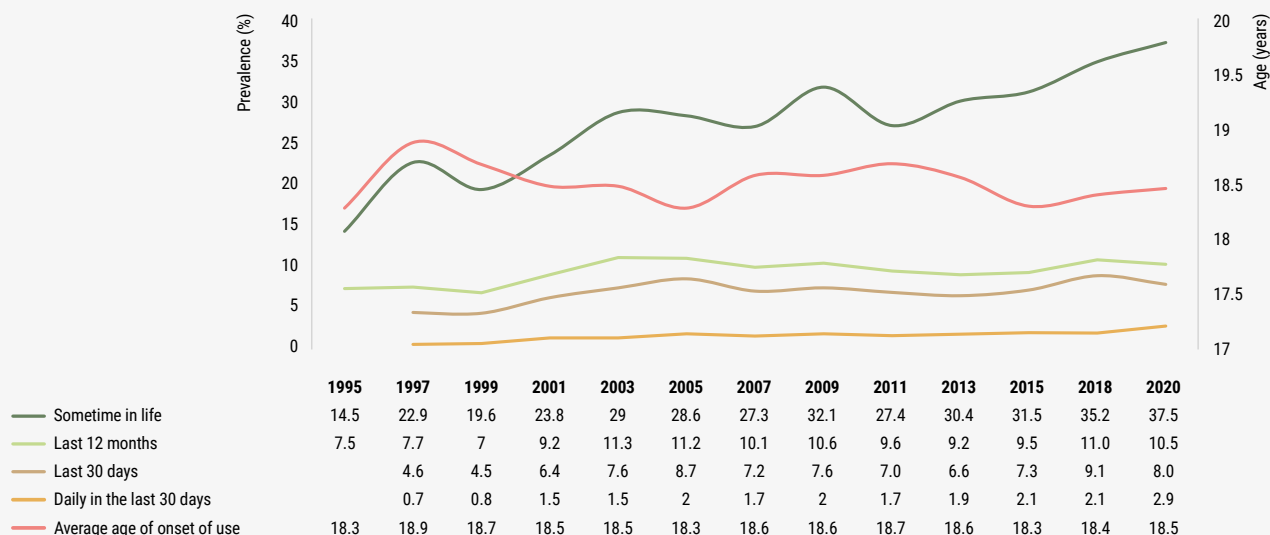
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Average age of onset of use**

Cannabis is the illegal substance that starts to be used at the youngest age (18.5 years). The age of onset of use has remained between 18 and 19 years of age throughout the historical series. Males start using cannabis earlier than females (18.1 and 19.1 years respectively).

As with other drugs, the difference in the average age of starting drug use found in this survey and the survey of students aged 14 to 18 (14.9 years) is due to the fact that EDADES asks people aged 15 to 64, including people who have started later, while ESTUDES only asks people aged 14 to 18, so that those who start later are not included in the calculation of the average age.

■ **Prevalence of use by age and sex**

Analysing the prevalence of cannabis use in the **last year** according to age, the prevalence of cannabis use decreases markedly as age increases, a situation that is repeated in both men and women. Thus, the highest prevalence for both sexes is found in the group of young people aged 15-24, where 22.1% report having used cannabis in the last 12 months compared to 2.6% among those aged 55-64.

By sex, use is more common among men than among women (14.6% and 6.3%, respectively), a situation that is repeated in all age groups.

Figure 5.2.2. Prevalence of cannabis use in the last 12 months among the population aged 15-64, by age and sex (%). Spain, 2020.

	15-64	15-24	25-34	35-44	45-54	55-64
Total	10.5	22.1	16.6	10.2	5.8	2.6
Man	14.6	28.7	23.2	15.3	8.0	3.5
Woman	6.3	15.1	9.9	4.9	3.7	1.7
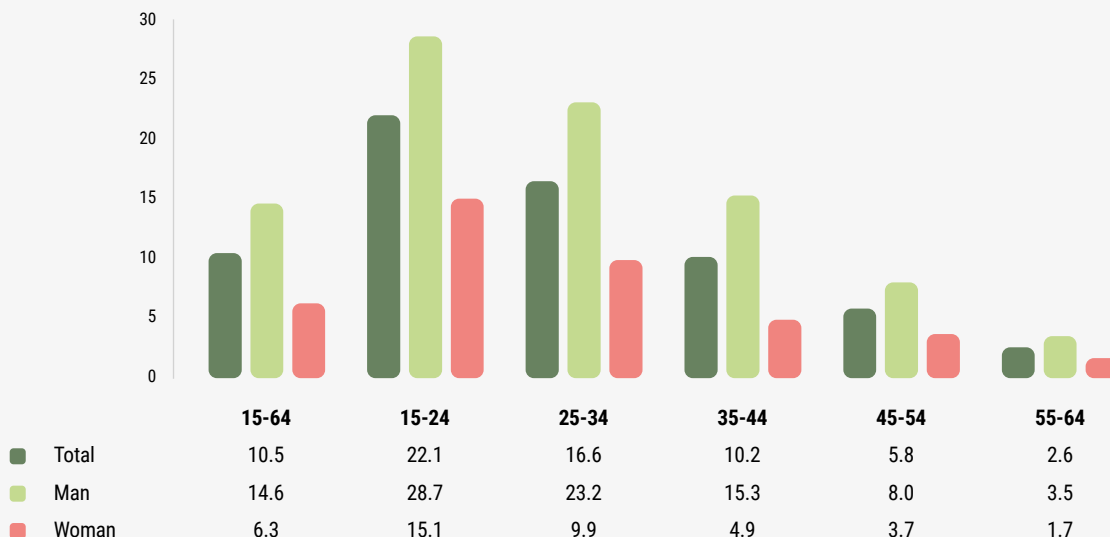
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

The same analysis, but this time with respect to cannabis use in the **last month**, again shows an inverse relationship between the evolution of cannabis use and age. Thus, while for the total population aged 15-64 the prevalence of use in the last 30 days stood at 8.0%, it increased to 15.9% among those aged 15-24 decreasing to below 3% in the 55-64 age group (2.2%). This situation is observed in both men and women.

Figure 5.2.3. Prevalence of cannabis use in the last 30 days among the population aged 15-64, by age and sex (%). Spain, 2020.

	15-64	15-24	25-34	35-44	45-54	55-64
Total	8.0	15.9	12.7	8.0	4.6	2.2
Man	11.4	21.8	17.8	12.1	6.4	2.8
Woman	4.7	9.7	7.6	3.9	2.9	1.6
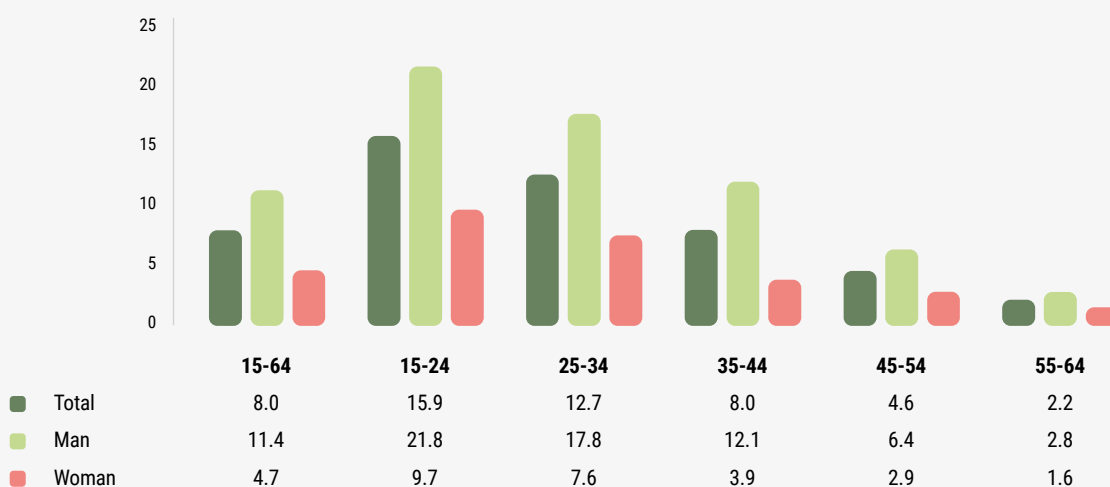
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

The highest difference in prevalence between the sexes is found in **lifetime** cannabis use (46.3% of men have used cannabis compared to 28.7% of women), which translates into a difference of almost 20 percentage points. As was the case in 2018, both sexes recorded the highest ever use of cannabis. In terms of sex, it is again males who consume the most, regardless of the age group analysed.

■ **Characteristics of cannabis use**

Looking at the type of cannabis, marijuana is historically more prevalent than hashish among those who have used cannabis in the last 30 days. 48.7% reported smoking mainly marijuana, 20.6% used mainly hashish and 30.8% reported having smoked cannabis of both types.

Smoking of both types (marijuana and hashish) is more widespread among men than among women, while the opposite is true for hashish.

The vast majority of cannabis users in the last month admit to having used it mixed with tobacco (86.9%). This is 6 percentage points lower than in 2018.

The average number of joints consumed in an episode of use is 2.9 joints, with similar figures for men and women. An upward trend is observed for this value since 2015.

Table 5.2.1. Characteristics of cannabis use in the population aged 15-64 years who have used cannabis in the last 30 days, by sex (%). Spain, 2015-2020.

		2015			2018			2020		
		Total	Man	Woman	Total	Man	Woman	Total	Man	Woman
Cannabis use in the last 30 days	Mainly marijuana	52.7	50.5	59.3	48.3	47.7	50.0	48.7	48.9	48.0
	Mainly hashish	17.0	17.7	15.1	21.9	20.5	25.9	20.6	19.2	24.5
	Of the two types	30.3	31.9	25.7	29.8	31.8	24.2	30.8	31.9	27.5
Use of cannabis mixed with tobacco in the last 30 days	Yes	89.5	90.1	87.7	92.9	92.9	92.9	86.9	87.4	85.6
	No	10.5	9.9	12.3	7.1	7.1	7.1	13.1	12.6	14.4
Average number of joints consumed in an episode of use		2.5	2.6	2.1	2.7	2.7	2.6	2.9	2.9	2.8

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Regardless of sex, the vast majority of individuals consumed cannabis in the form of a joint or spliff, although it should also be noted that 4.4% of cannabis users consumed the drug using water pipes or hookahs. The increase in the number of individuals using e-cigarettes for cannabis use in 2018 is noteworthy.

Table 5.2.2. Mode of cannabis use among the population aged 15-64 who have used cannabis in the last 30 days, by sex (%). Spain, 2018-2020.

		2018			2020		
		Total	**Man**	**Woman**	**Total**	**Man**	**Woman**
Cannabis use in the last 30 days	**In the form of a joint or spliff**	97.9	98.6	96.2	97.9	97.8	98.2
	Using waterpipes, bongs, hookahs or shishas	4.4	4.3	4.8	4.4	4.9	2.7
	Orally: cakes, biscuits…	2.6	2.1	3.9	1.8	2.0	1.2
	Using electronic cigarettes	0.5	0.5	0.5	2.0	2.1	1.7

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Among those who have never used cannabis in their lives, only 1.2% of respondents indicated that they would use cannabis if it were a legal drug, with very similar percentages regardless of sex.

Figure 5.2.4. Percentage of people who say that if it were legal to use hashish or marijuana they would try it. Response among those who have never tried it among the population aged 15-64, by sex (%). Spain, 2018-2020.
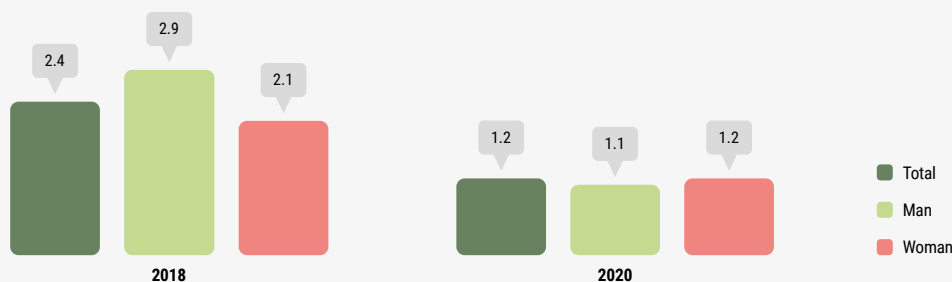
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Cannabis and tobacco use**

Nine out of ten people who have used cannabis in the last month report having used tobacco in this period (89.8%), with this proportion dropping to 32.2% among those who have not used cannabis, confirming the close relationship in terms of use between the two substances.

Figure 5.2.5. Prevalence of tobacco use in the last 30 days according to whether or not cannabis was used in the last 30 days and in the general population (%). Spain, 2020.
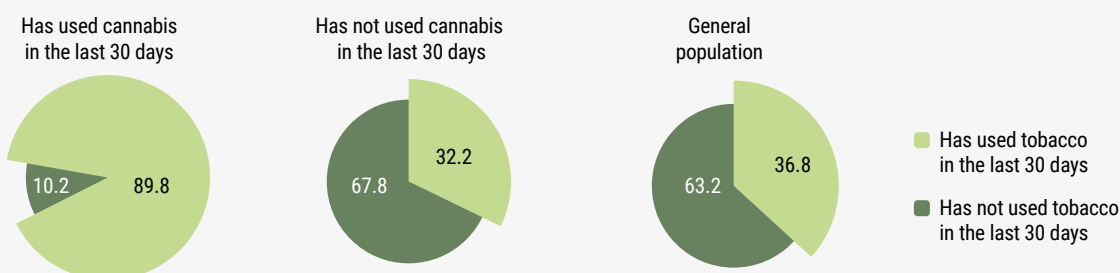
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Carrying out the opposite analysis, slightly less than 20% of those who have used tobacco in the last 30 days reported having used cannabis in this timeframe, compared to 1.3% of those who have not smoked tobacco in the last month.

Figure 5.2.6. Prevalence of cannabis use in the last 30 days according to whether or not tobacco has been used in the last 30 days and in the general population (%). Spain, 2020.

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Polydrug use**

Polydrug use refers to the use of two or more psychoactive substances in the same period of time. This pattern increases the risks of drugs, which can enhance their effects, reinforce addiction, interfere with diagnosis and hinder treatment.

Among users of **one or two psychoactive substances** in the last 12 months, the use of illicit drugs is very low, with cannabis being the most used substance (0.3 and 5.1% respectively).

Among people who used **three, four or more psychoactive substances** in the last 12 months, cannabis is almost always present (62.5% and 92.8% respectively).

Table 5.2.3. Prevalence of psychoactive substance use, by number of substances used in the last 12 months (%). Spain, 2020.

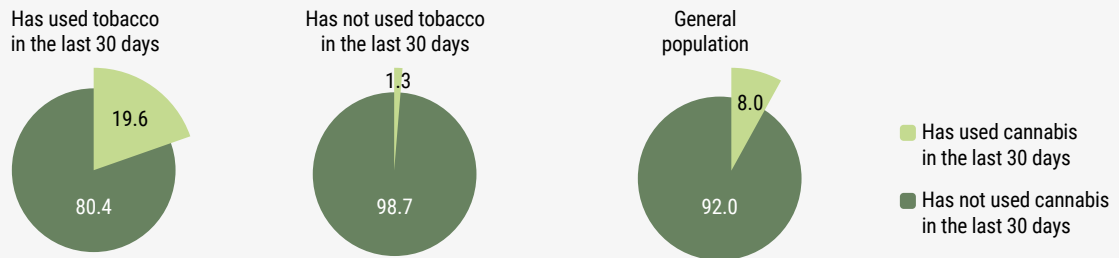|	One substance	Two substances	Three substances	Four or more substances
Alcohol	85.6	94.7	98.9	99.2
Tobacco	10.0	80.9	97.6	96.9
Cannabis	0.3	5.1	62.5	92.8

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Use of new psychoactive substances and cannabis**

New psychoactive substances (NPS) are considered to be those that imitate the effect of illegal drugs (cannabis, cocaine, ecstasy...). These new substances (keta, spice, synthetic cannabinoids, synthetic marijuana, meow meow, flakka, superman, cathinone, mephedrone, fentanyl derivatives, methoxet-amine, NBOMe, ayahuasca, kratom...) can come in the form of herbs, pills, powders, liquids, incense...

Nine out of ten people who have used new psychoactive substances at some time in their lives also admit to having used cannabis at some time in their lives (89.4%). 58.7% of those who have ever used new substances in their lifetime report having used cannabis in the 12 months prior to the survey, a prevalence that drops to 9.7% among those who have never taken new psychoactive substances

■ **Perceptions and opinions of the population regarding cannabis**

Risk perception refers to the extent to which people think that certain drug-related behaviours may lead to problems. In this regards, considering that the consumption of psychoactive substances entails a risk and can be problematic is a deterrent to consumption.

In relation to **regular cannabis use** (once a week or more), the perception of risk increased by 3.8 percentage points with respect to the data obtained in 2018, with the percentage of people who think that using cannabis once a week or more can cause quite a lot/a lot of health problems standing at 85.3%.

With regard to **sporadic cannabis use** (once or less per month), a similar figure was obtained in 2020 as in the previous measurement, with 66.3% of people thinking that such use could be quite or very harmful to health (66.1% in 2018).

Figure 5.2.7. Perceived risk of drug use (percentage of population who think that each behaviour can cause quite a lot or a lot of problems). Spain, 2020.
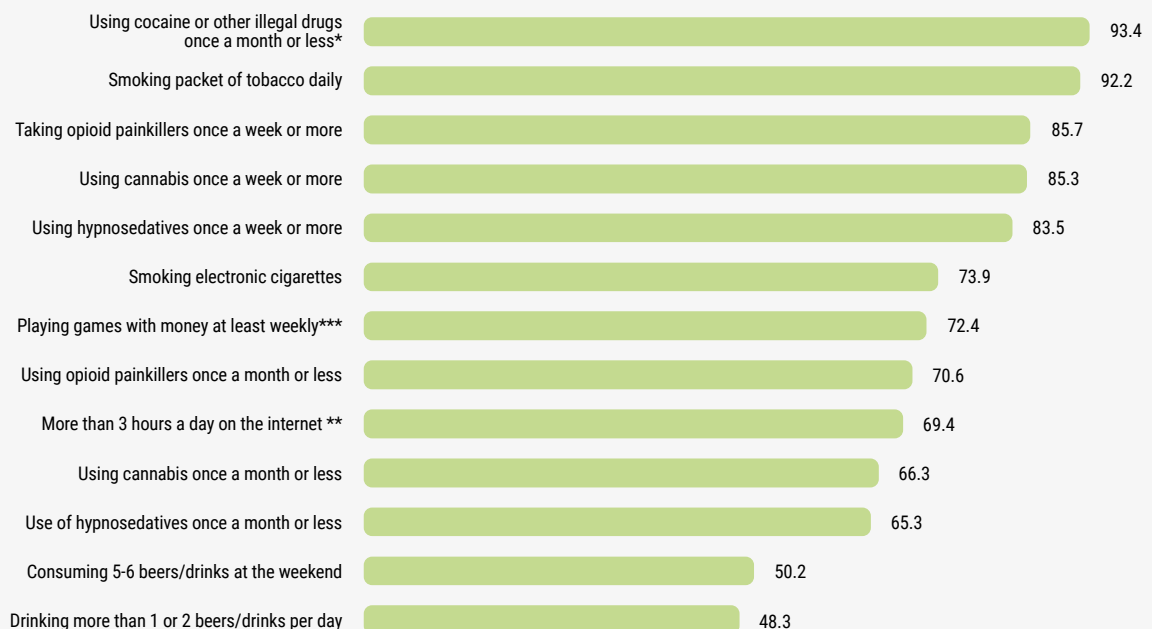
Behaviour	Percentage
Using cocaine or other illegal drugs once a month or less*	93.4
Smoking packet of tobacco daily	92.2
Taking opioid painkillers once a week or more	85.7
Using cannabis once a week or more	85.3
Using hypnosedatives once a week or more	83.5
Smoking electronic cigarettes	73.9
Playing games with money at least weekly***	72.4
Using opioid painkillers once a month or less	70.6
More than 3 hours a day on the internet **	69.4
Using cannabis once a month or less	66.3
Use of hypnosedatives once a month or less	65.3
Consuming 5-6 beers/drinks at the weekend	50.2
Drinking more than 1 or 2 beers/drinks per day	48.3

* Other illegal drugs included in 2020.
** Spending more than 3 hours per day on activities that require internet use without considering the time spent on school or work-related tasks.
*** Or gambling.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Figure 5.2.8. Perception of risk associated with psychoactive substance use (percentage of population aged 15-64 years who think that each use behaviour can cause quite a lot or a lot of problems), by sex. Spain, 2020.

Using cocaine or other illegal drugs once a month or less*: Man 92.1, Woman 94.6
Smoking packet of tobacco daily: Man 90.6, Woman 93.8
Taking opioid painkillers once a week or more: Man 85.3, Woman 86.2
Using cannabis once a week or more: Man 81.3, Woman 89.3
Using hypnosedatives once a week or more: Man 83.5, Woman 83.5
Smoking electronic cigarettes: Man 70.4, Woman 77.3
Playing games with money at least weekly***: Man 70.0, Woman 74.8
Using opioid painkillers once a month or less: Man 70.2, Woman 71.0
More than 3 hours a day on the internet **: Man 66.3, Woman 72.6
Using cannabis once a month or less: Man 60.0, Woman 72.5
Use of hypnosedatives once a month or less: Man 64.9, Woman 65.6
Consuming 5-6 beers/drinks at the weekend: Man 44.6, Woman 56.0
Drinking more than 1 or 2 beers/drinks per day: Man 42.3, Woman 54.5
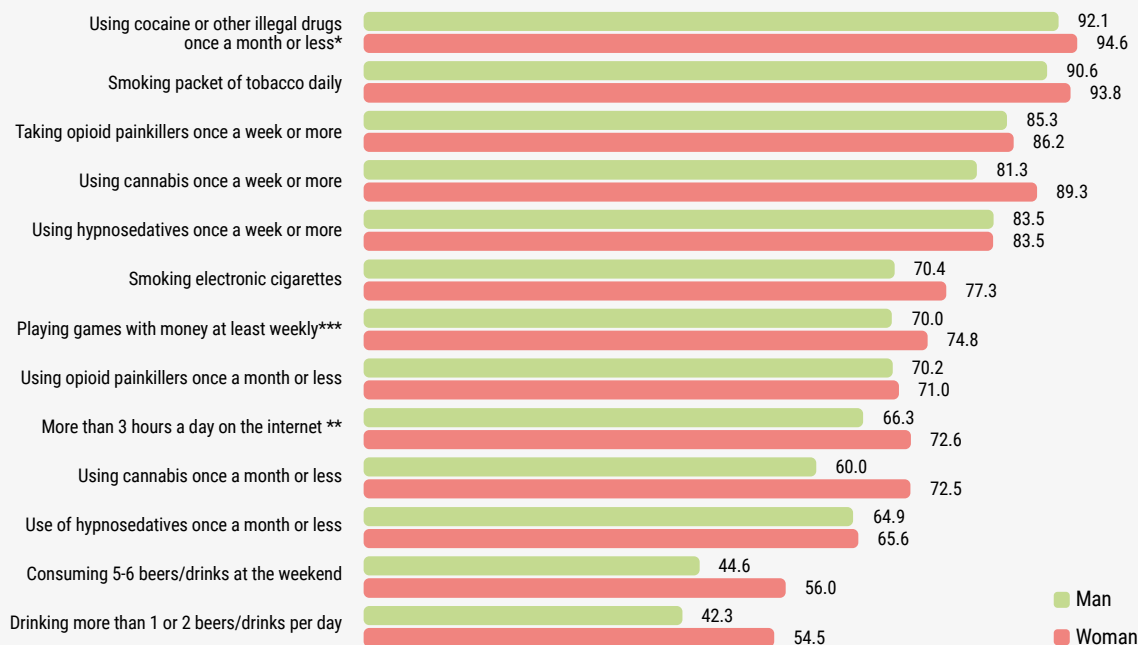
■ Man
■ Woman

* Other illegal drugs included in 2020.
** Spending more than 3 hours per day on activities that require internet use without considering the time spent on school or work-related tasks.
*** Or gambling.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Overall, risk perception is higher among women than among men in all cases. Comparatively between the sexes, the biggest differences are found in relation to alcohol, cannabis and internet use.

In addition to knowing about cannabis use, it is important to determine to what extent citizens consider it simple or not to acquire it within 24 hours.

Cannabis stands out from other illegal substances in terms of **accessibility**. 59.4% think it would be easy or very easy for them to obtain this substance within 24 hours, a lower proportion than in 2018 (63.3%). The perception of availability is slightly higher for men than for women (64.9% and 53.6% respectively).

It can be seen that since 2011 there has been a slight decrease in the perceived availability of this substance.

■ **Perception of the importance of the problem of cannabis use and visibility of the problem**

In relation to the visibility of certain scenes related to cannabis use, a situation similar to that already described for the perception of availability is recorded.

The most common situations encountered by individuals are those related to cannabis and alcohol use, with 56.7% saying that they frequently encounter people smoking joints, and with regard to alcohol use, around 45.3% of individuals say that they have regularly encountered people who are drunk or doing *botellón* (gathering in public spaces to drink store-bought alcohol).

In terms of the visibility of drug dealers offering drugs, as in 2018, the percentage of people who encounter these individuals on a frequent basis has risen again, from 10.1% to 12.1%.

- ■ **Views on the importance of various actions to try to solve the drug problem**

Respondents are asked to give their opinions on a series of actions to address the problem of drug use among the population. The measures with the highest levels of support are **education in schools**, and **police and customs control**, as 89.2% and 82.6% of the population think that these measures are very important to solve the drug problem in our country. Throughout the historical series, these actions have been the most widely supported.

Other actions, which are also considered very important for solving the drug problem by a large part of the population, are **advertising campaigns and voluntary treatment for users** (81.5% and 80.1%, respectively).

Finally, actions related to legalisation seem to be important for a smaller proportion of the population. 36.5% of individuals think that the **legalisation of cannabis** would be an important solution to solve the drug problem.

Figure 5.2.9. Rating as "very important" of various actions to solve the drug problem among the population aged 15-64 (%). Spain, 1995-2020.
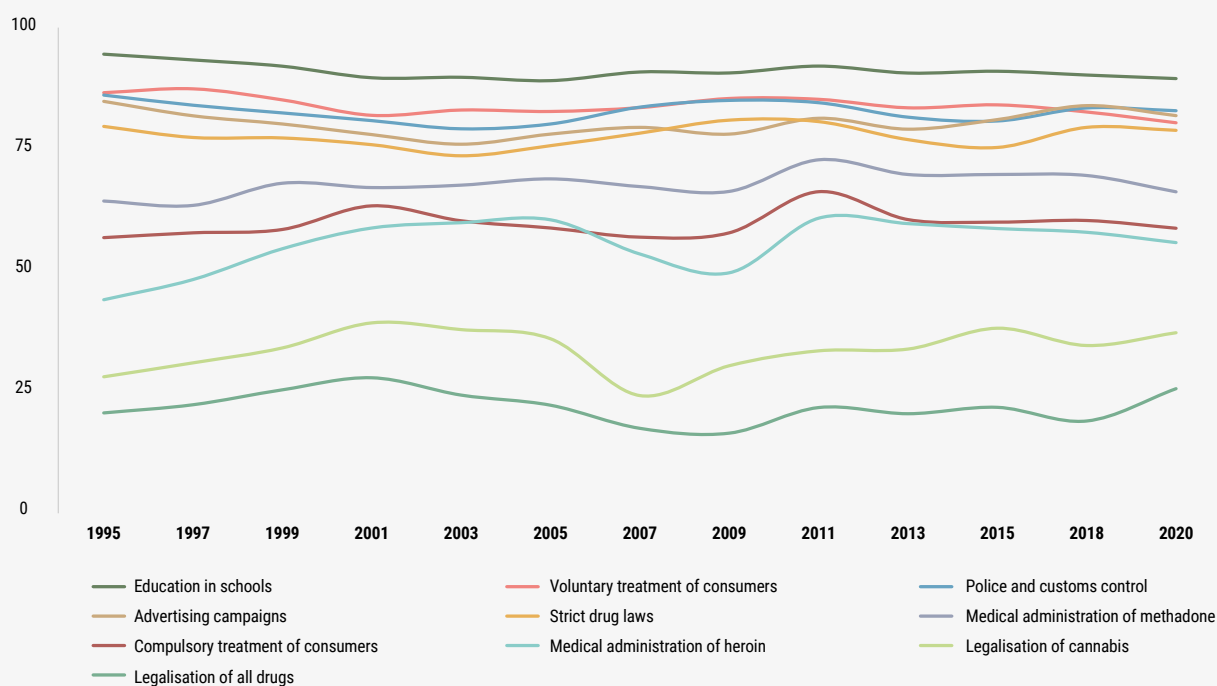
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

The proportion of women who consider these measures more important than men is higher for all actions except cannabis legalisation.

■ **Prevalence of cannabis use by Autonomous Regions and Cities**

This section presents cannabis use in the different Autonomous Regions and Autonomous Cities in the different time periods. It should be borne in mind that the sample corresponding to Cantabria, La Rioja, Ceuta and Melilla was small and the margin of error high, so that comparisons between the different autonomous regions should be made with caution.

The Autonomous Regions with the highest prevalence of **lifetime** cannabis use are Navarre, Catalonia, Cantabria, La Rioja and the Basque Country, all with prevalence rates equal to or above 45%. On the other hand, consumption is somewhat less widespread in the cities of Melilla and Ceuta, with prevalences of less than 20%.

In the time frame of the **last 12 months**, the regions with the highest prevalence of cannabis use are the Balearic Islands, La Rioja, Catalonia, Murcia and Valencia, with prevalence rates above 10%. The lowest prevalences are found in Andalusia, Castile La Mancha, Ceuta and Melilla, with prevalences below 6.5%.

Table 5.2.4. Prevalence of cannabis use in the population aged 15-64
by Autonomous Region/City (%). Spain, 2020.

Cannabis use	Sometime in life			Last 12 months		
	Prevalence	Lower 95%CI	Upper 95%CI	Prevalence	Lower 95%CI	Upper 95%CI
Andalusia	25.3	23.2	27.4	6.3	5.1	7.4
Aragon	37.7	33.6	41.7	8.4	6.1	10.7
Asturias	40.6	37.6	43.7	7.7	6.1	9.3
Balearic Islands	43.9	39.7	48.1	20.5	17.0	23.9
Canary Islands	25.8	22.0	29.5	7.8	5.5	10.1
Cantabria	47.1	42.9	51.2	6.6	4.6	8.7
Castile and Leon	39.5	36.9	42.2	10.8	9.1	12.5
Castile La Mancha	30.3	27.5	33.2	6.3	4.8	7.8
Catalonia	48.6	46.3	50.9	14.1	12.5	15.7
Valencia	44.8	42.8	46.9	13.4	12.0	14.8
Extremadura	24.6	21.6	27.7	8.4	6.4	10.3
Galicia	32.2	29.7	34.8	8.0	6.5	9.5
Madrid	37.9	35.6	40.2	10.8	9.3	12.3
Murcia	42.2	38.7	45.7	13.6	11.1	16.0
Navarre	49.6	45.1	54.0	13.1	10.1	16.1
Basque Country	45.0	41.9	48.2	12.2	10.2	14.3
La Rioja	46.0	41.4	50.6	14.5	11.3	17.8
Ceuta	19.2	14.3	24.1	6.1	3.2	9.1
Melilla	9.8	4.7	14.9	5.0	1.2	8.7
Average Spain	37.5	36.8	38.3	10.5	10.0	10.9

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Figure 5.2.10. Prevalence of cannabis use in the last 12 months among the population aged 15-64 by Autonomous Region/City (%). Spain, 2020.

National average 8.0%

> Average
< Average
= Average
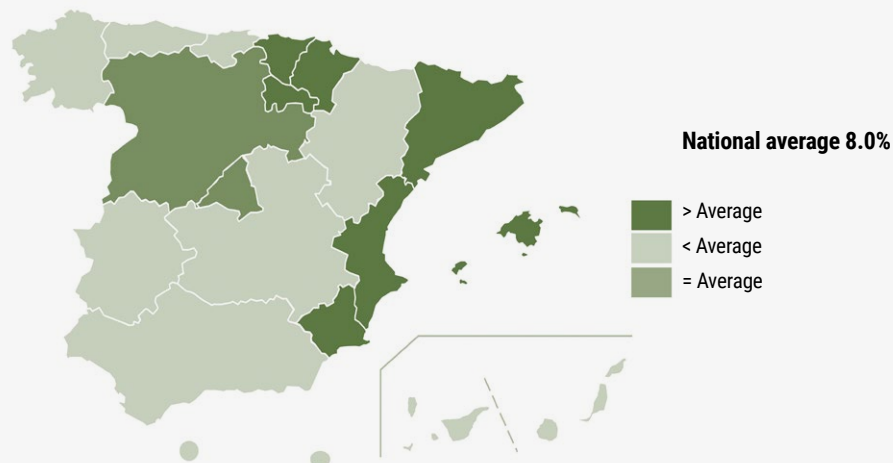
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

The first use of cannabis among the population is between 17.5 and 19.4 years of age. The Autonomous Region where cannabis use starts earliest is the Canary Islands (17.5 years), while the latest age of onset is in Melilla (19.4 years).

Table 5.2.5. Average age of onset of cannabis use in the population aged 15-64 years by Autonomous Region/City (%). Spain, 2020.

	Average age of onset of cannabis use
Andalusia	18.6
Aragon	18.3
Asturias	18.7
Balearic Islands	17.7
Canary Islands	17.5
Cantabria	18.4
Castile and Leon	18.6
Castile La Mancha	18.4
Catalonia	18.6
Valencia	18.4
Extremadura	18.5
Galicia	18.6
Madrid	18.8
Murcia	18.2
Navarre	18.5
Basque Country	18.3
La Rioja	19.1
Ceuta	18.1
Melilla	19.4
Average Spain	**18.5**

Source: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

In all Autonomous Regions/Cities, lifetime prevalence of cannabis use is higher among males than among females.

Table 5.2.6. Prevalence of lifetime prevalence of cannabis use in the population aged 15-64 by region/city and sex (%). Spain, 2020.

	Sometime in life	
	Man	**Woman**
Andalusia	33.8	16.7
Aragon	46.7	28.3
Asturias	47.9	33.5
Balearic Islands	54.1	33.4
Canary Islands	34.2	17.3
Cantabria*	55.2	39.1
Castile and Leon	47.7	31.1
Castile La Mancha	34.8	25.6
Catalonia	55.3	41.8
Valencia	55.9	33.6
Extremadura	37.2	11.5
Galicia	40.7	23.9
Madrid	47.5	28.7
Murcia	55.1	28.5
Navarre	57.2	41.7
Basque Country	55.2	34.8
La Rioja*	57.1	34.6
Ceuta*	28.8	9.0
Melilla*	19.0	0.0
Total	**46.3**	**28.7**

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).
* The values for these Autonomous Regions and Cities should be interpreted with caution due to the small sample size.

5.2.2. Household survey on alcohol and drugs in Spain among the working population

The Household Survey on Alcohol and Drugs in Spain (EDADES), which, as mentioned in the previous section, is carried out every two years among the population aged 15-64, has included the "Survey on the Use of Psychoactive Substances in the Workplace in Spain" every six years since 2007, in order to obtain a better understanding of the reality of drug use in the workplace, as well as the differences between the working population and the general population.

The main data on cannabis use from the latest survey conducted in 2020 among the working population in Spain aged 16-64 are summarised below.

Further information on this survey can be found at the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/encuestas_LABORAL.htm

The main data on cannabis use are summarised below.

■ **Time trends in cannabis use in the general population and in the working population**

Cannabis is the most prevalent illicit drug used in both the working population and the general population in all time periods.

**Figure 5.2.11. Prevalence of cannabis use in the general population
and in the working population (%). Spain 2013-2020.**

	Sometime in life (%)		Last 12 months (%)		Last 30 days (%)	
	2013	**2020**	**2013**	**2020**	**2013**	**2020**
Working population	33.5	41.3	9.0	10.9	6.7	8.5
General Population	30.4	37.5	9.2	10.5	6.6	8.0

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

In 2020, the prevalence of cannabis use in the working population was 41.3% **at some time in life**, 10.9% in **the last year**, and 8.5% in the **last month**. These figures are higher than those reached by the general population in the same edition (37.5% at some time in their lives, 10.5% in the last 12 months and 8% in the last 30 days). Compared with the 2013 edition, the prevalence of cannabis use in the working population increased in these time periods, slightly more than in the general population.

■ **Prevalence of consumption by age and sex**

Evaluating the prevalence of use in the last 12 months by sex in the working and general population, in both populations, use was higher in men (14.7% and 14.6%, respectively) than in women (6.3% and 6.3%, respectively). In relation to age in the workplace, those under 35 years of age (19.7%) had a higher prevalence of cannabis use compared to those over 34 years of age (7.7%).

Cannabis use in the last 30 days is also more prevalent among men under 25 years of age (almost 1 in 3 reported using cannabis).

■ **Characteristics of cannabis use in the past 30 days**

If **socio-demographic variables** are analysed, cannabis use is more prevalent among people with no or only primary education, and in relation to marital status, there is a higher proportion of single people, possibly favoured by the greater presence of young people in this category, while those married or in a couple show percentages below 5%.

Figure 5.2.12. Prevalence of cannabis use (last 30 days) in the working population according to socio-demographic variables (%). Spain 2013-2020.
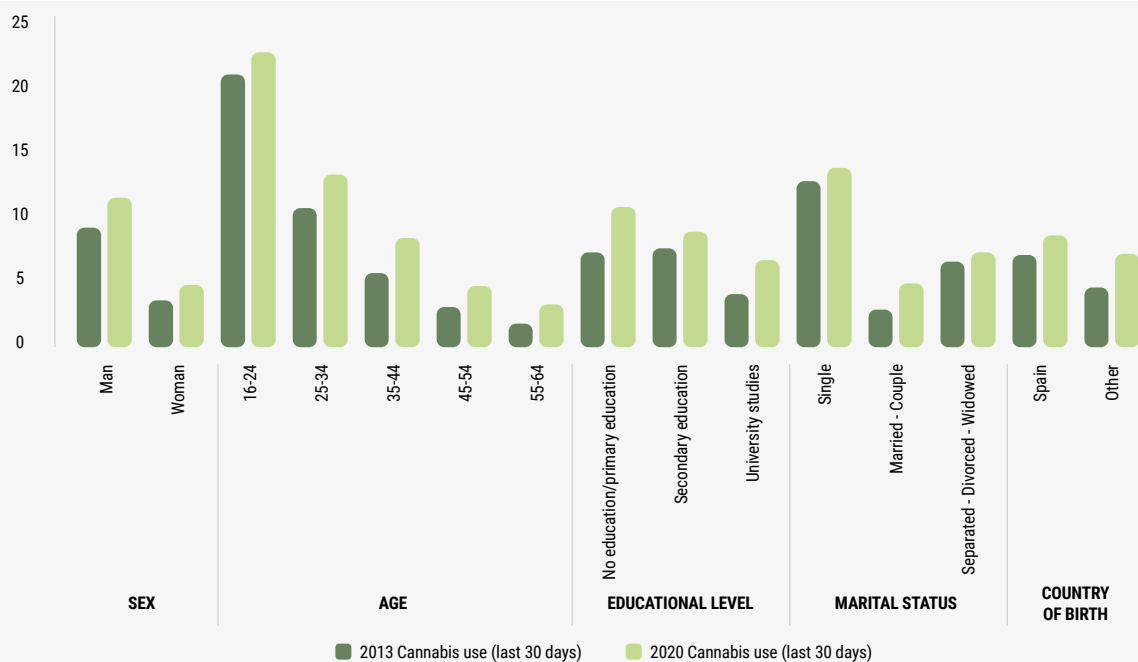
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

Analysing patterns of use according to the **employment status** of the population, a higher proportion of cannabis use in the last month is found among unemployed people. While consumption is higher among the unemployed, it is among those in employment that there has been the largest increase since 2013.

Table 5.2.7. Prevalence of cannabis use (last 30 days) in the population aged 16-64 by employment status (%). Spain 2013-2020.

	2013	2020
Persons employed (currently working or temporarily absent)	5.3	7.8
Employees currently working	5.3	7.9
Temporarily absent employees	4.6	6.4
Unemployed persons with previous employment	9.8	11.4

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

By sex, consumption is higher among men regardless of employment status. Significant differences in the prevalence of cannabis use were found in relation to employment status, and logistic regression, controlling for the effect of age and sex, confirmed that being unemployed was associated with a higher probability of using cannabis.

Table 5.2.8. Prevalence of cannabis use (last 30 days) in the population aged 16-64 by employment status and sex (%). Spain 2020.

	Man	Woman
Persons employed (currently working or temporarily absent)	10.5	4.7
Employees currently working	10.5	4.7
Temporarily absent employees	10.0	3.2
Unemployed persons with previous employment	16.3	5.6

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

By **occupational category**, skilled manual workers have the highest cannabis use, followed by unskilled workers.

Cannabis use is increasing in all groups, although substantially among managers and professionals (4.7% in 2013 and 7.8% in 2020).

Figure 5.2.13. Prevalence of cannabis use (last 30 days) in the working population by occupational category (%). Spain 2013-2020.
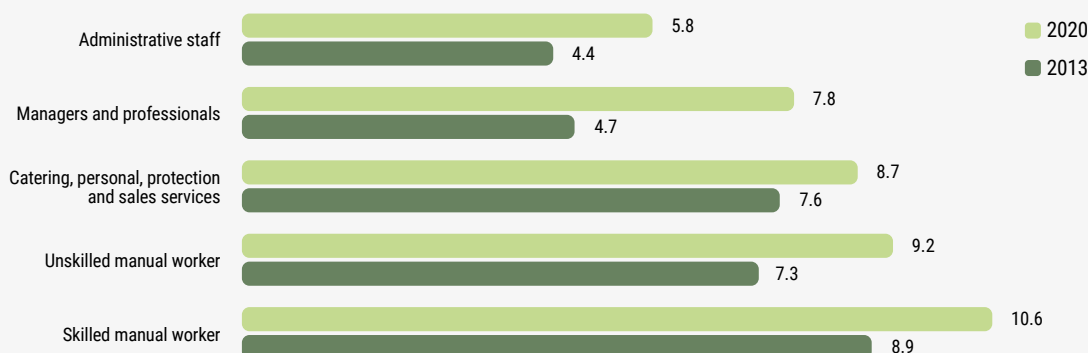
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

In all occupational categories, men have a higher prevalence of cannabis use than women.

Figure 5.2.14. Prevalence of cannabis use (last 30 days) in the working population by occupational category and sex (%). Spain 2020.

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

In terms of **sector of activity**, the prevalence of cannabis use in the last 30 days is highest in the arts/recreation/sports sector, followed by the hotel and catering and construction sectors.

By sex, regardless of the sectors considered, the highest prevalence of cannabis use is observed among men, with the differences with respect to women increasing in sectors such as construction and the hotel and catering industry. In contrast, differences in prevalence between men and women are smaller in the public administration sector.

The observed differences in consumption according to sector of activity are statistically significant, which is confirmed by logistic regression analysis, after controlling for the effect of age and sex.
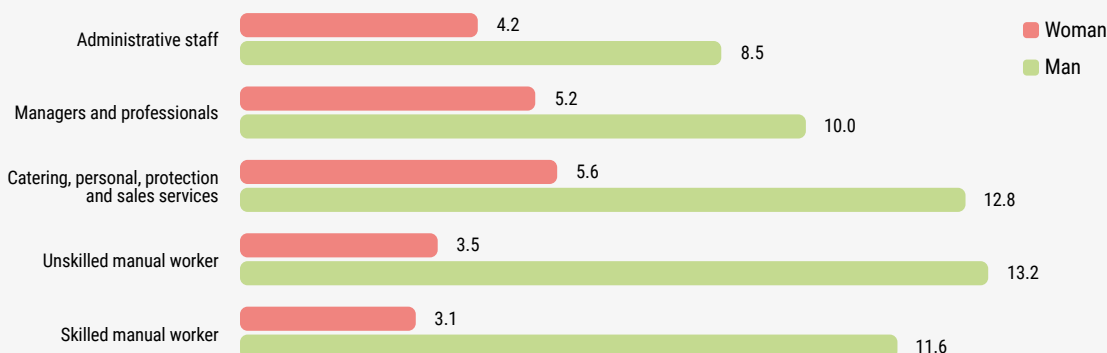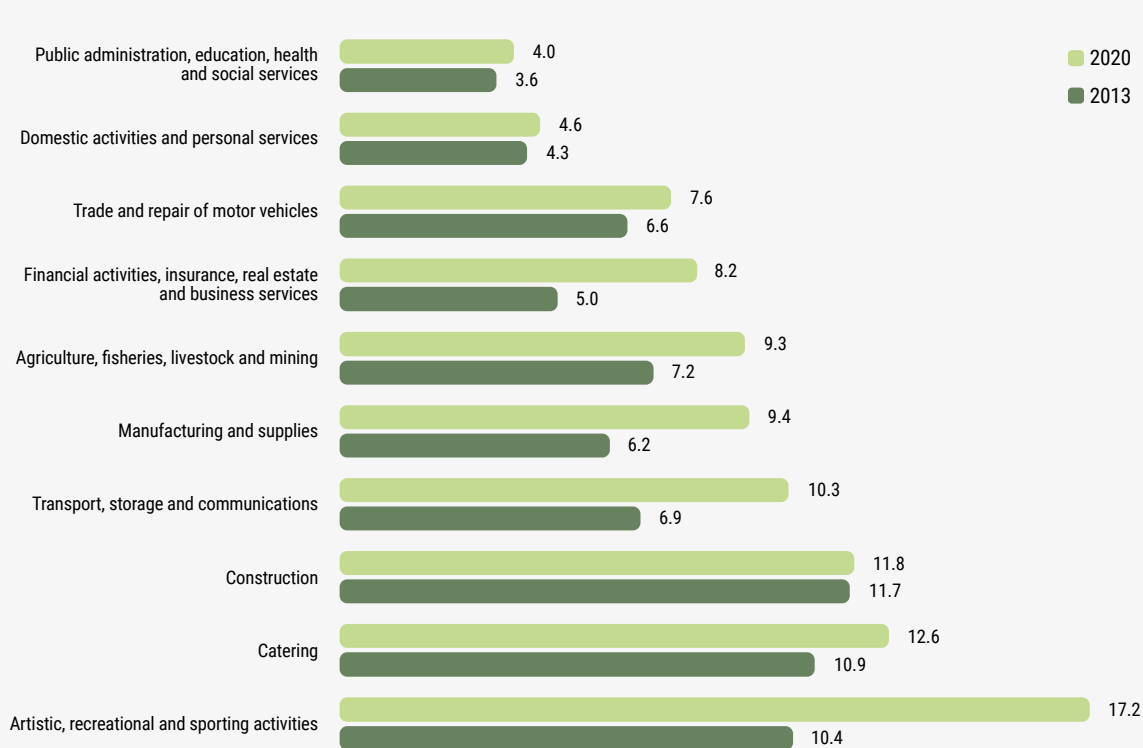
Figure 5.2.15. Prevalence of cannabis use (last 30 days) in the working population by sector of activity (%). Spain 2013-2020.

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

Analysing **working hours**, the highest prevalence of cannabis use is found among workers who work continuous night shifts, followed by those with reduced working hours.

Significant differences are found in the percentage of cannabis users according to working hours, which is confirmed by logistic regression analysis after controlling for the effect of age and sex.

Figure 5.2.16. Prevalence of cannabis use (last 30 days) in the working population by working hours (%). Spain 2013-2020.
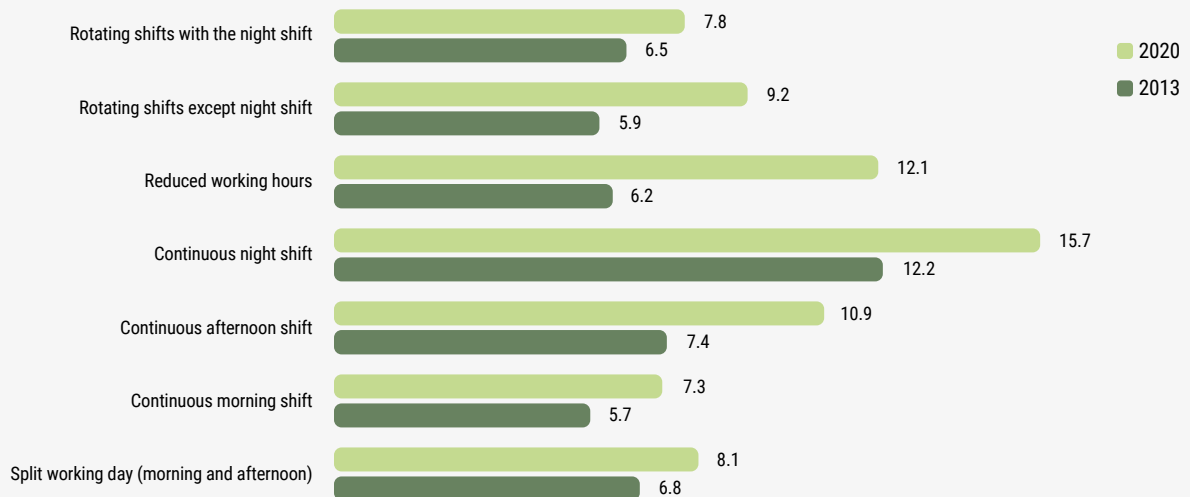
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

Compared to 2013, the largest increases in prevalence of cannabis use are recorded among employees who have reduced working hours at their workplace. The sample size of some of the categories (such as continuous night shift) requires caution in comparisons, as these are very volatile figures whose number of cases may show significant year-on-year changes.

Looking at **risk factors** in the work environment, the highest prevalence of cannabis use is found among workers reporting safety risks. Specifically, the highest prevalence of use is found among workers who work in situations of variable temperature (cold/heat), with 12.6% compared to 7.4% who also use cannabis, but do not recognise having this working condition. In addition to these factors, notable values are found in workers who have periods with little work or who feel underpaid.

Figure 5.2.17. Prevalence of cannabis use (last 30 days) in the working population according to whether or not they present different risks in the work environment (%). Spain 2020.

Yes: Number of people who use/number of people who do report the risk factor.
No: Number of people who use/number of people who do not report the risk factor.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

Regardless of the factor considered, there is a higher prevalence of cannabis use among men than among women.

Figure 5.2.18. Prevalence of cannabis use (last 30 days) in the working population according to different risks in the work environment and according to sex (%). Spain 2020.

Risk factor	Woman	Man
Feeling exhausted at work	5.5	14.3
Feeling tension or stress at work	6.1	13.3
Insecurity about the future of work	6.2	15.4
Feeling underpaid	5.2	17.3
Dangerous work	7.5	12.0
Working with heat or cold	6.5	14.7
Hardship at work	5.9	14.6
Work requiring very high performance	6.3	14.5
Long working hours	6.3	11.8
Working days with little rest time	5.5	13.1
Routine or monotonous tasks	4.8	12.8
Working below their level	5.2	12.4
Dissatisfied with treatment by superiors	5.0	12.3
Dissatisfied with the treatment by colleagues	3.8	10.6
Feeling underqualified for the job	2.7	9.9
Little prospect of promotion	4.0	11.8
Periods with little work	4.7	16.7
Long commutes or absences from home	7.8	13.0
Dissatisfied with work	3.3	13.2

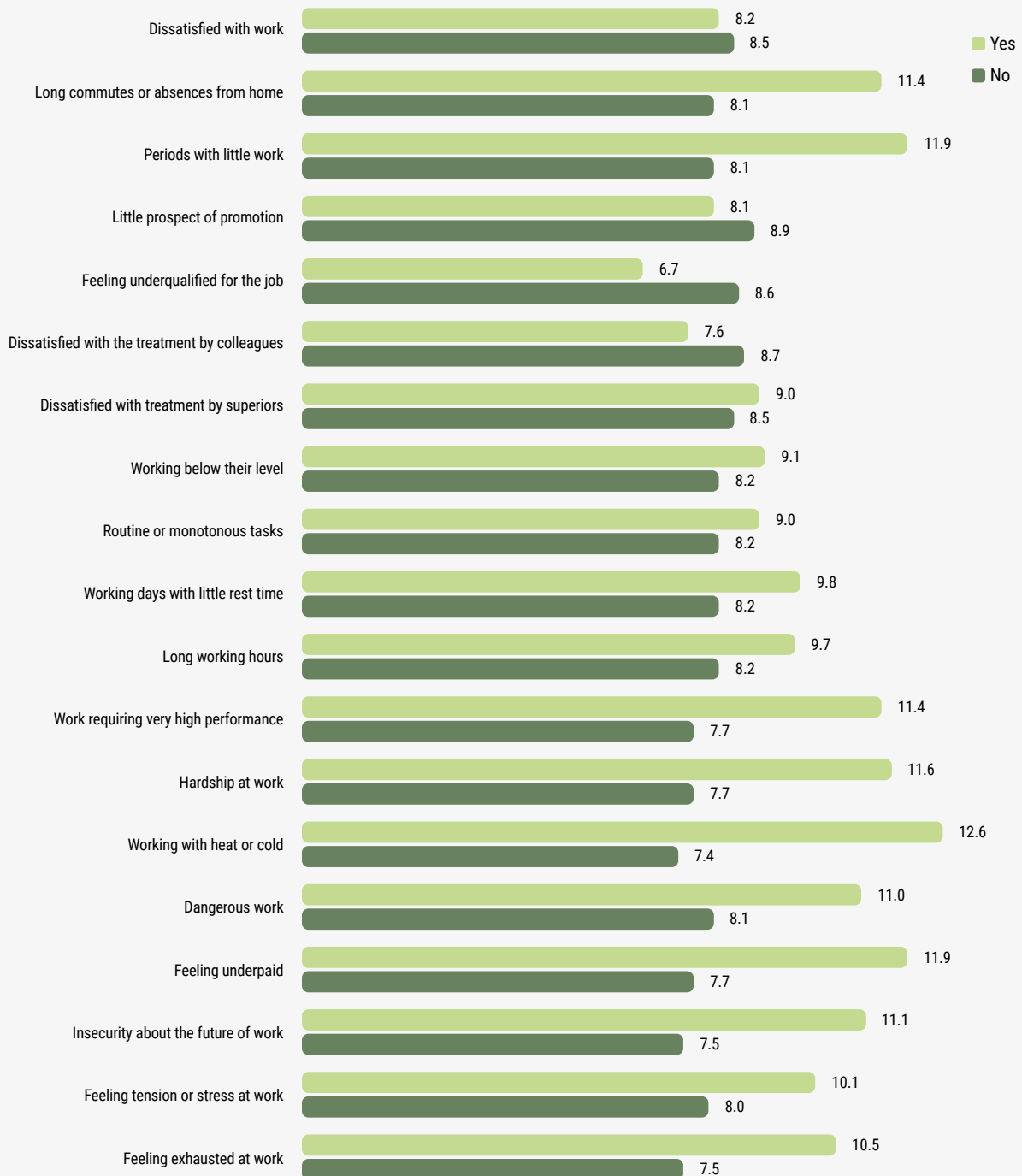Data shown: Number of people who use/number of people who do report the risk factor.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

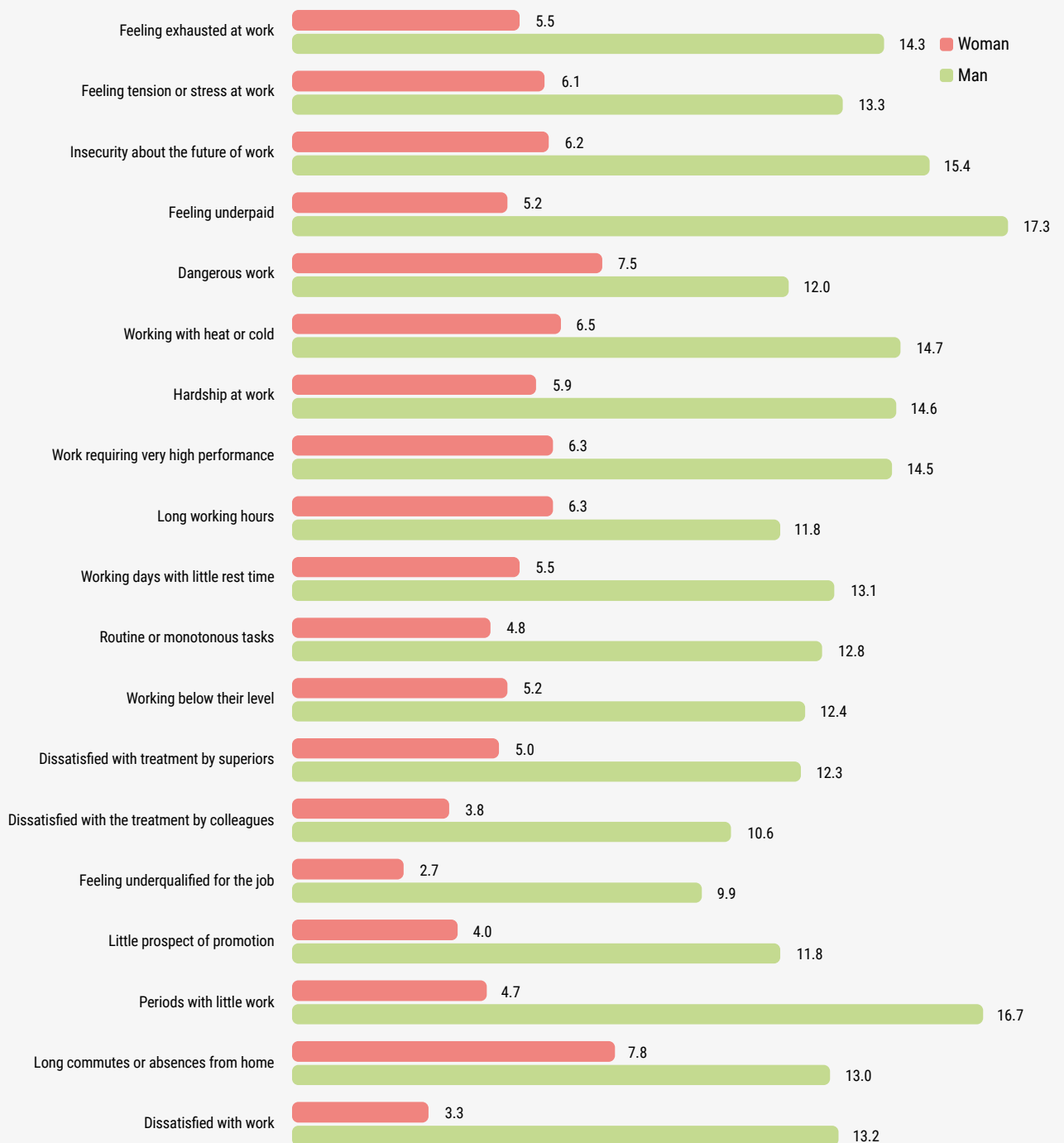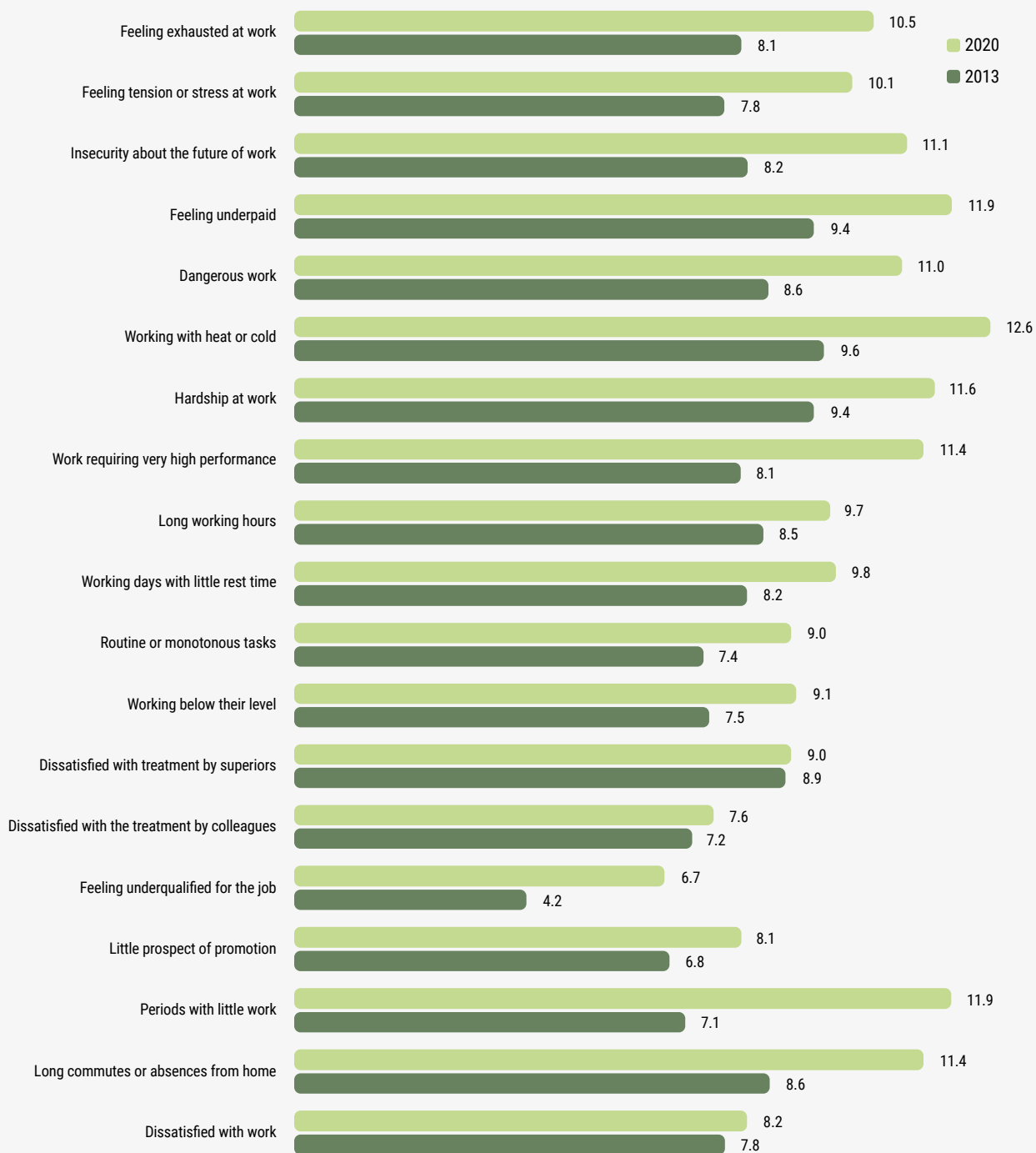Compared to 2013, an increase in prevalence of cannabis use is observed in all categories.

Figure 5.2.19. Prevalence of cannabis use (last 30 days) in the working population according to different risks in the work environment (%). Spain 2013-2020.

Category	2020	2013
Feeling exhausted at work	10.5	8.1
Feeling tension or stress at work	10.1	7.8
Insecurity about the future of work	11.1	8.2
Feeling underpaid	11.9	9.4
Dangerous work	11.0	8.6
Working with heat or cold	12.6	9.6
Hardship at work	11.6	9.4
Work requiring very high performance	11.4	8.1
Long working hours	9.7	8.5
Working days with little rest time	9.8	8.2
Routine or monotonous tasks	9.0	7.4
Working below their level	9.1	7.5
Dissatisfied with treatment by superiors	9.0	8.9
Dissatisfied with the treatment by colleagues	7.6	7.2
Feeling underqualified for the job	6.7	4.2
Little prospect of promotion	8.1	6.8
Periods with little work	11.9	7.1
Long commutes or absences from home	11.4	8.6
Dissatisfied with work	8.2	7.8

Data shown: Number of people who use/number of people who do report the risk factor.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-Laboral).

5.3. Use in the population over 64 years of age (ESDAM)

The Survey on Alcohol, Drugs and Other Addictions in People over 64 years of age (ESDAM) has been carried out for the first time in 2020 within the framework of the Surveys on Alcohol and Other Drugs in Spain (EDADES) programme, which focuses on the population aged 15 to 64 years, and is led by the DGPNSD with the collaboration of the Autonomous Regions. Its implementation responds to the need to study individually the behaviour of people over 64 years of age in relation to the consumption of alcohol, drugs and other addictions.

For more detailed information, please consult the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2019-2020_ESDAM_FINAL.pdf

The main data on cannabis use are summarised below.

Legal psychoactive substances, i.e., alcohol, tobacco, hypnosedatives and opioid analgesics, are the most widely used psychoactive substances among the population aged 65 and over, with prevalence varying according to the time frame analysed.

Analysing the use of illegal drugs, among people over 64 years of age, only **lifetime** use of cannabis stands out, with a prevalence of 4.6%. Even so, the prevalence of cannabis use is significantly lower than in the population aged 15-64 (37.5%). For the remaining illegal substances, prevalence rates among people aged over 64 years are extremely low (≤1% for each substance). Prevalence for cannabis use in the **last year** (0.5%) and **in the last month** is extremely low (0.5%).

Figure 5.3.1. Prevalence of cannabis use in people aged 65 and over and people aged 15-64. Spain, 2020.
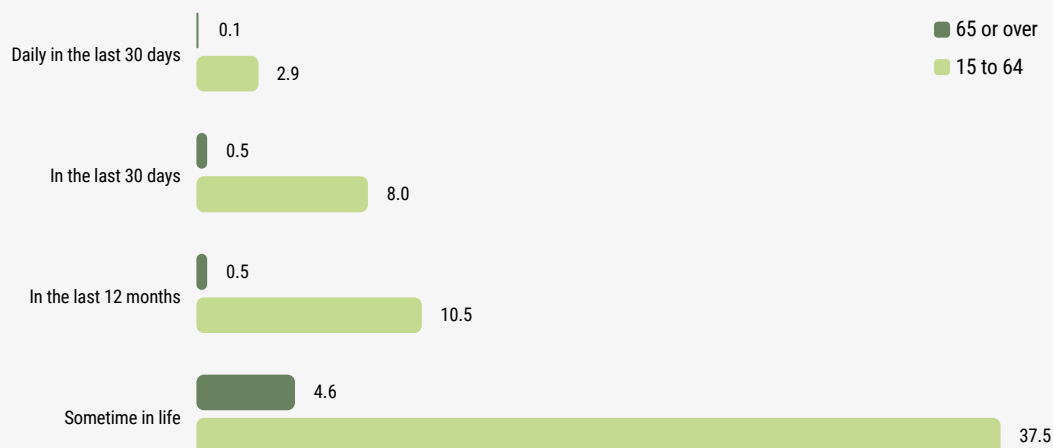
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-ESDAM).

In terms of sex, lifetime cannabis use in this population group is higher among males (7.1%) than females (2.8%).

Figure 5.3.2. Prevalence of lifetime cannabis use in people aged 65 and over and in people aged 15-64, by sex (%). Spain, 2020.
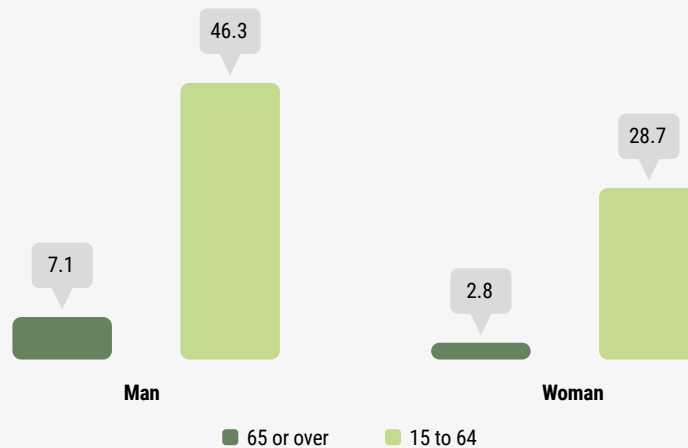
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES-ESDAM).

5.4. Impact of the COVID-19 pandemic on use in 2020

The COVID-19 pandemic and the measures taken to control it have had a major health, social and personal impact at all levels, affecting the use of psychoactive substances and other potentially addictive behaviours. The DGPNSD, and in particular its OEDA, monitored the situation through the information systems already in place and reinforced this monitoring through various initiatives. One of the most ambitious initiatives was the OEDA-COVID 2020 survey, designed to obtain meaningful and representative information from the Spanish population on potential changes in addiction due to this pandemic.

The OEDA-COVID 2020 survey was conducted in the general population residing in Spain and fieldwork was carried out between 10 November and 3 December 2020. The survey was conducted by means of a telephone questionnaire comprising 55 questions asked by an interviewer. Some questions from the Survey on Alcohol and Other Drugs in Spain (EDADES) questionnaire were used, most of them adapted to the parameters of the telephone format.

Questions on illicit substance use were limited to the most prevalent substances: cannabis and cocaine, and the CAST scale was included to measure possible problematic cannabis use.

More information can be found at the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/COVID-19/20210326_Informe_ENCUESTA_OEDA-COVID_2020_def.pdf

The main data on cannabis use are summarised below.

5.4.1. Cannabis use among the population aged 15 to 64

The prevalence of cannabis use in the months prior to the Covid-19 pandemic, i.e., before March 2020, among 15-64-year-olds surveyed was 7.8%, with higher use among males than females (10.6% among males and 4.9% among females).

Consumption decreased considerably during the pandemic, standing at 6.5% in the 15-64 age group (8.5% in men and 4.4% in women), with statistically significant differences found in both sexes (p<0.001).

**Figure 5.4.1. Prevalence of cannabis use before and during the Covid-19 pandemic
in the population aged 15-64, by sex (%). Spain, 2020.**
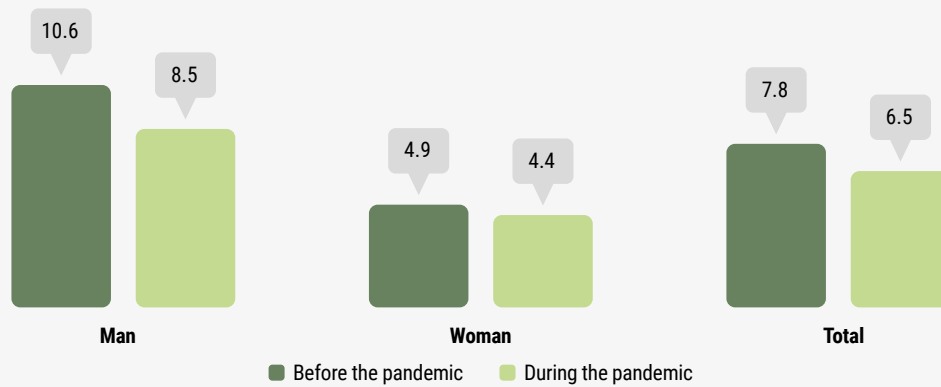
SOURCE: OEDA. OEDA-COVID 2020 survey of people aged 15-64 in Spain.

Analysing the results **by age** shows a reduction in the prevalence of cannabis use during the Covid-19 pandemic in all age groups, with the greatest reduction in use among people under 25 years of age.

**Figure 5.4.2. Prevalence of cannabis use before and during the Covid-19 pandemic
in people aged 15-64, by age (%). Spain, 2020.**

SOURCE: OEDA. OEDA-COVID 2020 survey of people aged 15-64 in Spain.

Considering age and sex, the decline in use during the pandemic is more significant among young men, who nevertheless remain the heaviest users.
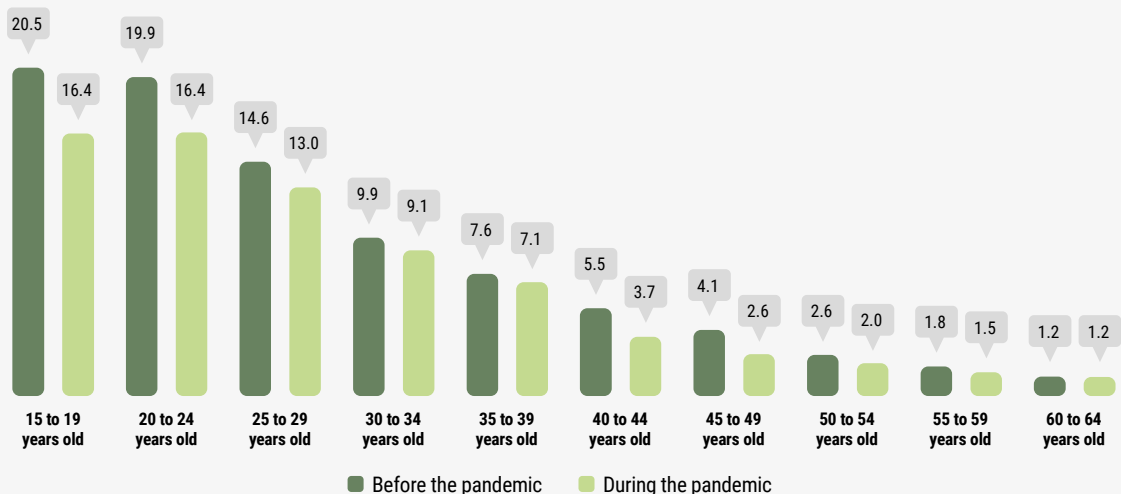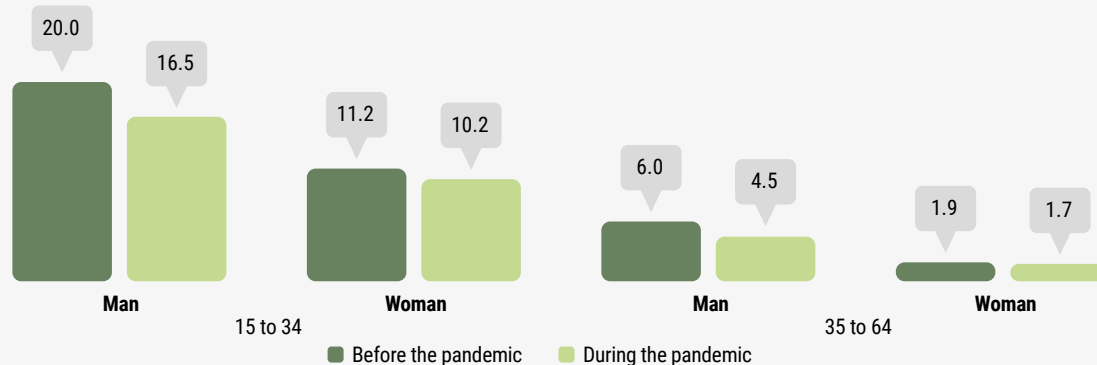
Figure 5.4.3. Prevalence of cannabis use before and during the Covid-19 pandemic in the population aged 15-64, by age and sex (%). Spain, 2020.

SOURCE: OEDA. OEDA-COVID 2020 survey of people aged 15-64 in Spain.

Regarding **problematic cannabis use**, as measured by the CAST (Cannabis Abuse Screening Test) scale designed by Legleye et al.[44] in 2007, 1.2% of respondents aged 15-64 years had a possible high-risk cannabis use (CAST≥4), rising to 19% among those who reported using cannabis during the pandemic.

Regarding the **change in the pattern of cannabis use**, 3.5% of the population stopped using cannabis or reduced their use during the pandemic, a percentage that is higher in men than in women, while the percentage of people who started using cannabis during the pandemic is less than 1%, with no differences between men and women.

Table 5.4.1. Changes in the pattern of cannabis use during the Covid-19 pandemic among the population aged 15-64, by sex (%). Spain, 2020.

	Total	Man	Woman
Did not and does not use	91.5	88.6	94.4
Abandonment	2.1	2.9	1.2
Decrease	1.4	1.8	1.0
Maintenance	2.8	4.1	1.5
Increase	1.4	1.7	1.2
Start of use	0.8	0.8	0.7

SOURCE: OEDA. OEDA-COVID 2020 survey of people aged 15-64 in Spain.

By **age**, during the Covid-19 pandemic, the greatest changes in cannabis use were observed among 15-34-year-olds. The data show that there is a greater abandonment or decline in cannabis use during the pandemic people aged 15 to 34 (7.1%) than among those aged 34 and over (1.7%). The rate of initiation was less than 1% of all respondents, but was concentrated among younger people (15-34 years), as was the increase in use.

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44 Legleye, S., Karila, L., Beck, F., Reynaud, M., 2007. Validation of the CAST, a general population Cannabis Abuse Screening Test. J. Subst. Use 12, 233-242.

Table 5.4.2. Changes in the pattern of cannabis use during the Covid-19 pandemic among people aged 15-64, by age (%). Spain, 2020.

	Total	15-34	45-64
Did not and does not use	91.5	82.8	95.7
Abandonment	2.1	3.8	1.2
Decrease	1.4	3.3	0.5
Maintenance	2.8	5.1	1.7
Increase	1.4	3.4	0.5
Start of use	0.8	1.6	0.4

SOURCE: OEDA. OEDA-COVID 2020 survey of people aged 15-64 in Spain.

5.4.2. Cannabis use in people over 64 years of age

No use of either of the two illegal drugs analysed, **cannabis and cocaine**, was detected in people over 64 years of age.

5.5. Use among prisoners 2016

The Government Delegation for the National Plan on Drugs of the Ministry of Health, in collaboration with the General Secretariat of Penitentiary Institutions of the Ministry of the Interior and the Directorate General of Penitentiary Services of the Department of Justice of the Regional Government of Catalonia, carries out, every five years, a Survey on Health and Drug Use among prisoners (ESDIP). In 2022, due to the transfer of functions and services from the State Administration to the Autonomous Region of the Basque Country regarding the execution of State legislation on penitentiary matters, the Directorate of Justice of the Regional Ministry of Equality, Justice and Social Affairs of the Basque Country has taken over management of the implementation of the new ESDIP 2022 survey.

Data collection for the latest ESDIP survey was from 2 November to 2 December 2016. A new survey is currently underway and fieldwork has been carried out over February and March 2022.

More information can be found at the following link:

https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2016ES-DIP.pdf

The main data on cannabis use are summarised below.

Cannabis was the most commonly used illegal drug among the prison population both inside and outside prison. In prison, 19.4% of inmates used cannabis in the last 30 days, 32.5% of them for 20 days or more in the last month. Use is more widespread among men under the age of 25.

The use of all illegal drugs in the last 12 months is clearly higher in the prison population (while released) than in the general population[45], with differences in the use of cannabis (42.2% and 9.5% respectively) and cocaine (30.7% and 1.9% for powder and 19.1% and 0.2% for base cocaine, respectively). A higher percentage of cannabis users in the last 30 days in prison is also observed among prisoners of Spanish nationality (21.4%) compared to foreigners (15.2%) and among convicts (20.1%) compared to pre-trial detainees (15.1%). From 2011 to 2016, there was a downward trend in cannabis use in prison.

On entering prison, the percentage of users of all drugs decreased, most strikingly in the use of alcoholic beverages, cocaine and cannabis. In relation to the issue at hand, 37.8% used cannabis in the last 30 days while at liberty compared to 19.4% who used cannabis in the last 30 days in prison.

Figure 5.5.1. Percentage of cannabis users in prison (last 30 days). Spain, 2016.
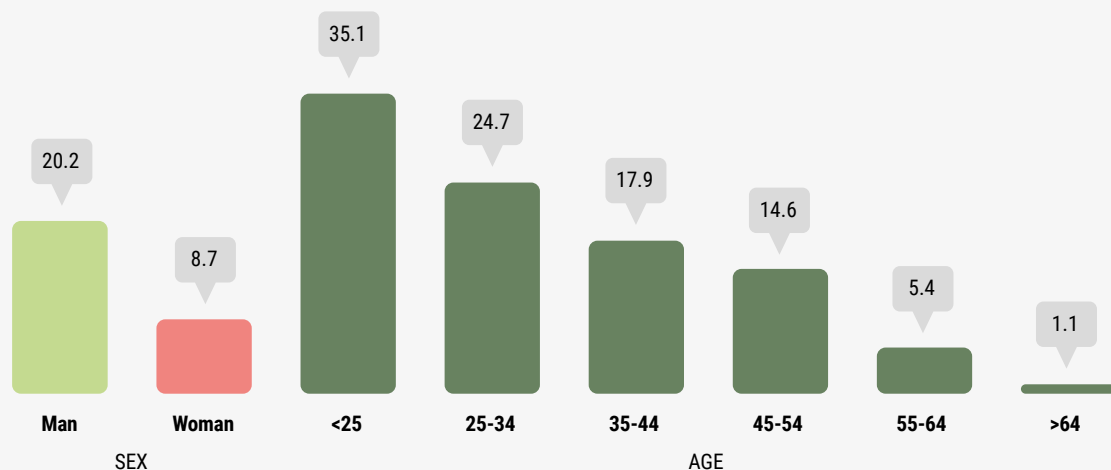
Source: OEDA. Survey on Health and Drug Use among Prisoners. ESDIP 2016.

The majority (95%) of prisoners who had ever used an illegal drug (cannabis, opiates, base and powder cocaine, amphetamines, ecstasy, hallucinogens or inhalants) used it for the first time outside prison.

The prison population starts using cannabis at an earlier age than the general population (16 and 18 years respectively). 1.8% of users started using cannabis in prison.

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45 EDADES: Survey on alcohol and drugs in Spain. https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/
sistemaInformacion/encuestas_EDADES.htm

06

PROBLEMATIC USE AND CONSEQUENCES OF CANNABIS USE

6.1. Problematic cannabis use

Problematic use of psychoactive substances is use that causes obvious harm or negative consequences for the user, be it dependence or any other health, psychological or social problem, or use that carries a high probability or risk of such harm. In addition, it may have negative consequences for third parties[46].

◼ **Estimation of problematic/high-risk cannabis use (CAST scale)**

According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) definition[47] of 2013, problem/high risk use of psychoactive substances is defined as use that is causing actual harms (negative consequences) to the person (including dependence, but also other health, psychological or social problems) or is placing the person at a high probability/risk of suffering such harms. In addition, the negative consequences of consumption on third parties could be included.

As part of a collaborative project with the EMCDDA, a psychometric study was carried out in the 2006 ESTUDES survey, introducing different screening scales assessing problematic cannabis use, to determine which scale was the most appropriate based on its psychometric properties. Specifically, the screening scales were used: CAST (Cannabis Abuse Screening Test), SDS (Severity of Dependence Scale) and DSM-IV (American Psychiatric Association); opting for the CAST scale which, from a psychometric point of view, produced the most robust results with respect to the other scales evaluated[48,49].

The CAST scale consists of 6 items (Table 6.1) that seek to identify patterns or risk behaviours associated with cannabis use in the past year. Since its development, this scale has been widely used in both general and adolescent populations in several countries and has proven to be suitable for these purposes[50].

Table 6.1.1. CAST (Cannabis Abuse Screening Test) Questionnaire.

Question	Opciones de respuesta
1. Have you smoked cannabis before midday?	Never Rarely From time to time Fairly often Very often
2. Have you smoked cannabis when you were alone?	
3. Have you had memory problems when you smoked cannabis?	
4. Have friends or members of your family told you that you should reduce your cannabis consumption?	
5. Have you tried to reduce or stop your cannabis use without succeeding?	
6. Have you had problems because of your cannabis use (argument, fight, accident, poor results at school, poor performance at work)? Which?	

Source: Translation by OEDA. DGPNSD.

Since the psychometric study of 2006, the CAST scale has been maintained in the ESTUDES survey and since 2013 it has been introduced in the EDADES survey, which has made it possible to establish a time trend.

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46 European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) http://www.emcdda.europa.eu/activities/hrdu
47 European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) http://www.emcdda.europa.eu/activities/hrdu
48 Klempova D, Sánchez A, Vicente J, Barrio G, Domingo A, Suelves JM, Llorens N, Prieto L, Brime B and Ramírez V. Consumo problemático de cannabis en estudiantes de 14-18 años: validación de escalas [Problem cannabis use in 14-18 year-old students: validation of scales]. DGPNSD and EMCDDA. http://www.pnsd.mscbs.gob.es/profesionales/publicaciones/catalogo/bibliotecaDigital/publicaciones/pdf/ConsProblematico_cannabis.pdf
49 Legleye, S, Karila, L, Beck, F, Reynaud, M. Validation of the CAST, a general population Cannabis Abuse Screening Test. J. Subst. Use 2007;12: 233-242.
50 Legleye S, Piontek D, Kraus L: Psychometric properties of the Cannabis Abuse Screening Test (CAST) in a French sample of adolescents. Drug Alcohol Dependence 2011; 113:229-235.

The cut-off point to be used to consider a person as a possible problem user has been an issue that has generated much debate among experts in the field. Initially, the author of the scale established 4 as the cut-off point, but later studies raised the possibility of using other cut-off points and other ways of analysing the items that make up the CAST scale[51,52,53.] In fact, some international surveys, such as ESPAD, have used different cut-off points in different editions of the survey, using the cut-off point of 2 in the 2019 study[54].

Following the psychometric study carried out in 2006, it was established that the appropriate cut-off point was 4, with those with a score of 4 or more being considered as potential problem users. This cut-off point has been maintained in all ESTUDES and EDADES surveys conducted and will be used throughout this report.

The most important results on problem cannabis use from the ESTUDES and EDADES surveys are presented below.

6.1.1. Survey on Drug Use in Secondary Education in Spain (ESTUDES)

Among students aged 14-18 who have used cannabis in 2021 and have answered the CAST scale, 63.2% have a score of 0-1, 19.0% have a score of 2-3 and 17.8% have a score of 4 or more (possible problematic use). Compared to previous years, 2021 saw an increase of more than two percentage points in the percentage of students with problematic cannabis use, the highest figure in the historical series, above that recorded in 2012.

Figure 6.1.1. Categorisation of CAST scale scores among secondary school students aged 14-18 who have used cannabis in the last 12 months (%). Spain, 2006-2021.
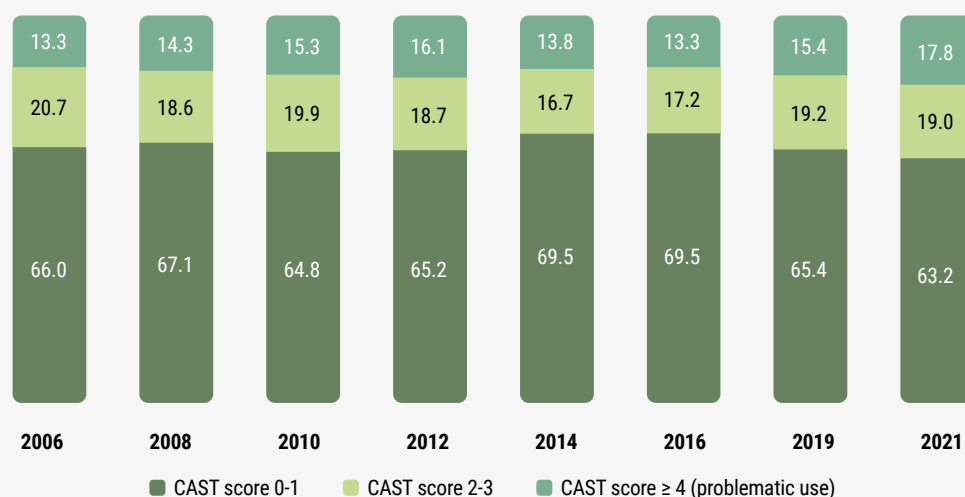
CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

51 Legleye S., Piontek D., Kraus L.; Psychometric properties of the Cannabis Abuse Screening Test (CAST) in a French sample of adolescents. Drug and Alcohol Dependence 2011; 113: 229-235.
52 Legleye S., Kraus L., Piontek D., Phan O., Jouanne C.; Validation of the Cannabis Abuse Screening Test in a Sample of Cannabis Inpatients. Eur Addict Res 2012;18: 193-200.
53 Gyepesi A., Urban R., Farkas J., Kraus L., Piontek D., Paksi B., Horvath G., Magi A., Eisinger A., Pilling J., Kokonyei G., Kun B., Demetrovics Z.; Psychometric Properties of the Cannabis Abuse Screening Test in Hungarian Samples of Adolescents and Young Adults. Eur Addict Res 2014;20: 119-128.
54 ESPAD Group (2020), ESPAD Report 2019: Results from the European School Survey Project on Alcohol and Other Drugs, EMCDDA Joint Publications, Publications Office of the European Union, Luxembourg.

If all students aged 14-18 in Secondary Education are considered, problematic cannabis users would represent 3.0% of the total population, slowing down the increasing trend recorded since 2016.

Table 6.1.2. Percentage and estimate of problem cannabis users (according to CAST scale) in the population of secondary school students aged 14-18. Spain, 2006-2021.

	2006	2008	2010	2012	2014	2016	2019	2021
Population of students aged 14-18 (in thousands) with CAST score ≥ 4 (problem use)	52,468	55,025	78,572	65,239	37,238	43,844	55,387	51,788
Percentage among all students aged 14 to 18 years old	3.3	3.7	4.6	3.8	2.5	2.8	3.4	3.0

CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

In terms of sex, problematic cannabis use is more prevalent in males (21.0% compared to 14.8% in females) and in terms of age, problem use increases with increasing age, from 13.5% in the 14-year-old age group to 24.2% in the 18-year-old age group.

Figure 6.1.2. Categorisation of CAST scale scores among secondary school students aged 14-18 who have used cannabis in the last 12 months, according to sex and age (%). Spain, 2021.
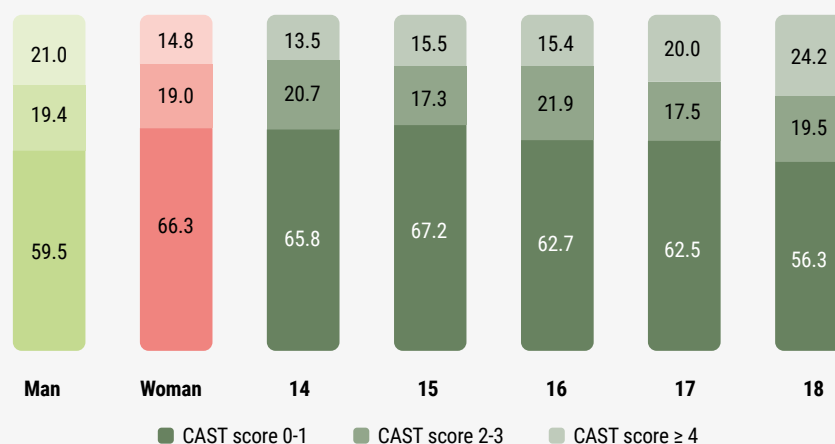
CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary School Students in Spain (ESTUDES).

In terms of the type of cannabis used, almost half of the students with possible problematic cannabis use report using marijuana and hashish interchangeably. This preference is slightly stronger for girls. Use of mainly marijuana is slightly more prevalent among boys (29.7%) than among girls (28.8%) with problematic use, while use of mainly hashish at 20.1% is equally prevalent among boys and girls.

Regardless of sex, for problematic users, the most common way of using cannabis is by mixing it with tobacco. However, in the female group this prevalence of use is higher.

On the other hand, the average number of joints consumed per day by students showing possible problematic cannabis use is 5.1 (5.3 among boys and 4.8 among girls).

Table 6.1.3. Characteristics of problem cannabis users (CAST≥4 score)
in the population of students aged 14-18 who have used cannabis in the last 30 days,
by sex (%). Spain, 2021.

		Total	Man	Woman
Cannabis use in the last 30 days	**Mainly marijuana**	29.3	29.7	28.8
	Mainly hashish	20.1	20.1	20.1
	Of the 2 types	50.6	50.3	51.1
Use of cannabis mixed with tobacco in the last 30 days	**Yes**	87.0	85.6	89.1
	No	13.0	14.4	10.9
Average number of joints consumed per day (No.)		5.1	5.3	4.8

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Among problematic cannabis users, it has been examined whether there is any behavioural link with **intensive episodes** of consumption such as drunkenness or binge drinking. The data indicate that 3 out of 4 students with possible problematic cannabis use have been drunk in the last month, which is three times the proportion reported for all students aged 14 to 18 (23.2%). Also, higher prevalence of binge drinking than in the student population was found among cannabis users who scored less than 4 on the CAST scale (56.1%).

As for the relationship with binge drinking, the situation is similar: 75.2% of problematic cannabis users have done binge drinking in the last month, while the value drops to 60.8% when the score on the CAST scale is below 4. For both groups the prevalence of binge drinking is higher than for all students aged 14-18 (27.9%)

Table 6.1.4. Prevalence of drunkenness and binge drinking in the last 30 days among
all secondary school students aged 14-18 and according to the classification of students
on the CAST scale who have used cannabis in the last 12 months (%). Spain, 2021.

	Total secondary school students aged 14-18 years	CAST classification of cannabis users in the last 12 months	
		Problematic cannabis use (CAST≥4)	Cannabis use with a score on the CAST scale<4
Have been drunk in the last 30 days	23.2	75.6	56.1
Have done binge drinking in the last 30 days	27.9	75.2	60.8

CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Regarding the relationship between problematic cannabis use and tobacco use, **daily tobacco use** among problematic cannabis users is 65.7%. However, the prevalence of this habit decreases among cannabis users in the last 12 months with a score on the CAST scale <4 (approximately 3 out of 10). The differences are striking when compared to the overall daily smoking rate (9.0%).

Table 6.1.5. Prevalence of daily tobacco use among secondary school students aged 14-18 according to the classification of students on the CAST scale who have used cannabis in the last 12 months (%). Spain, 2021.

		Total number of students in secondary education from 14 to 18 years old	Problematic cannabis use (CAST≥4)	Cannabis use in the last 12 months with CAST score<4
Daily tobacco use in the last 30 days	Yes	9.0	65.7	29.0
	No	91.0	34.3	71.0

CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

6.1.2. Survey on Alcohol and other Drugs in Spain (EDADES)

In 2020 the prevalence of possible problematic cannabis use (CAST≥4) in the population aged 15-64 was 1.9%, (3.0% in males and 0.9% in females).

Considering individuals who have used cannabis in the last 12 months who responded to the CAST scale, the prevalence of possible problem use was found to be 22.5%, and it is more prevalent among men than women (24.1% versus 18.5%).

Figure 6.1.3. Prevalence of problem cannabis use (CAST score ≥4) among the population aged 15-64 and among the population aged 15-64 who have used cannabis in the last 12 months (%). Spain, 2013-2020.
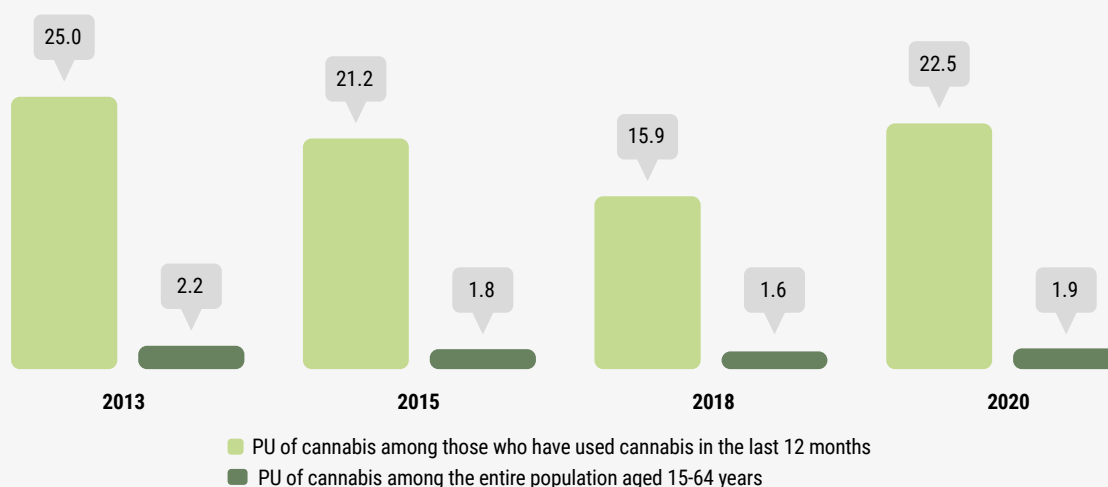
PU= Problematic Use.
CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

After several years of recording falls, the prevalence of possible problematic cannabis use rebounded in 2020, with results close to those of 2015.

Figure 6.1.4. Prevalence of problem cannabis use (CAST score ≥4) among people aged 15-64 and among people aged 15-64 who have used cannabis in the last 12 months, by sex (%). Spain, 2013-2020.
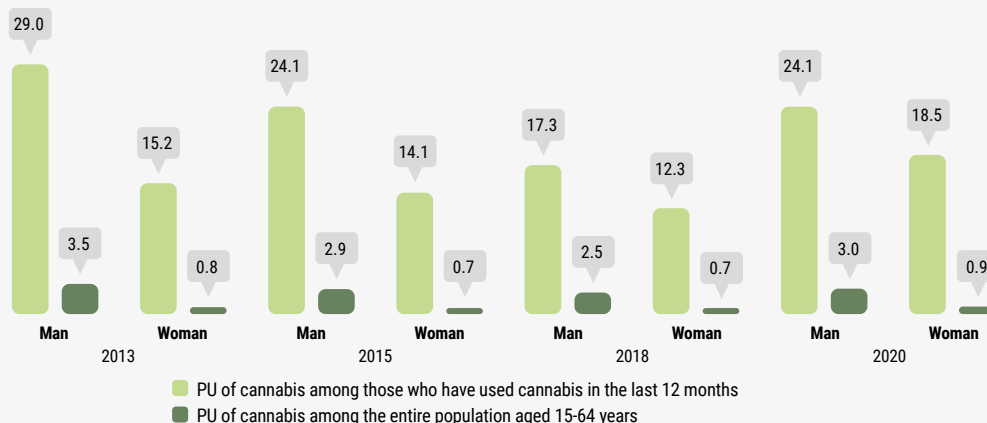
PU= Problematic Use.
CAST = Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Use of other psychoactive substances together with cannabis**

36.5% of potential problem cannabis users report having used cocaine at some time in the last year, a prevalence that decreases to 21.5% among users with a CAST score<4, and drops to 2.5% for the total population aged 15-64. In the case of hypnosedatives with or without prescription, the prevalence of use is 34.1% among users with a CAST score ≥4, which is much higher than in the group with a CAST score below 4 (18.3%). Irrespective of the score on the CAST scale, almost all cannabis users have drunk alcohol and smoked tobacco in the last year.

Table 6.1.6. Prevalence of psychoactive substance use in the last 12 months among people aged 15-64 years who have used cannabis in the last 12 months, according to their score on the CAST scale (%). Spain, 2020.

	Problematic cannabis use (CAST ≥4)	Cannabis use (CAST <4)	Total general population
Alcohol	92.6	93.5	77.2
Binge drinking	69.7	61.1	19.4
Gathering in public spaces to drink store-bought alcohol or *"Botellón"*	31.7	27.7	9.9
Tobacco	96.4	94.3	39.4
Hypnosedatives with or without a prescription	34.1	18.3	12.0
Cocaine (powder and/or base)	36.5	21.5	2.5

CAST= Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

■ **Characteristics of cannabis use**

If we analyse the type of cannabis use in the last 30 days according to the score obtained on the CAST scale, there are no major differences between users with a CAST score ≥4 and users with a CAST score<4, with only a higher percentage of individuals using both types of cannabis and a lower percentage using mainly marijuana among those with a score of 4 or more on the CAST scale. In terms of the average number of joints smoked per day, those with a possible problematic pattern of use smoked more than those who scored less than 4 on the CAST scale (3.5 versus 2.3).

Table 6.1.7. Characteristics of cannabis use in problem cannabis users (CAST ≥4)
in people aged 15-64 years who have used cannabis in the last 30 days (%). Spain, 2020.

Characteristics of cannabis use		Problem cannabis use (CAST≥4)	Cannabis use (CAST<4)
Cannabis use in the last 30 days	Mainly marijuana	43.5	51.0
	Mainly hashish	20.2	20.5
	Of the two types	36.3	28.6
Use of cannabis mixed with tobacco in the last 30 days	Yes	90.1	88.6
	No	9.9	11.4
Average number of joints consumed per day		3.5	2.3

CAST= Cannabis Abuse Screening Test.
SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

6.2. Admissions to treatment for cannabis use

The Admissions to treatment indicator is a register that collects individualised data on admissions to outpatient treatment for abuse or dependence on psychoactive substances (legal and illegal drugs, except tobacco) in an autonomous region/city and in a given year. This indicator became operational in 1987, but it was not until 1996 that the registration of cannabis treatment admissions began. A detailed protocol describes the variables to be included, the psychoactive substances collected and the inclusion and exclusion criteria. This information is available on the website of the National Plan on Drugs (PNSD)[55].

A total of 50,035 admissions to treatment for psychoactive substance abuse or dependence (excluding alcohol and tobacco) were recorded in 2019, with 14,202 admissions generated by cannabis abuse or dependence.

In 1996, admissions to treatment for cannabis use accounted for less than 5% of all admissions, but the share of cannabis in this indicator increased steadily, rising sharply from 2007 to 2013, surpassing heroin admissions for the first time in 2012.

Cannabis is currently the second substance (28.4%) responsible for treatment admissions in Spain, behind cocaine (44.7% of the total) and followed by opioids (22.3%), being in many Autonomous Regions the top substance responsible for treatment admissions.

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55 National Plan on Drugs (PNSD) https://pnsd.sanidad.gob.es/en/profesionales/sistemasInformacion/
sistemaInformacion/indicadores.htm

Figure 6.2.1. Number of admissions to treatment for cannabis abuse or dependence. Spain, 1996-2019.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015	2016	2017	2018	2019
First treatments	1,300	1,768	2,412	2,335	2,487	2,966	3,972	4,613	5,319	4,426	4,125	4,619	5,058	7,273	8,639	9,736	10,982	12,912	12,968	11,185	9,278	9,122	9,485	10,372
With prior treatment	230	387	407	418	408	540	665	871	928	844	941	1,114	2,055	1,705	2,101	2,603	3,402	3,585	3,510	3,448	3,208	3,314	3,386	3,306
Total							4,772	5,711	6,500	5,524	5,304	5,936	7,419	9,503	11,192	12,873	14,869	16,914	16,478	15,676	13,304	12,932	13,459	14,202

* Data estimated for the whole of Spain, since some Autonomous Regions have not included the prior treatment variable.
Note: The sum may or may not coincide with the total due to the existence of cases with unknown values in the prior treatment variable.
Source: OEDA. Indicator on Admissions to treatment for psychoactive substance use.

Figure 6.2.2. Percentage of admissions to treatment for psychoactive substance abuse or dependence, by main drug, excluding alcohol (total admissions, first-time admissions, under 18 years old* and those born outside Spain) (%). Spain, 2019.

	All admissions	Admitted for the first time in life	Admitted under 18 years of age*	Born outside Spain
Opioids	22.3	11.2	0.5	23.0
Cocaine	44.7	45.4	2.4	36.3
Cannabis	28.4	37.7	95.2	34.1
Other stimulants	2.2	2.5	0.6	3.6
Other substances	2.4	3.2	1.3	3.0
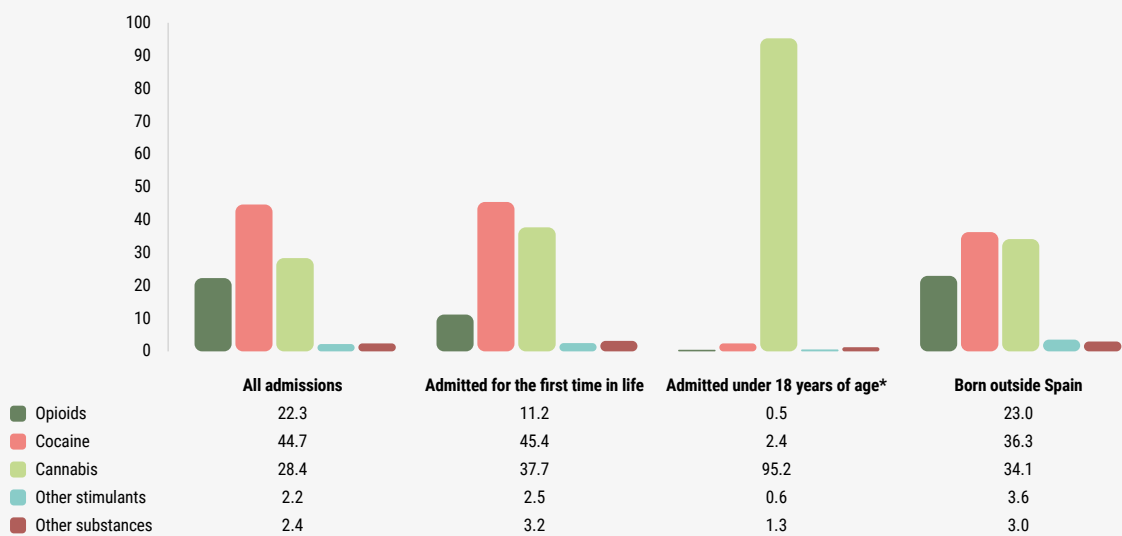
* All those admitted for treatment under 18 years of age.
Note: The percentage may or may not add up to 100% because only some drugs are represented in this figure.
Source: OEDA. Indicator on Admissions to treatment for psychoactive substance use.

It is important to highlight that cannabis abuse or dependence is the leading cause among minors seeking treatment for psychoactive substance abuse or dependence in Spain. Thus, 95.2% of all under-18s who have been admitted to treatment for illicit drug use in 2019 in our country have done so for problems associated with cannabis use (figure 6.2.2).

The proportion of those admitted to treatment for cannabis is higher for females both in total admissions (33.9% for females and 27.2% for males), and when analysing first-time admissions (42% for females and 36.7% for males) or those admitted under the age of 18 (96.1% for girls and 94.9% for boys), although in the latter case the difference is small. However, among those born outside Spain, the weight of cannabis is greater among men, who are the ones who most seek treatment, although the difference is minimal.

Figure 6.2.3. Percentage of admissions to treatment for psychoactive substance abuse or dependence, by main drug, excluding alcohol, by sex (total admissions, first-time admissions, under 18 years old* and those born outside Spain) (%). Spain, 2019.

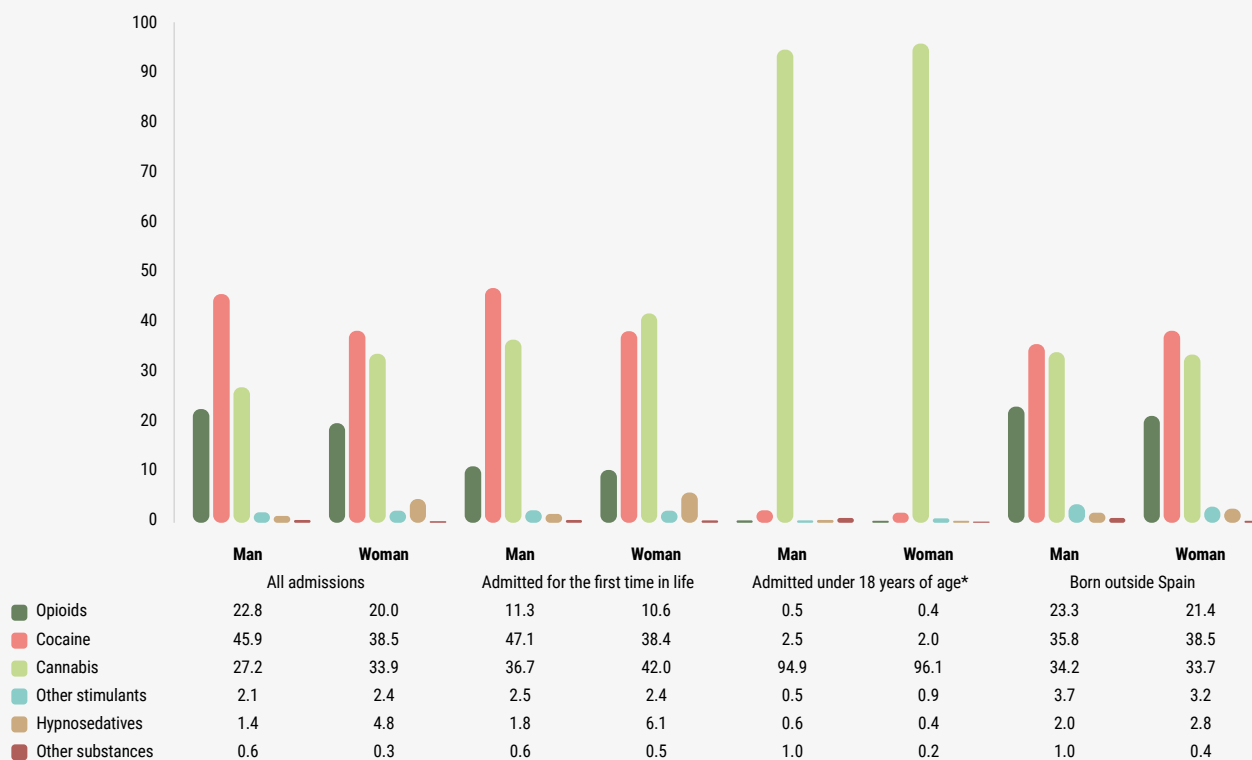|	All admissions		Admitted for the first time in life		Admitted under 18 years of age*		Born outside Spain	
	Man	Woman	Man	Woman	Man	Woman	Man	Woman
Opioids	22.8	20.0	11.3	10.6	0.5	0.4	23.3	21.4
Cocaine	45.9	38.5	47.1	38.4	2.5	2.0	35.8	38.5
Cannabis	27.2	33.9	36.7	42.0	94.9	96.1	34.2	33.7
Other stimulants	2.1	2.4	2.5	2.4	0.5	0.9	3.7	3.2
Hypnosedatives	1.4	4.8	1.8	6.1	0.6	0.4	2.0	2.8
Other substances	0.6	0.3	0.6	0.5	1.0	0.2	1.0	0.4

* All those admitted to treatment under 18 years of age.
Note: The percentage may or may not add up to 100% because only some drugs are represented in this figure.
Source: OEDA. Indicator Admissions to treatment for psychoactive substance use.

The profile of those admitted to treatment for cannabis is that of a 26.9 year-old male who is seeking treatment for cannabis for the first time. With primary education, studying or unemployed having worked before. They come on their own initiative or under pressure from family and/or friends. Lives with family of origin, in stable homes. They started using at the age of 15.7 years, they arrive at treatment using every day and the route of use is pulmonary or smoked. 36.6% report having used other substances in the 30 days prior to the start of use, with cocaine and alcohol being the most commonly used substances.

Table 6.2.1. Characteristics of those admitted to treatment for cannabis abuse or dependence, total and by sex (%). Spain, 2019.

		Man	Woman	Total
Number of cases		11,294	2,894	14,202
Percentage of cases (%)		79.6	20.4	100.0
Previously treated (%)		24.9	21.2	24.2
Average age (years)		26.9	26.8	26.9
Maximum level of education completed (%)	No education	0.7	0.4	0.6
	Primary	55.1	49.6	54.0
	Secondary	40.7	43.8	41.3
	Higher education	3.5	6.2	4.1
Main employment status (%)	Working	27.3	25.9	27.0
	Unemployed, not having worked	9.1	7.9	8.9
	Unemployed, having worked	29.4	31.1	29.7
	Other situations	34.1	35.1	34.3
Spanish (%)		85.0	88.5	85.7
Foreign (%)		15.0	11.5	14.3
Primary source of referral for treatment (%)	Other drug dependence treatment services	1.9	2.2	1.9
	General Practitioner, Primary Health Care	14.8	14.5	14.7
	Hospitals or other health services	10.9	15.3	11.8
	Social Services	5.3	12.6	6.8
	Prison, reform or internment centre for minors	6.3	2.4	5.5
	Legal or police services	12.7	8.2	11.8
	Companies or employers	0.1	0.1	0.1
	Family or friends	15.7	13.3	15.2
	Own initiative	29.0	27.2	28.6
	Education services	1.3	1.7	1.4
	Other	2.0	2.5	2.1
No. of children		0.4	0.6	0.5
Longest cohabitation in 30 days prior to admission to treatment (%)	Alone	10.2	9.6	10.1
	Only with a partner	7.4	11.8	8.2
	Only with children	0.7	5.3	1.6
	With partners and children	10.2	10.6	10.3
	With parents or family of origin	58.3	51.5	56.9
	With friends	2.8	3.5	2.9
	Detainee (e.g., prison, social integration centre)	4.5	1.7	3.9
	In non-detained institutions (e.g., shelter)	4.5	4.2	4.5
	Others	1.5	1.9	1.6
Main accommodation in 30 days prior to admission to treatment (%)	Houses, flats, apartments	88.6	92.3	89.4
	Prison, reform or internment centre for minors	4.9	1.7	4.2
	Other institutions	3.8	3.8	3.8
	Pensions, hotels, hostels	0.3	0.2	0.3
	Unstable/precarious accommodation	1.6	1.0	1.5
	Other places	0.8	1.0	0.9
Other psychoactive substances used in the last 30 days (%)	Opioids	2.8	1.8	2.6
	Cocaine	40.6	38.4	40.2
	Cocaine-free stimulants	10.8	11.6	10.9
	Hypnosedatives	5.3	6.3	5.5
	Hallucinogens	1.9	1.3	1.8
	Volatile Inhalants	0.5	0.2	0.4
	Cannabis	0.0	0.0	0.0
	Alcohol	70.7	68.2	70.3
	Other psychoactive substances	0.5	0.4	0.5
Age of onset		15.4	16.4	15.7
Frequency of use (%)	Every day	68.5	67.0	68.2
	4-6 days a week	5.5	4.5	5.3
	2-3 days a week	7.9	7.6	7.8
	1 day per week	2.1	2.6	2.2
	Less than 1 day per week	3.5	4.0	3.6
	Did not use	12.5	14.2	12.8
Route of administration (%)	Oral	1.8	1.4	1.8
	Pulmonary or smoked (spliff with cocaine, silver foil)	97.4	97.8	97.5
	Intranasal or sniffed	0.5	0.5	0.5
	Injected or parenteral	0.0	0.0	0.0
	Other	0.2	0.2	0.2

Source: OEDA. Indicator on Admissions to treatment for psychoactive substance use.

The analysis by sex shows a similar profile, with a higher level of educational attainment among women admitted to treatment than among men (the percentage of people with primary education is higher among men and the percentage of people with secondary and university education is higher among women). A slightly higher percentage of employees among men (27.3%) than among women (25.9%). No significant differences are found in terms of cohabitation patterns (except for a slightly higher percentage of women, 5.3%, living alone with their children compared to 0.7% of men) and type of accommodation by sex. There are also no sex differences in the frequency of cannabis use, but there is a higher prevalence of simultaneous use of other substances among men than among women.

6.3. Cannabis-related hospital emergencies

The indicator on Hospital emergencies due to acute reaction to non-medical use of psychoactive substances indicator collects a national sample of hospital emergencies related to non-medical or non-therapeutic use of psychoactive substances in Spain.

Information is collected for one week of each month, randomly selected from the Spanish Monitoring Centre for Drugs and Addictions; some Autonomous Regions carry out a continuous collection in some hospitals. This indicator is a sample-based indicator, which prevents a direct assessment of the number of cases reported, but it does provide information on the weight of the different substances in emergency episodes, as well as changes in trends. This indicator records substances for which the practitioner states in the medical record a direct link to the emergency. In addition, according to the reporting protocol, information on alcohol-related emergency episodes is only collected if alcohol is present together with another psychoactive substance. More detailed information on the inclusion and exclusion criteria, as well as the data collection form, can be found on the website of the National Plan on Drugs[56].

In 2019, 5,352 hospital emergency episodes related to non-medical or non-therapeutic use of psychoactive substances were recorded in the sample[57], a stable sample size since 2010. In these 5,352 episodes, cocaine and cannabis were the substances with the highest presence, accounting for 50.7% and 50.6%, respectively, of the emergency episodes analysed. By sex, cannabis was found to be present in almost the same percentage of episodes among men (50.8%) as among women (50.2%).

As can be seen in the figure below, concerning the evolution over time of substance use-related emergencies between 1996 and 2019, it is worth noting the continued increase in the percentage of episodes related to cannabis use, which went from being related to 6.2% of episodes in 1996 to 50.6% in 2019. This represents a clear upward trend in cannabis-related emergencies over the entire historical series of the indicator. This continued increase in cannabis-related emergencies has not been observed for any of the other illegal substances detected in this indicator.

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56 https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/indicadores.htm
57 In accordance with the protocol for this indicator, this figure corresponds to the episodes found in the review of emergencies occurring during a randomly selected week for each month of the year in the hospitals selected by the Autonomous Regions that participated in the data collection in 2019.

Figure 6.3.1. Percentage of hospital emergency episodes related to cannabis and other drug use, by year. Spain* 1996-2019.
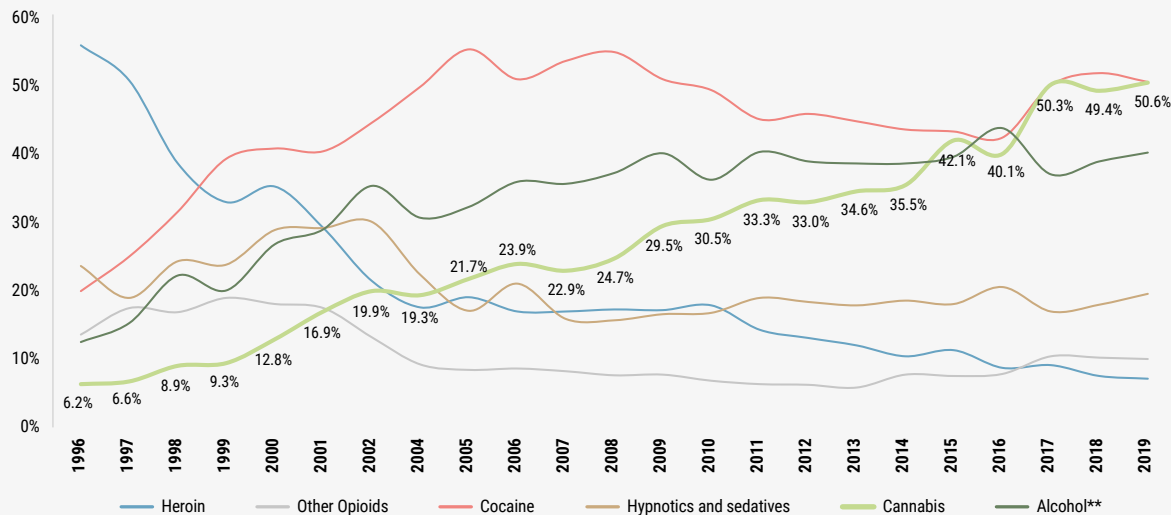
* Autonomous Regions that declare the Emergency Indicator.
** Alcohol is only recorded when accompanied by another substance.
SOURCE: Indicator Hospital emergencies in users of psychoactive substances. Spanish Monitoring Centre for Drugs and Addictions (OEDA).

In general, the results of the emergencies indicator are consistent with those observed in the other indicators and in national surveys, where cocaine and cannabis occupy an important share of drug use in Spain.

With regard to the usual profile of emergency episodes, in general it is a male (74.3%), average age 34.1 years, who has consumed more than one substance (60%), and it is usually resolved with medical discharge (73%). In emergency episodes related to cannabis use, the usual profile is that of a man (75.3%) with an average age of 30.9 years. 72.4% of these episodes end with medical discharge, 17.7% with hospital admission and 3.0% are transferred to another centre. The average age of cannabis-related emergency episodes is lower than that found for other substances, although it has shown a clear upward trend, which seems to be stabilising in recent years.

Table 6.3.1. Characteristics of hospital emergency episodes related to the use of any psychoactive substance and to cannabis use. Total and by sex. Spain*, 2019.

	Episodes related to any psychoactive substance			Cannabis-related episodes		
	T	M	W	T	M	W
Number of episodes	5,352	3,971	1,372	2,559	1,927	632
Percentage of emergencies (%)	100	74.3	25.7	50.6	75.3	24.7
Average age (years)	34.1	34.5	32.9	30.9	31.5	29.0
Resolution of urgency (%)						
Medical discharge	73.0	72.7	74.2	72.4	71.8	74.5
Voluntary Discharge	8.8	9.3	7.2	6.9	7.1	6.2
Hospital admission	15.1	15.2	14.6	17.7	18.1	16.4
Death in the emergency department	0.0	0.0	0.0	0.0	0.0	0.0
Transfer to another centre	3.1	2.8	3.8	3.0	3.0	2.9

* Autonomous Regions that declare the Emergencies indicated.
T: total, M: man, F: woman.
Source: OEDA. Indicator on Hospital emergencies in users of psychoactive substances.

The profile has changed over time, with rises, in addition to the average age of those attended, in the weight of women, who have gone from accounting for less than 17% in 1997 to 24.7% in 2019. The percentage of cannabis emergencies resulting in hospital admission has also increased over time.

6.4. Cannabis-related mortality

6.4.1. Specific Register of Mortality due to Acute Drug Reaction (OEDA)

The specific mortality register aims to collect information on court-recorded deaths where the direct and fundamental cause of death is an acute adverse reaction following non-medical and intentional use of psychoactive substances.
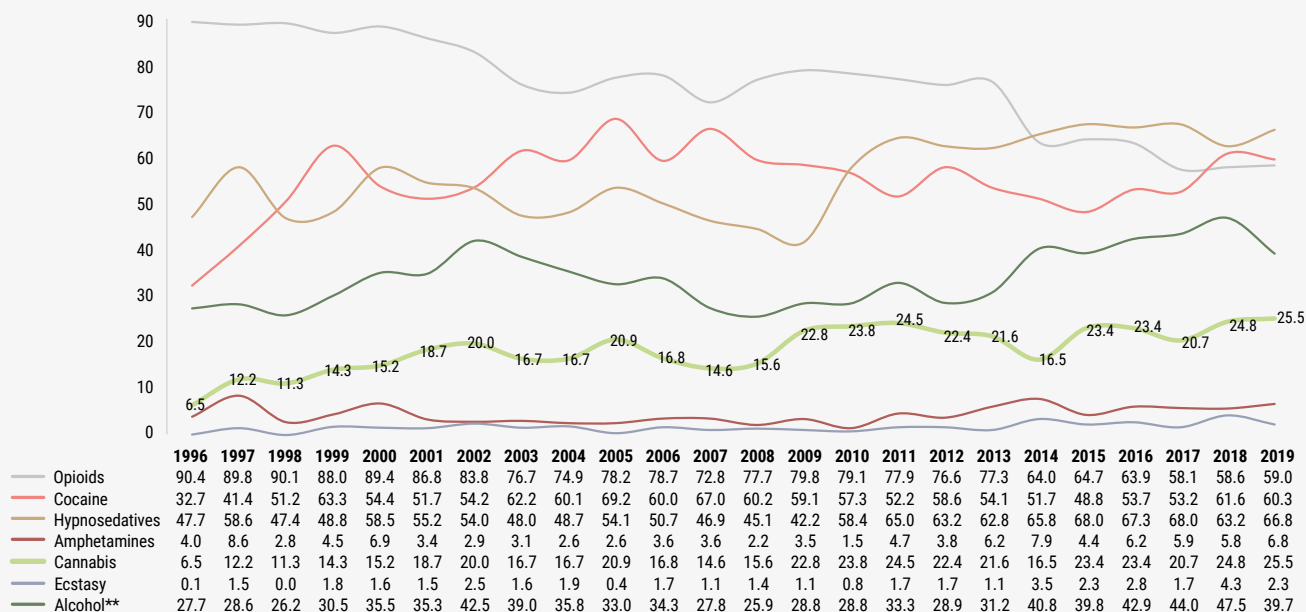
The primary source of information comes from forensic and toxicological sources, such as the Forensic Anatomical Institutes, Forensic Doctors, National Institute of Toxicology and Institutes of Legal Medicine, which report the data to the autonomous region or city in which they are located.

This indicator became systematically operational in 1990, although partial information has been available since 1983. Information on deaths due to acute reaction to opioids and/or cocaine was initially collected, but many other psychoactive substances are now also reported.

In 2019, 920 deaths were reported to the Specific Register of Mortality due to acute reaction to psychoactive substances. Of these, toxicological information disaggregated by substance type is available for 819 cases.

The analysis of the Mortality Indicator confirms that, in 2019, the substances present in the deceased are mainly hypnosedatives and cocaine, followed by opioids, alcohol and cannabis. Most of the deceased (90.2%) show more than one substance in their toxicological analysis. Cannabis has shown an increasing presence among deaths due to acute reactions to psychoactive substance use, stabilising over the last 10 years, usually appearing in combination with other substances (hypnosedatives, opioids, cocaine and alcohol). In 2019, cannabis was detected in 209 deaths, 25.5% of the total number of deaths with a toxicology report. In 2 cases it was detected as a single substance and, irrespective of the detection of other substances, alcohol was also detected in 25.5% of the fatalities in which cannabis was detected, cocaine was detected in 59.8%, hypnosedatives in 67% and opioids in 89%.

Figure 6.4.1. Percentage of deaths due to acute reaction following the use of psychoactive substances, according to the type of substance detected in the toxicological analysis, by year. Spain*, 1996-2019.
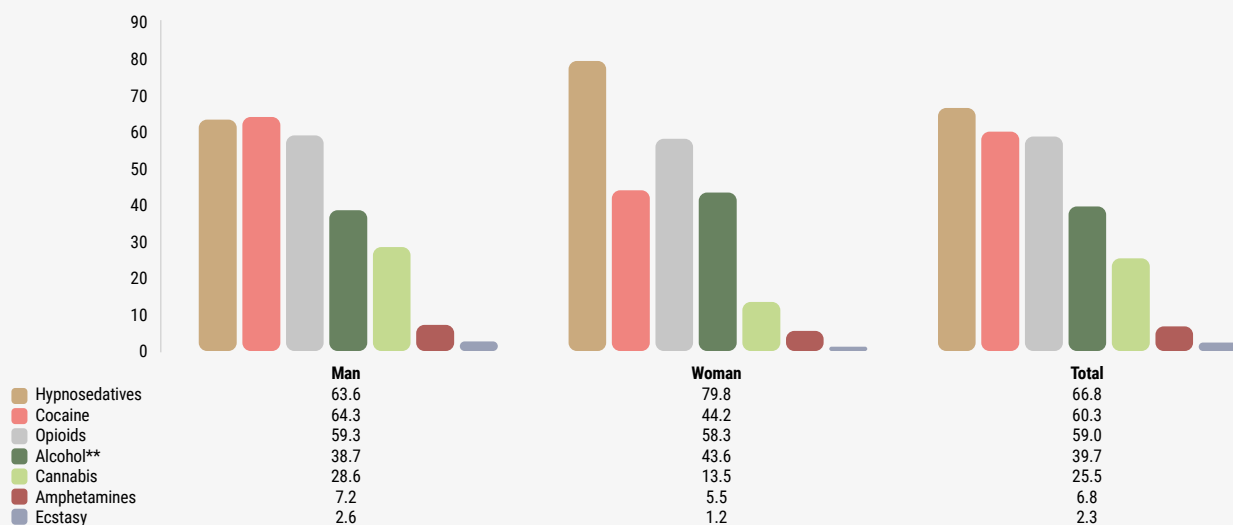

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Opioids	90.4	89.8	90.1	88.0	89.4	86.8	83.8	76.7	74.9	78.2	78.7	72.8	77.7	79.8	79.1	77.9	76.6	77.3	64.0	64.7	63.9	58.1	58.6	59.0
Cocaine	32.7	41.4	51.2	63.3	54.4	51.7	54.2	62.2	60.1	69.2	60.0	67.0	60.2	59.1	57.3	52.2	58.6	54.1	51.7	48.8	53.7	53.2	61.6	60.3
Hypnosedatives	47.7	58.6	47.4	48.8	58.5	55.2	54.0	48.0	48.7	54.1	50.7	46.9	45.1	42.2	58.4	65.0	63.2	62.8	65.8	68.0	67.3	68.0	63.2	66.8
Amphetamines	4.0	8.6	2.8	4.5	6.9	3.4	2.9	3.1	2.6	2.6	3.6	3.6	2.2	3.5	1.5	4.7	3.8	6.2	7.9	4.4	6.2	5.9	5.8	6.8
Cannabis	6.5	12.2	11.3	14.3	15.2	18.7	20.0	16.7	16.7	20.9	16.8	14.6	15.6	22.8	23.8	24.5	22.4	21.6	16.5	23.4	23.4	20.7	24.8	25.5
Ecstasy	0.1	1.5	0.0	1.8	1.6	1.5	2.5	1.6	1.9	0.4	1.7	1.1	1.4	1.1	0.8	1.7	1.7	1.1	3.5	2.3	2.8	1.7	4.3	2.3
Alcohol**	27.7	28.6	26.2	30.5	35.5	35.3	42.5	39.0	35.8	33.0	34.3	27.8	25.9	28.8	28.8	33.3	28.9	31.2	40.8	39.8	42.9	44.0	47.5	39.7

* Data are included for all geographical areas monitored by the indicator and the cases in which a substance has been detected.
** Alcohol is only recorded when it appears together with another substance.
Source: OEDA. Indicator on Mortality due to acute reaction to psychoactive substances. Specific Mortality Register.

The substances detected show differences according to sex, with cannabis being more commonly detected among male fatalities (28.6%) than among females (13.5%).

Figure 6.4.2. Percentage of deaths due to acute reaction following the use of psychoactive substances, according to the type of substance detected in the toxicological analysis, by sex. Spain*, 2019.

	Man	Woman	Total
Hypnosedatives	63.6	79.8	66.8
Cocaine	64.3	44.2	60.3
Opioids	59.3	58.3	59.0
Alcohol**	38.7	43.6	39.7
Cannabis	28.6	13.5	25.5
Amphetamines	7.2	5.5	6.8
Ecstasy	2.6	1.2	2.3

* Data are included for all geographical areas monitored by the indicator and the cases in which a substance has been detected.
** Alcohol is only recorded when it appears together with another substance.
Source: OEDA. Indicator on Mortality due to acute reaction to psychoactive substances. Specific Mortality Register.

6.5. Cannabis-related road accidents

According to the report of the National Institute of Toxicology and Forensic Sciences[58] 2020 has been an exceptional year in which road mobility has been reduced as a result of the pandemic caused by the SARS-CoV-2 virus, which has led to a decrease in the number of road accidents and, therefore, of fatalities, reaching a historic low of 873 deaths per 24 hours on interurban roads, a decrease of 21% compared to 2019. Analyses carried out on road traffic fatalities in 2020 show that among the 597 drivers who died in road traffic accidents and underwent autopsy, 291 (48.7%) showed positive toxicological results[59] for alcohol, drugs of abuse and psychotropic drugs, alone or in combination. The drugs most commonly used by the 597 drivers killed in road accidents and subjected to autopsy and toxicological analysis were alcohol (31.2%), followed by cocaine (12.2%) and cannabis (10.7%).

Figure 6.5.1. Percentage of drivers killed (n=597) in whom substances (alcohol, drugs and/or psychotropic drugs) are detected without taking into account possible associations. Spain, 2020.
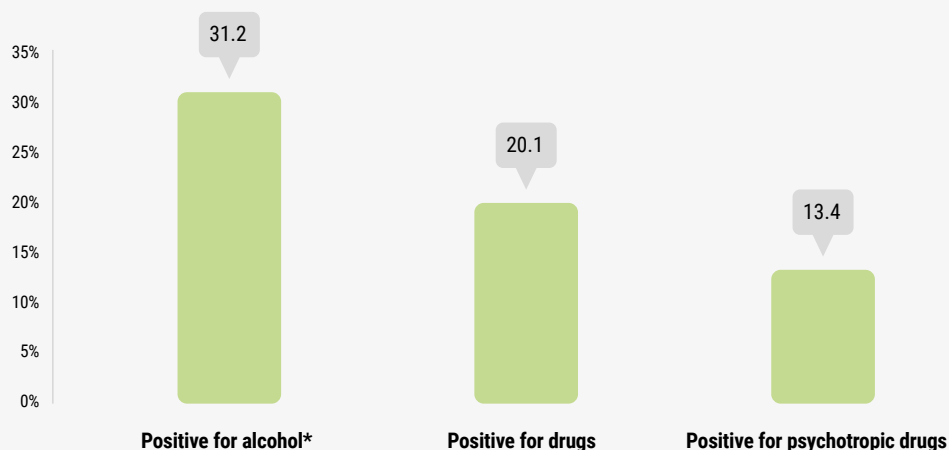
* Positive for alcohol: Blood alcohol concentration of 0.30 g/L or more.
Source: Toxicological Findings in Traffic Accident Fatalities (2020) National Institute of Toxicology and Forensic Sciences. Ministry of Justice.

Figure 6.5.2. Percentage of drivers killed (n=597), according to drugs detected*. Spain, 2020.
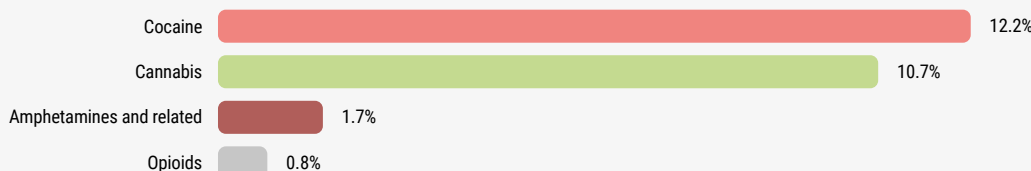
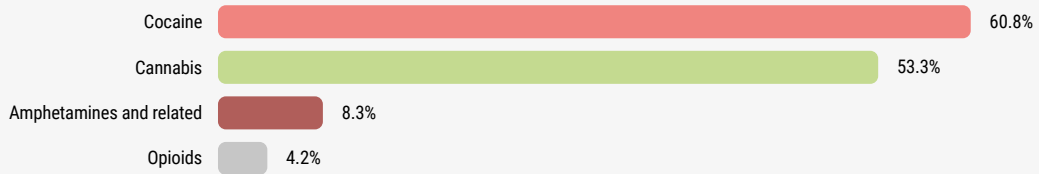* More than one drug may be detected in the same deceased.
Source: Toxicological Findings in Traffic Accident Fatalities (2020) National Institute of Toxicology and Forensic Sciences. Ministry of Justice.

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58 Toxicological Findings in Traffic Accident Fatalities (2020) National Institute of Toxicology and Forensic Sciences. Ministry of Justice. Available at: https://www.mjusticia.gob.es/es/AreaTematica/DocumentacionPublicaciones/InstListDownload/MemoriaTrafico2020.pdf
59 "Positive" means a test result indicating the presence of any drug of abuse or psychotropic drug, regardless of the quantity, or a blood alcohol concentration above 0,3 g/l.

When assessing the 120 deceased drivers who tested positive for drugs, 53.3% tested positive for cannabis, of which 19.2% were in the 25-34 age group and 39.2% were in the 25-54 age group.

**Figure 6.5.3. Percentage of drug-positive driver fatalities (n= 120), by drug detected*.
Spain, 2020.**

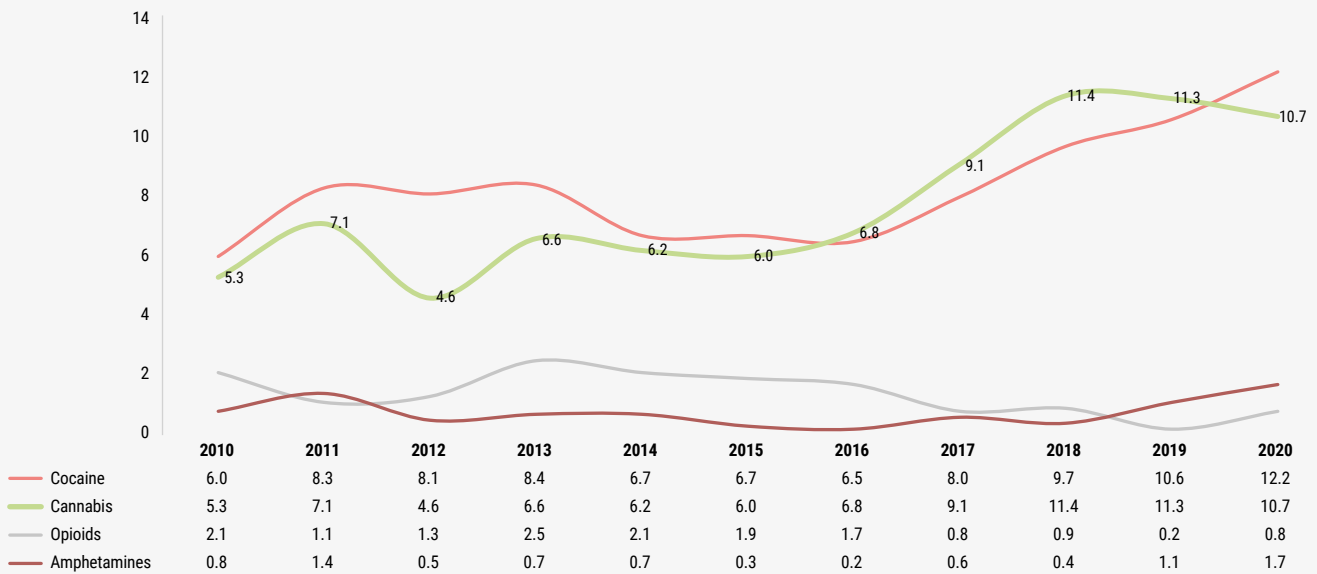|	
Cocaine	60.8%
Cannabis	53.3%
Amphetamines and related	8.3%
Opioids	4.2%

* More than one drug may be detected in the same deceased.
Source: Toxicological Findings in Traffic Accident Fatalities (2020) National Institute of Toxicology
and Forensic Sciences. Ministry of Justice.

Of 136 pedestrians killed in road traffic accidents who underwent autopsy, 56 (41.2%) showed positive toxicological results for alcohol, drugs of abuse and psychotropic drugs alone or in combination. Of those who tested positive (56 pedestrians), almost 54% tested positive for alcohol and 25% for other drugs (mainly cocaine and cannabis).

Since 2016, there has been a marked upward trend in the proportion of cannabis and cocaine positives among drivers killed in road traffic accidents. An increase over that period (2016-2020) of 3.9% for cannabis, which seems to be stabilising since 2018.

**Figure 6.5.4. Evolution of substances detected in deceased drivers who have tested positive.
Spain 2010-2020.**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cocaine	6.0	8.3	8.1	8.4	6.7	6.7	6.5	8.0	9.7	10.6	12.2
Cannabis	5.3	7.1	4.6	6.6	6.2	6.0	6.8	9.1	11.4	11.3	10.7
Opioids	2.1	1.1	1.3	2.5	2.1	1.9	1.7	0.8	0.9	0.2	0.8
Amphetamines	0.8	1.4	0.5	0.7	0.7	0.3	0.2	0.6	0.4	1.1	1.7

Source: Toxicological Findings in Traffic Accident Fatalities (2020) National Institute of Toxicology
and Forensic Sciences. Ministry of Justice.

SYNTHETIC CANNABINOIDS

Despite their relatively infrequent use, synthetic cannabinoids have been included in this report because of their emerging nature and the concerns they raise.

The following general information on synthetic cannabinoids has been compiled from EMCDDA publications[60,61].

Synthetic cannabinoids are a group of substances that mimic the effects of (-)-trans-Δ9-tetrahydrocannabinol (THC), which is the main substance responsible for the most important psychoactive effects of cannabis. Like THC, synthetic cannabinoids bind to the body's cannabinoid receptors. Scientists originally developed synthetic cannabinoids to study the body's endocannabinoid system, as well as to provide information about diseases and help develop new drugs. In the mid-2000s, they began to appear in Europe as "legal" substitutes for cannabis. These substances constitute the largest group of new psychoactive substances monitored by the EMCDDA through the EU's Early Warning System (EWS).

Synthetic cannabinoids are usually packaged in "herbal smoking blends", which are sold under common names such as spice. They have also been distributed in products in the form of powders, tablets and cannabis resin-like products. In recent years, new dosage forms containing cannabinoids have appeared on the drug market, such as e-liquids, as well as paper impregnated with synthetic cannabinoids. These products are readily available on the Internet and, in some countries, in physical shops ("head shops" and "smart shops").

Since 2008, a large number of synthetic cannabinoids have been detected in hundreds of different products in Europe, although their effects are often very similar. The number of synthetic cannabinoids, their chemical diversity and their speed of emergence make detection, monitoring and response to this group of compounds particularly difficult challenges. When a synthetic cannabinoid is, or is about to be, legally controlled, manufacturers have one or more substitute substances ready for sale.

Information on the level of use of synthetic cannabinoid products is limited; however, knowledge of the situation is improving as more countries include questions on their use in general population surveys. From the available information, it appears that prevalence of drug use in the general population is low in Europe, but may be higher in socially marginalised populations, such as homeless people and prisoners.

Although cases have been rare in Europe, in 2015 more than 200 people were hospitalised for a few days in Poland after smoking a product distributed under the name "Mocarz" (herbal mixture containing synthetic cannabinoids). Because these products rarely list their ingredients, most people are unaware that they are consuming a synthetic cannabinoid. More recently, a total of 21 4F-MDMB-BICA-related deaths were reported in Hungary over a four-month period in 2020. Many of the synthetic cannabinoids on the drug market are more potent than THC. This may explain why the harmful effects of synthetic cannabinoids, such as severe and fatal intoxications, may be more frequent than in the case of cannabis. Another important factor may be the large doses to which people are exposed[62].

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60 https://www.emcdda.europa.eu/system/files/publications/2753/Synthetic cannabinoids_2017_ES.pdf
61 https://www.emcdda.europa.eu/system/files/publications/14035/Synthetic-cannabinoids-in-Europe-EMCDDA-technical-report.pdf
62 https://www.emcdda.europa.eu/system/files/publications/2753/Synthetic cannabinoids_2017_ES.pdf

Smoking blends are made by spraying synthetic cannabinoids on plant material. This crude process can result in mixtures containing large amounts of very potent cannabinoids, as well as "hot pockets" within individual products where the cannabinoid is highly concentrated. These factors make it difficult for users to control their dosage and they may take a toxic amount without realising it. Smoking blends have caused several mass poisonings in the US, while synthetic cannabinoid-impregnated paper may pose an equally high risk of poisoning because the amount of synthetic cannabinoid may be unevenly distributed.

The potential for outbreaks of poisoning and other harms caused by these substances underlines the importance of maintaining and strengthening the identification, reporting and monitoring of any serious adverse events associated with their use. In this respect, early warning systems play an essential role in identifying and responding to the harms caused by synthetic cannabinoids. The EMCDDA has issued a series of risk communications addressing a range of public health concerns related to synthetic cannabinoids and, since 2016, has subjected a number of synthetic cannabinoids to a formal risk assessment.

Anti-drug services should focus on the individual, their symptoms and the environment in which drug use occurs, rather than on identifying the specific substance being used. It is important to recognise that the needs of people using synthetic cannabinoids may differ significantly from those of cannabis users.

Available information on the use of synthetic cannabinoids in our country comes from three sources:

- Surveys of the Spanish Monitoring Centre for Drugs and Addictions (OEDA).
- Indicators of the Spanish Monitoring Centre for Drugs and Addictions (OEDA).
- Spanish Early Warning System (SEAT) on the use of new psychoactive substances (NPS).

7.1. Surveys of the Spanish Monitoring Centre for Drugs and Addictions (OEDA)

The information obtained in the surveys is provided directly by the person interviewed. It is important to clarify that the person who consumes synthetic cannabinoids knows that he or she is consuming products with effects similar to cannabis, usually a plant material impregnated with cannabinoids called spice, but does not know exactly what psychoactive substances he or she is consuming. For this reason, surveys ask directly about the use of spice, specifying that spice drugs, synthetic cannabinoids or synthetic marijuana are also included in this group.

7.1.1. Surveys of the Spanish Monitoring Centre for Drugs and Addictions (OEDA)

In 2020, the lifetime prevalence of spice use stands at 0.6% in the population aged 15-64. With regard to sex, it is observed that consumption is higher among men than among women.

Table 7.1.1. Prevalence of spice use in the population aged 15-64 years ever in their lifetime, by sex (%). Spain, 2020.

	Total	Man	Woman
Lifetime consumption of spice	0.6	0.9	0.3

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

According to age, spice consumption is highest among those under 35 years of age (1.0%), and especially among those aged 25-34 years.

Table 7.1.2. Prevalence of spice use in the population aged 15-64, by age (%). Spain, 2020.

	Age (years)						
	15-24	25-34	35-44	45-54	55-64	15-34	35-64
Lifetime consumption of spice	0.9	1.2	0.6	0.3	0.2	1.0	0.4

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

With regard to the evolution of spice consumption, since 2011 the prevalence of consumption has remained stable at values below 1%.

Table 7.1.3. Evolution of the prevalence of spice consumption in the population aged 15-64 years (%). Spain, 2011-2020.

	2011	2013	2015	2017	2020
Lifetime consumption of spice	0.8	0.5	0.8	0.4	0.6

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).

Spice users tend to have other risky consumption patterns, such as polydrug use, which is more frequent in this group than in the general Spanish population aged 15-64.

Among spice users, higher prevalence of use of all substances (both legal and illegal) is found. Remarkably, 95.1% of Spice users have also used Cannabis, a figure that drops to 37.5% among the general population.

Table 7.1.4. Prevalence of lifetime use of psychoactive substances people aged 15 to 64 and among lifetime spice users (%). Spain, 2020.

	General population 15-64 years old	Spice users
Alcohol	93.0	99.1
Tobacco	70.0	93.2
Amphetamines/speed	4.3	65.2
Hallucinogens	5.5	78.8
Hypnosedatives with or without a prescription	22.5	38.7
Cannabis	37.5	95.1
Ecstasy	5.0	70.9
Powder and/or base cocaine	11.2	84.0

SOURCE: OEDA Survey on Alcohol and Drugs in Spain (EDADES)

As can be seen in the table below, spice use is highly correlated with polydrug use, with 90.9% of people who have ever used spice having used 4 or more psychoactive substances.

Table 7.1.5. Prevalence of use of a single or more psychoactive substance(s)*
among spice users ever in lifetime (%). Spain, 2020.

Number of psychoactive substances* consumed	(%)
A single substance	0.0
Two substances	4.2
Three substances	4.9
Four or more substances	90.9

SOURCE: OEDA. Survey on Alcohol and Drugs in Spain (EDADES).
* Alcohol, tobacco, hypnosedatives, cannabis, powder cocaine, base cocaine, ecstasy, amphetamines, hallucinogens, heroin and volatile inhalants.

7.1.2. Survey on drug use in Secondary Education in Spain (ESTUDES) in students aged 14 to 18

In 2021, the lifetime prevalence of spice use stands at 0.6% among students aged 14-18. In general, this use is more frequent among boys (0.8%) than among girls (0.5%), and the highest prevalence occurs at the age of 18 in the case of boys (1.4%), and at the age of 17 in the case of girls (0.9%). The vast majority of those who have used spice at some time in their life had consumed in the last 12 months, since the prevalence in this time range (0.5%) is similar to that observed at some time in their life.

Table 7.1.6. Prevalence of spice use among secondary school students aged 14-18,
by sex and age (%). Spain, 2021.

	TOTAL			BY AGE AND SEX														
	Total	M	W	14 T	14 M	14 W	15 T	15 M	15 W	16 T	16 M	16 W	17 T	17 M	17 W	18 T	18 M	18 W
Sometime in life	0.6	0.8	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.9	0.3	1.0	1.2	0.9	0.8	1.4	0.2
In the last 12 months	0.5	0.6	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.5	0.7	0.3	0.7	0.8	0.6	0.6	1.0	0.1

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).
T: Total; M: Male; W: Woman.

Regarding the evolution of the prevalence of spice use among students aged 14-18, since 2010 the prevalence of spice use has been decreasing, reaching an all-time low in 2021.

Table 7.1.7. Change in the prevalence of spice use among secondary school students aged 14-18 (%). Spain, 2010-2021.

Prevalence of spice use at some time in life						Prevalence of spice use in the last 12 months					
2010	2012	2014	2016	2019	2021	2010	2012	2014	2016	2019	2021
1.1	1.4	0.8	0.9	0.8	0.6	0.8	1.0	0.6	0.7	0.5	0.5

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

Regarding the perceived risk of spice use, the majority (75.0%) of students aged 14-18 consider that using spice once a month or less frequently can cause a quite a lot or a lot of problems. This risk perception is higher among girls than boys and also at age 18 than at younger ages.

Table 7.1.8. Perceived risk of spice use once a month or less frequently among secondary school students aged 14-18 (proportion of students who think that this behaviour can cause a quite a lot or a lot of problems), by sex and age (%). Spain, 2012-2021.

2012	2014	2016	2019	2021	2021							
					Sex		Age					
Total	Total	Total	Total	Total	M	W	14	15	16	17	18
72.4	82.7	77.7	74.8	75.0	70.3	80.1	72.0	72.6	74.3	77.1	80.8

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

However, it should be noted that the perception of risk is much lower in those students who have consumed spice at some time in their lives compared to those who have not consumed spice in the same period, as shown in the following table (table 7.1.9).

Table 7.1.9. 14-18-year-old secondary school students' perceived risk of spice use once a month or less frequently (proportion of students who think that this behaviour can cause a quite a lot or a lot of problems), according to whether or not they have ever used spice in their lifetime (%). Spain, 2016-2021.

2016		2019		2021	
Perceived risk		Perceived risk		Perceived risk	
YES, they have used spice	NO, they have not used spice	YES they have used spice	NO, they have not used spice	YES they have used spice	NO, they have not used spice
46.0	78.7	47.9	75.8	50.4	75.8

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

In terms of perceptions of the availability of spice, about half of 14-18 year-old students think that it would be relatively easy or very easy to get spice. This ease of obtaining spice is recognised by a higher proportion of students in recent years, 2016-2021, compared to what was observed in the years 2010-2014.

Table 7.1.10. Perceived availability of spice among secondary school students aged 14-18 (proportion of students who think it would be relatively easy or very easy to obtain spice). Spain, 2010-2021.

2010	2012	2014	2016	2019	2021
39.8	42.6	41.4	53.7	55.3	51.5

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

As with risk perception, the perception of being able to obtain spice easily is more prevalent among students who have ever consumed spice.

Table 7.1.11. Perceived availability of spice among secondary school students aged 14-18 (proportion of students who think it would be relatively easy or very easy to get hold of spice) according to whether or not they have ever used the substance in their lives (%). Spain, 2010-2021.

Yes, they use spice						NO, they do not use spice					
2010	2012	2014	2016	2019	2021	2010	2012	2014	2016	2019	2021
79.1	73.4	78.9	86.5	85.6	83.0	39	41.4	40.6	52.6	54.3	50.9

SOURCE: OEDA. Survey on Drug Use in Secondary Education in Spain (ESTUDES).

In terms of awareness of the existence of spice, 63.2% of students aged 14-18 had never heard of the substance in 2021. The proportion of students who have never heard of spice has been increasing since 2014 and has been stable since 2019.

Table 7.1.12. Lack of awareness of the existence of spice among secondary school students aged 14-18. Spain, 2012-2021.

% of students who have never heard of the drug				
2012	2014	2016	2019	2021
44.7	42.3	58.3	64.2	63.2

FUENTE: OEDA. Encuesta sobre Uso de Drogas en Enseñanzas Secundarias en España (ESTUDES).

7.2. Indicators of the Spanish Monitoring Centre for Drugs and Addictions (OEDA)

The following indicators report on some of the consequences of spice use, and indirectly provide information on the status and trends of spice use.

Spice started to be specifically recorded in the indicators in 2014. Since it started to be recorded, it has had a low presence, being responsible for 14 admissions to treatment in 2019, appearing in 8 admissions to treatment as a secondary drug in 2019 and not being detected in any of the emergency episodes recorded. Among the deceased, it was detected for the first time in 2019 in one case, with other substances being present in the deceased, namely opiates, cocaine, hypnosedatives and cannabis. The route of administration reported by those admitted for treatment is the pulmonary or smoked route.

The profile of the person admitted for spice treatment is that of a 21-year-old male, living in the family home with the family of origin, with a primary school education and still studying.

Figure 7.2.1. Number of admissions to treatment for spice abuse or dependence and deaths in which spice is detected. Spain, 2014-2019.
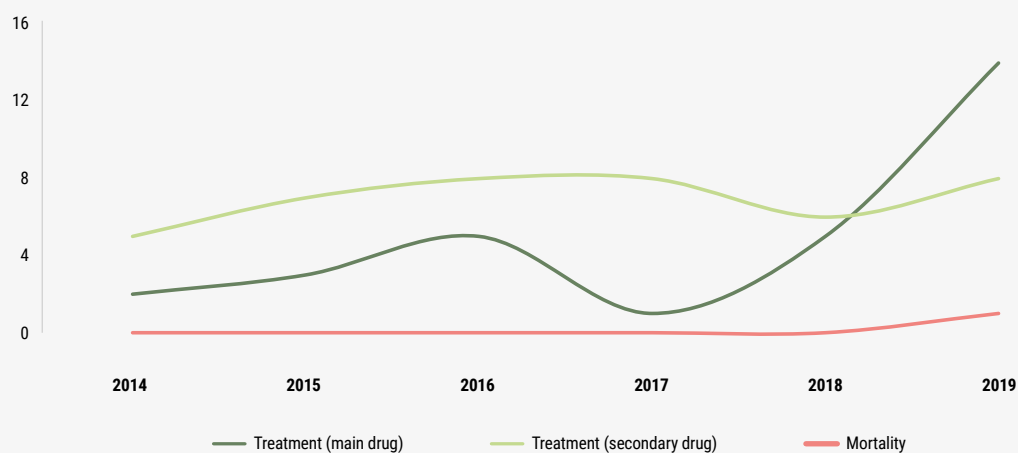
Source: OEDA. Indicator on Admissions to treatment for psychoactive substance use.

7.3. Spanish Early Warning System (SEAT)

The continuous emergence of new psychoactive substances (NPS) in the different substance markets which attempt to circumvent the regulations governing the circulation of the classic controlled substances, has challenged international Conventions and European policy makers and legislators and has prompted the development of surveillance and early warning systems at both national and international levels. The aim of these early warning systems is to share rapidly the information available in the different territories on new substances, or new risks to known substances, and to streamline and coordinate the response to these new threats.

The European Union Early Warning System (EWS)[63] was established in 1997 by the EMCDDA[64] and the European Police Office (Europol)[65] in cooperation with the EU Member States, in the framework of the Joint Action of 16 June 1997 concerning the information exchange, risk assessment and the control of new synthetic drugs[66]. Each EU Member State articulates its national system according to its internal organisation[67].

The purpose of the EWS is the notification of NPS and it offers a mechanism for the exchange of information and rapid response to the appearance of "new drugs" or "new psychoactive substances", meaning synthetic or natural substances not controlled by international law and often produced to mimic the effects of controlled drugs. It is also possible to use the network to alert on major drug-related events, e.g. deaths or poisonings associated with the adulteration or contamination of drugs.

The Spanish Early Warning System (SEAT) is the rapid information exchange system on the use of NPS in our country. Through SEAT, the Autonomous Regions communicate information on NPS to the central point, the OEDA, which in turn circulates all information of interest on NPS at the national level.

Newly emerging synthetic cannabinoids are, in principle, considered NPS and as such are kept under surveillance at national and international level through early warning systems. At a later stage, if continued circulation and significant potential risks are identified for any of them, the EMCDDA makes a formal assessment of the situation with regard to that or those particular substance(s). On the basis of the results of this evaluation, it may propose to the European Commission their inclusion in the list of controlled substances.

It is important to clarify that notification to early warning systems normally involves the identification by analytical techniques of specific substances contained in a sample of a product. Therefore, synthetic cannabinoids are reported directly, and not the material containing them, which is usually an impregnated plant material (spice) or to a lesser extent, impregnated paper or some oil or fluid for vaping, smoking or otherwise consuming.

In 2021, the International Narcotics Control Board (INCB) expanded control measures by adding to Schedule II of psychotropic substances controlled under the 1971 Convention on Psychotropic Substances (green list, edition 32) two synthetic cannabinoids (CUMIL-PEGACLONE and MDMB-4en-PINACA)[68], bringing the total number of psychotropic substances under international control to more than 144, of which more than 20 are synthetic cannabinoids.

Reports of cannabis adulterations with new synthetic cannabinoids highlight the new risks of accidental use of these potent substances. As discussed above, synthetic cannabinoids are considered as new psychoactive substances (NPS), and in total 209 new synthetic cannabinoids have been detected in the EU since 2008, including 11 of them reported for the first time in 2020. In 2019, approximately 6,500 seizures were made in the Member States, corresponding to 200 kg seized. Together with cathinones, they account for almost 60% of the number of NPS seizures in 2019.

Each EU country notifies the EWS of the movement of NPS detected in its territory. To this end, the EWS has two main NPS reporting systems in place:

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63 EWS. Early Warning System. http://www.emcdda.europa.eu/publications/topic-overviews/eu-early-warning-system
64 EMCDDA - European Monitoring Center for Drugs and Drugs Addictions http://www.emcdda.europa.eu/
65 Europol. https://www.europol.europa.eu/
66 Joint Action of 16 June 1997 adopted by the Council on the basis of Article K.3 of the Treaty on European Union concerning the information exchange, risk assessment and the control of new synthetic drugs (OJ L 167, 25.6.97, p.1).
67 Early Warning System, National Profiles. EMCDDA, Lisbon, May 2012. https://www.emcdda.europa.eu/thematic-papers/ews_en
68 https://www.incb.org/documents/Psychotropics/forms/greenlist/2021/Green_list_SPA_V21.pdf

● **Annual Situation Report (ASR)**

It is a system that provides timely country-specific information to the EWS once a year. This is a document that each country completes with aggregated information on all NPS reported throughout the year in its territory. This document reports, for each substance, the format(s) in which it is submitted, the number of seizures or samples collected in that year, the total amount of substance, and the entity reporting it.

● **European Database on New Drugs (EDND).** It is a system for the continuous reporting of NPS on a case-by-case basis. It is an IT platform that allows detailed information to be provided at any time on a specific event involving the identification of one or more NPS in any EU country. While the platform is open to the reporting of any NSP-related event, it is requested to prioritise the reporting of particularly relevant events, including, for example:

■ NPS detected for the first time in the country, or in Europe.

■ NPS subjected to intensive monitoring by the EMCDDA.

■ Serious adverse events related to NPS (deaths, acute poisonings).

■ NPS-related outbreaks.

■ Information on NPS obtained from biological samples.

■ NPS in adulteration or counterfeiting of other substances.

■ New routes of administration of NPS or known substances.

The EDND platform allows very detailed information to be included in the notification, such as the date and type of event, the entities involved in the sample collection and analysis, the physical description of the sample and the chemical characterisation of the substance(s) detected, including the analytical techniques used and reports of analytical results.

Data on synthetic cannabinoids reported to the EMCDDA by our country in recent years are presented below.

■ **Synthetic cannabinoids reported via Annual Situation Report (ASR)**

In 2019, Spain notified the EMCDDA via ASR 1,650 cases related to 84 different NPS. Of these 84 NPS, 17 were synthetic cannabinoids, totalling 83 notifications. The most frequently reported synthetic cannabinoid in 2019 was 4F-MDMB-BINACA, with a total of 24 cases.

In 2020, Spain notified the EMCDDA via ASR 2,501 cases related to 87 different NPS. Of these 87 NPS, 13 were synthetic cannabinoids, totalling 197 cases. The most frequently reported synthetic cannabinoids in 2020 were CUMYL-THPINACA, which was reported 58 times, followed by CUMYL-PeGA-CLONE, with 54 cases. Comparing both years, there is a decrease in the number of synthetic cannabinoids reported, but a large increase in the number of notifications.

**Table 7.3.1 Synthetic cannabinoids reported by Spain to the EMCDDA
via the Annual Situation Report in 2019 and 2020.**

2019		2020	
NPS detected	**Number of cases**	**NPS detected**	**Number of cases**
4F-MDMB-BINACA	24	CUMYL-THPINACA	58
5F-MDMB-PICA	17	CUMYL-PeGACLONE	54
UR-144	14	5F-MDMB-PICA	28
CUMYL-PEGACLONE	6	MDMB-4en-PINACA	24
5F-MDMB-PINACA (5F-ADB)	5	4F-MDMB-BINACA	14
MDMB-4en-PINACA	3	5F-MDMB-PINACA	4
5FUR-144 / XLR-11	2	CUMYL-CBMICA	4
AMB-FUBINACA	2	Cumyl-CH-MeGaClone	4
FUB-144	2	CUMYL-4CN-BINACA	2
4F-MDMB-PICA	1	RCS-4	2
5F-ADB-PINNACA	1	5F-AKB48	1
5F-MDMB-BUTYNUT	1	A-836,339	1
CUMYL-5F-P7AICA	1	AB-FUBINACA	1
CUMYL-5FPINACA	1	**Total, 13 cannabinoids**	**197 cases**
FUB-AKB48	1		
JWH-122	1		
NM-2201	1		
Total, 17 cannabinoids	**83 cases**		

SOURCE: OEDA. Data reported to the EMCDDA through ASR 2020.

■ **Synthetic cannabinoids reported via EDND**

According to the data available in EDND as of 7 December 2021, the EWS monitors 881 different sub-stances, and among them, 222 are synthetic cannabinoids.

As of 11 November 2021, EDND has 202 substances notified by Spain since 2012, of which 39 are synthetic cannabinoids.

Table 7.3.2. Synthetic cannabinoids reported by Spain to the EMCDDA between 2012 and 2021, according to EDND data*:

Notified substance:
4F-MDMB-BINACA
5F-3,5-AB-PFUPPYCA
5F-AKB48
5F-AMB (5F-AMB-PINACA)
5F-AMB-PICA
5F-Cumyl-PeGaClone
5F-EMB-PINNACA
5F-MDMB-PICA
5F-MDMB-PINACA (5F-ADB)
5FUR-144 (XLR-11)
AB-CHMINACA
AB-FUBINACA
ADB-BUTINACA
ADB-CHMINACA
ADB-FUBINACA
ADB-PINACA
AM-2201
AM-2201 carboxylate analogue quinolinyl derivative (5F-PB-22)
AM-2233
AMB-FUBICA
AMB-FUBINACA
Apinaca
CRA-13
CUMYL-4CN-BINACA
CUMYL-5F-P7AICA
CUMYL-5FPINACA
EG-018
FUB-AKB48
JWH-018
JWH-302
JWH-methylcyclohexane-8quinolinol (BB-22)
MAM-2201
M-CHMIC
MDA 19 (BZO-HEXOXIZID)
MDMB-4en-PINACA
MDMB-CHMICA
NM-2201
UR-144
URB-597

* Date of data extraction: 11-11-2021.
SOURCE: OEDA. Data reported to the EMCDDA via EDND.
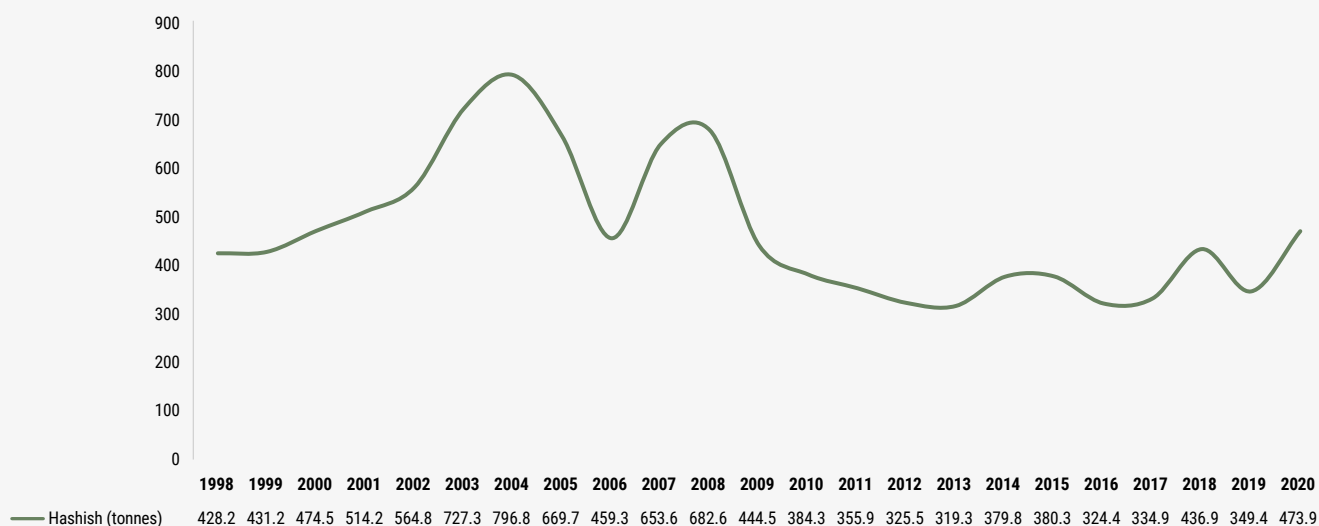
08

CONTROL
MEASURES

8.1. Number of seizures and quantities of cannabis seized

Around 1.1 million seizures were reported in Europe since 2019, the most frequent being cannabis products. Specifically, in 2019, EU member states reported 326,000 seizures of cannabis resin (465 tonnes) and 313,000 seizures of cannabis herb (148 tonnes). As for the price per gram, they range in similar figures, with an average of €7-12/gram for resin, and €8-13/gram for grass.

The quantities of cannabis seized can be indirect indicators of the availability of the drug on the market, provided that it is borne in mind that their evolution is often affected by various factors such as the increase or decrease in the activity of supply control services and the proportion of the drug going to the external market, as well as the occurrence of large seizures, which can lead to significant year-to-year fluctuations.

In Spain, the profile of quantities of **hashish** seized between 1998 and 2020 has undergone significant changes, which are summarised below. A significant increase in the quantities of hashish seized began in 1998, reaching an all-time high in 2004 (796.8 tonnes). From 2005 onwards, there was a steady decline until 2013, the year with the lowest volume of seizures in the entire series (319.3 tonnes) despite small upsurges in 2007 and 2008. Since 2014, the volume of seizures has remained steady with small spikes such as in 2018. However, in 2020, the quantity seized (473.9 tonnes) has increased compared to 2019.

Figure 8.1.1. Quantity of hashish seized (tonnes) in Spain, 1998-2020.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hashish (tonnes)	428.2	431.2	474.5	514.2	564.8	727.3	796.8	669.7	459.3	653.6	682.6	444.5	384.3	355.9	325.5	319.3	379.8	380.3	324.4	334.9	436.9	349.4	473.9

Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA)
based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System for Analysis
and Evaluation of Organised Crime (SENDA).

With regard to **marijuana**, there has been an upward trend in the quantities seized since 2013. The amount of marijuana seized is approximately 10 times less than the amount of hashish seized.

Figure 8.1.2. Quantity of marijuana seized (tonnes) in Spain, 2013-2020.
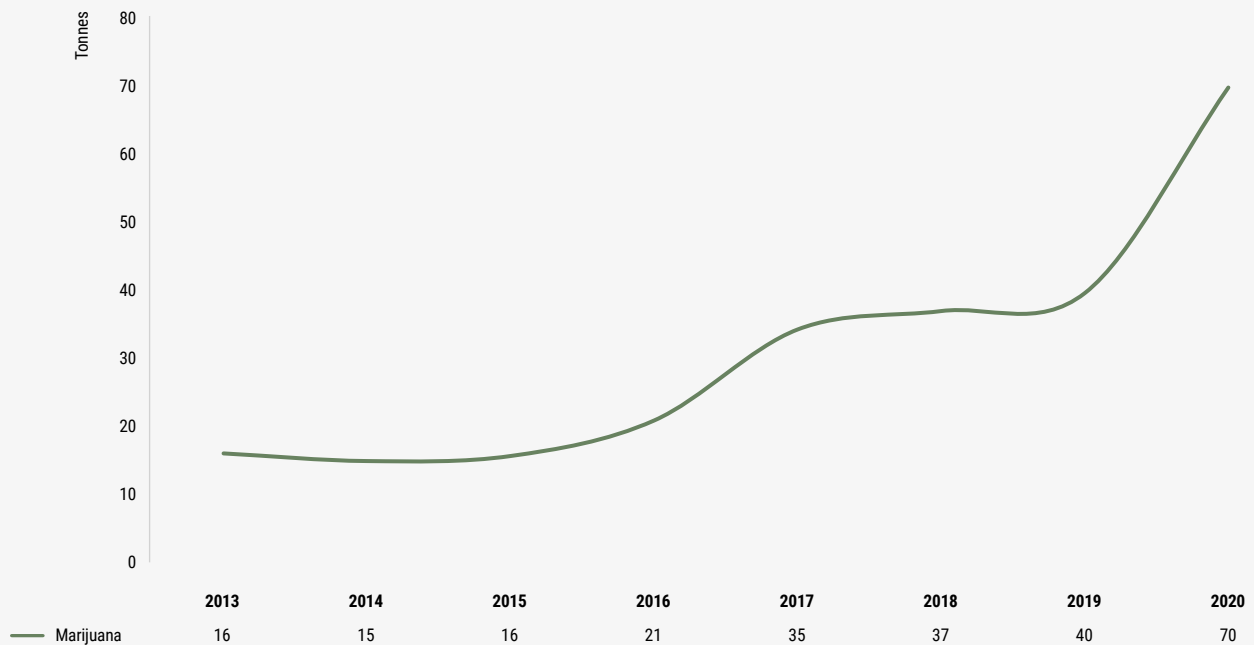
	2013	2014	2015	2016	2017	2018	2019	2020
Marijuana	16	15	16	21	35	37	40	70

Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA)
based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System for Analysis
and Evaluation of Organised Crime (SENDA).

8.2. Price and THC content of seized cannabis

8.2.1. Price

The data presented in this section refer to the national average price for cannabis, as this fluctuates depending on various circumstances such as quality and purity, volume of transaction, population demand or level of supply.

Analysing the evolution of the price of cannabis on the illicit market in the medium term, an upward trend can be observed in the average price per gram of hashish resin, which, was 3.87 euros in 2000, and reached 5.57 euros in 2020. This has also been the case for the grass/marijuana which, in the same period, has risen from 2.49 euros to 5.09 euros.

In any case, the average price of a gram of hashish resin is always higher than the price of grass/marijuana.

**Figure 8.2.1. Average prices of cannabis (both resin and marijuana)
on the illicit market (euros). Spain, 2000-2020.**
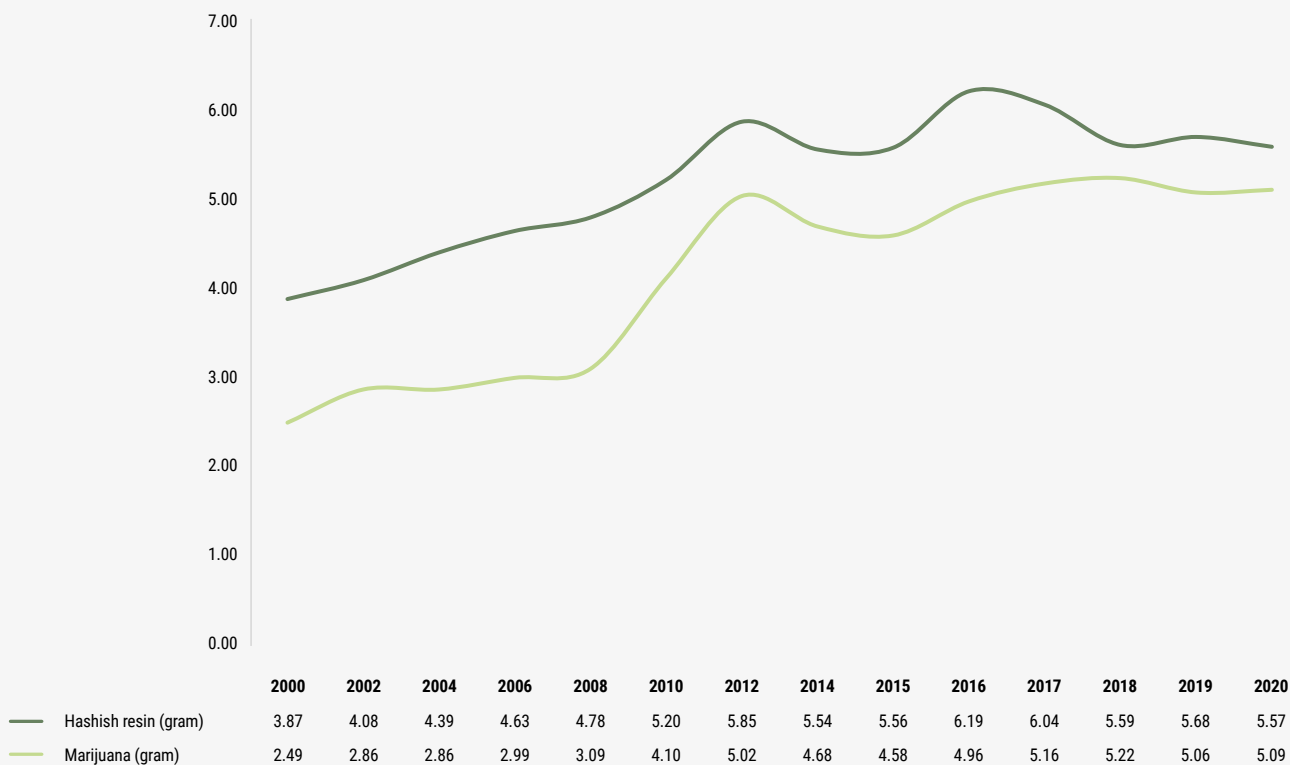
	2000	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Hashish resin (gram)	3.87	4.08	4.39	4.63	4.78	5.20	5.85	5.54	5.56	6.19	6.04	5.59	5.68	5.57
Marijuana (gram)	2.49	2.86	2.86	2.99	3.09	4.10	5.02	4.68	4.58	4.96	5.16	5.22	5.06	5.09

Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA)
based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System for Analysis
and Evaluation of Organised Crime (SENDA).

8.2.2. THC concentration

In relation to the average THC (tetrahydrocannabinol) concentration of seized cannabis, over the whole period 2002-2020, it can be observed that it is always higher in resin than in herbal cannabis. In fact, in 2020, the THC concentration of the resin was 28.9% while that of the grass was 12% (less than half).

In terms of time evolution, the THC concentration of the resin shows a downward trend from 2004 to 2008 (with a historic low of 9.8% in 2006). From 2009 onwards, an initial slight increase begins, which intensifies from 2017 (17.8%), reaching 28.9% in 2020.

In the case of the time evolution of the THC concentration of the grass, it was increasing from 2002 until 2011, when it can be said to have more or less stabilised.

Figure 8.2.2. Percentage of THC (tetrahydrocannabinol) present in cannabis according to the type of presentation tested; THC contained in cannabis resin and THC contained in cannabis grass or marijuana. Spain, 2002-2020.
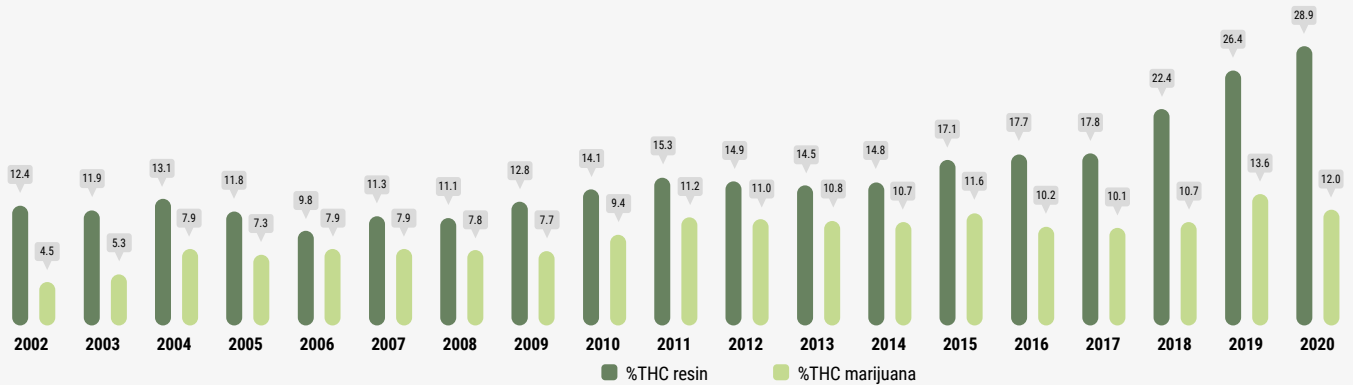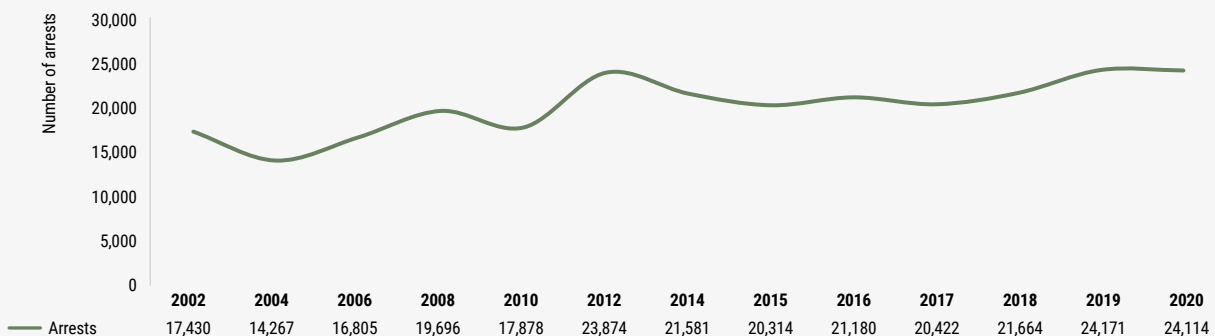

Source: Centre for Intelligence against Terrorism and Organised Crime (CITCO).

Across Europe, the cannabis resin now sold is more potent than before, with an average THC content of between 20-28%, almost twice that of herbal cannabis. Cannabis products available in Europe include products with a high THC content and new forms of cannabis on the illegal market, as well as a wide range of products containing cannabis extracts, albeit with a low THC content, which are sold commercially[69].

8.3. Arrests for cannabis trafficking and charges for illicit use and/or possession of cannabis

According to data from the Ministry of the Interior, arrests for drug trafficking since 2002 (17,430) have shown an upward trend until 2012 (23,874), when they began a period of relative decline. The last three years have seen a reversal of the trend, with peak values of over 24,000 arrests since 2019.

Figure 8.3.1. Arrests for drug trafficking (absolute numbers). Spain, 2002-2020.

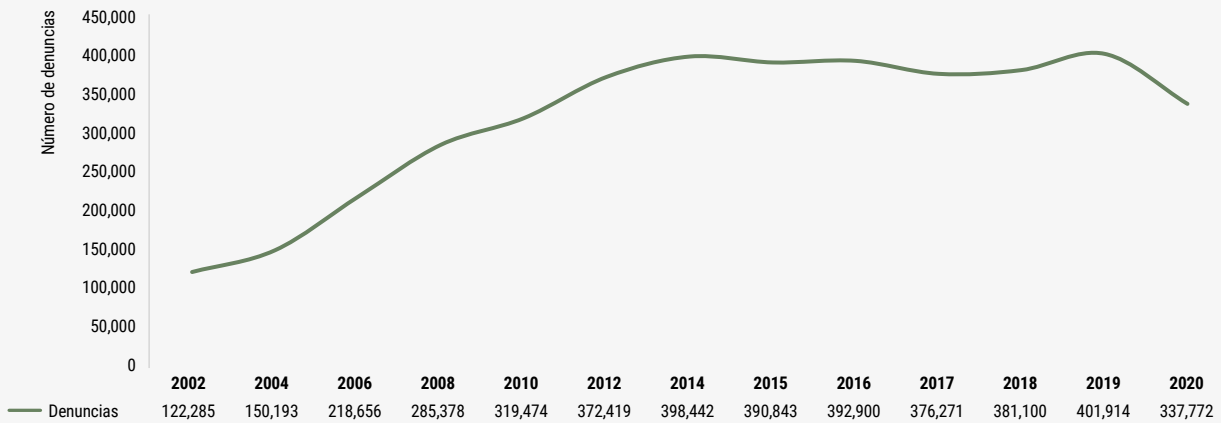|	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Arrests	17,430	14,267	16,805	19,696	17,878	23,874	21,581	20,314	21,180	20,422	21,664	24,171	24,114

Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA) based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System of Analysis and Evaluation on Organised Crime (SENDA).

69 https://www.emcdda.europa.eu/system/files/publications/13838/2021.2256_ES0906.pdf

Charges for possession of drugs in public spaces, based on Organic Law 4/2015 of 30 March on the protection of public safety, which have been registered since 2002 (122,285), showed a progressive increase until 2014. It has since stabilised at values below 400,000, with small spikes as in 2019.

Figure 8.3.2. Charges for possession and consumption of drugs in public places based on Organic Laws 1/1992 and 4/2015 (absolute numbers). Spain, 2002-2020.

	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Denuncias	122,285	150,193	218,656	285,378	319,474	372,419	398,442	390,843	392,900	376,271	381,100	401,914	337,772

Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA) based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System of Analysis and Evaluation on Organised Crime (SENDA).

As in previous years, in 2020 most arrests and charges were related to cannabis derivatives (59.6% and 74.1%, respectively).

Figure 8.3.3. Distribution of arrests by type of substance (percentage). Spain, 2020.
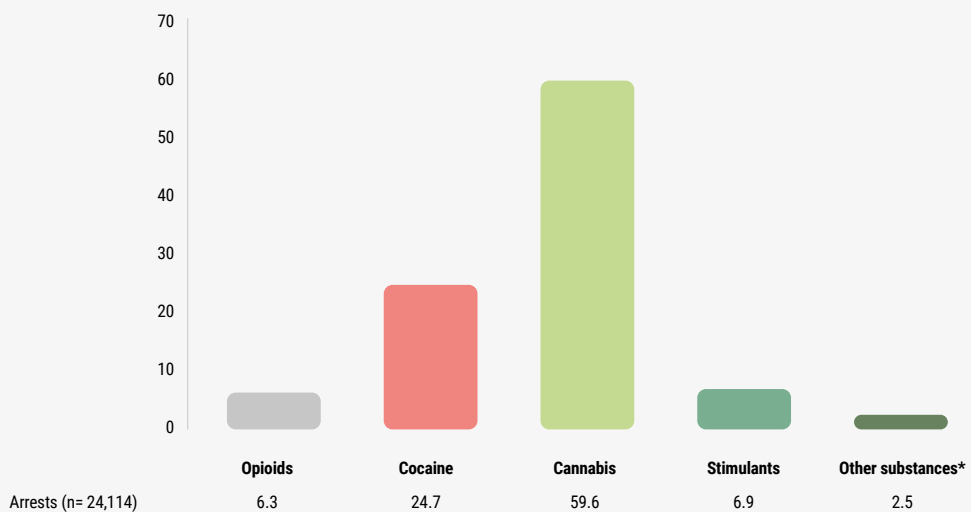
	Opioids	Cocaine	Cannabis	Stimulants	Other substances*
Arrests (n= 24,114)	6.3	24.7	59.6	6.9	2.5

* Other substances include: Depressants, sedatives, tranquillisers, hallucinogens and others.
Note: Arrests for trafficking in different families of drugs are counted once for each family.
Source: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA) based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System of Analysis and Evaluation on Organised Crime (SENDA).
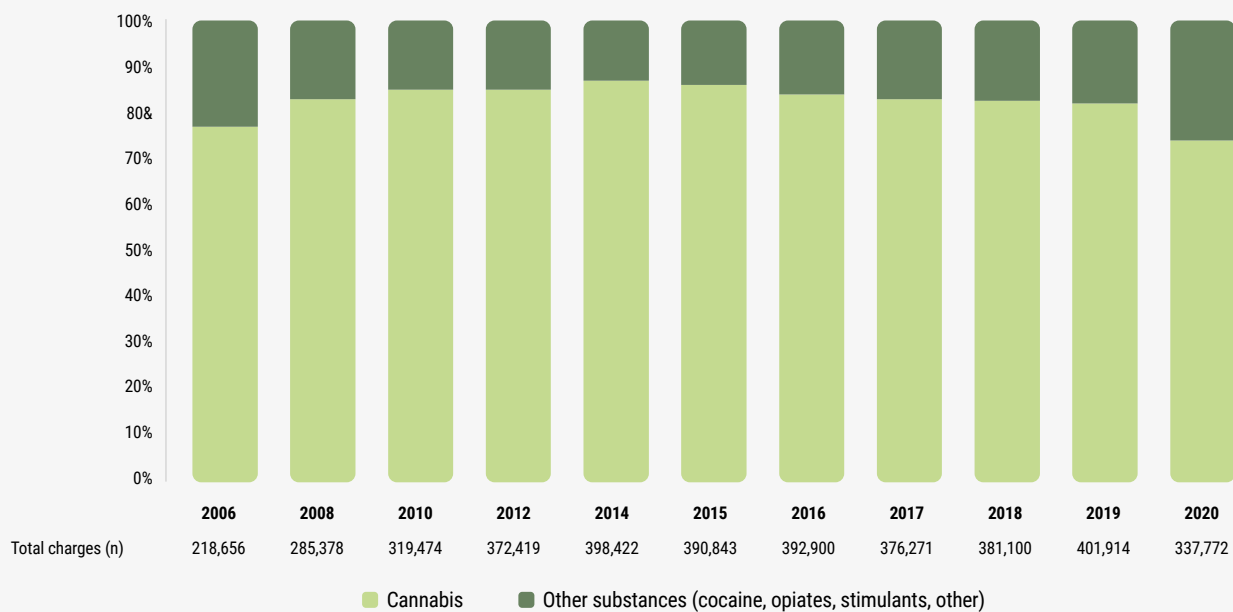
**Figure 8.3.4. Distribution of charges by type of substance (percentage).
Spain, 2020.**
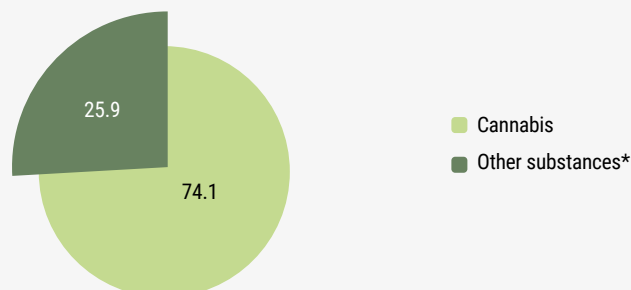
* Other substances include: Depressants, sedatives, tranquillisers, hallucinogens and others.
Note: Arrests for trafficking in different families of drugs are counted once for each family.
SOURCE: Figure produced by the Spanish Monitoring Centre for Drugs and Addictions (OEDA)
based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System for Analysis
and Evaluation of Organised Crime (SENDA).

With regard to the evolution over time, it can be observed that in the historical series from 2006 to 2020, both the percentage of arrests and the percentage of charges related to cannabis have been increasing slightly, although with different patterns: in the case of arrests, the maximum is found in 2020 while, for charges, the maximum is found between 2012-2014, with the number decreasing since then (Figures 8.3.5 and 8.3.6).

**Figure 8.3.5. Arrests by drug family (absolute numbers and % of total).
Spain, 2006-2020.**
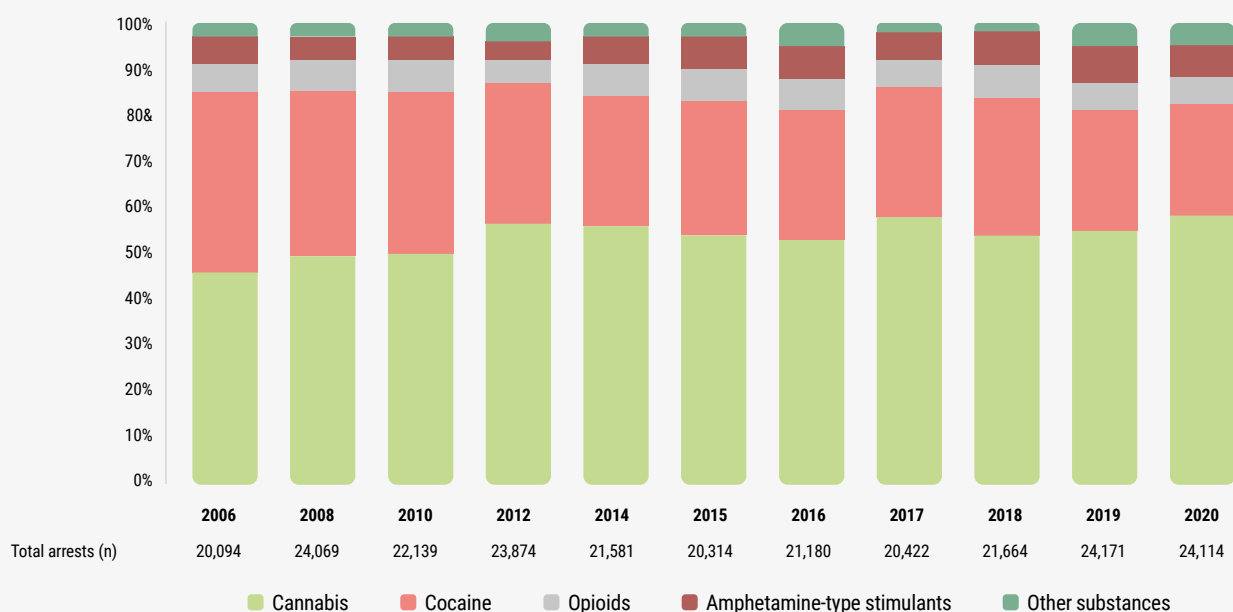
Note: Arrests for trafficking in different families of drugs are counted once for each family.
SOURCE: Table compiled by the Spanish Monitoring Centre for Drugs and Addictions (OEDA)
based on data from the Statistical Yearbooks of the Ministry of the Interior. Statistical System for Analysis
and Evaluation of Organised Crime (SENDA).

Figure 8.3.6. Charges by drug family (absolute numbers and % of total). Spain, 2006-2020.

	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Total charges (n)	218,656	285,378	319,474	372,419	398,422	390,843	392,900	376,271	381,100	401,914	337,772

■ Cannabis ■ Other substances (cocaine, opiates, stimulants, other)

Note: charges where substances from different drug families are seized are counted once for each family.
SOURCE: Table compiled by the OEDA using data from the Statistical Yearbooks of the Ministry of the Interior.
Statistical System for Analysis and Evaluation of Organised Crime (SENDA).

ANALYSIS OF THE EVOLUTION OF CANNABIS USE IN SPAIN THROUGH THE ANALYSIS OF WASTEWATER FOR EPIDEMIOLOGICAL PURPOSES

Authors: members of the ESAR-Net network (www.esarnet.es)[70, 71].

This chapter presents the results obtained by applying epidemiological wastewater analysis to the measurement of 11-Nor-9-carboxy-delta-9-THC (THC-COOH), the main metabolite of THC (delta-9-tetrahydrocannabinol) to analyse the evolution of cannabis use over the last 10 years.

■   **Methodology**

In this study, wastewater samples were taken at different wastewater treatment plants in Spain (detailed in each sub-section) during a full week (generally starting on a Tuesday and ending on a Monday) ensuring that each sample was representative of a full day (24 h composite sample). Sampling was carried out during the first half of each year (2011-2021), usually during the months of March and April, avoiding public holidays or special events.

The concentration of THC-COOH in each sample was determined by solid phase extraction and liquid chromatography coupled to mass spectrometry. The concentrations were then converted into mass of metabolite excreted per day and normalised to 1000 inhabitants (here referred to as THC-COOH load), using the wastewater flow received by each WWTP on the sampled day and the population served by the WWTP. This load could be converted into consumption by knowing the metabolism of the substance and its excretion pathway(s), but in the case of cannabis there is some uncertainty about these, so it was decided to establish time and geographical trends on the basis of metabolite load only. In those cities where more than one treatment plant was surveyed, the population-weighted average was calculated to estimate the standardised load in the city as a whole.

Further information on the methodology of wastewater analysis for epidemiological purposes can be found in the references [72, 73].

The laboratories participating in the analysis carry out an inter-laboratory exercise each year to ensure comparability of results[74].

70 J.B. Quintana, R. Rodil, R. Montes, A. Estévez-Danta, S. Méndez-Martínez (Universidade de Santiago de Compostela); F. Hernández, L. Bijlsma, A. Celma, M.C. Campos, E. Gracia, C. Simarro (Universitat Jaume I); Y. Picó, V. Andreu, D. Sadutto, L. Herrera-Vera (Centro de Investigación sobre Desertificación, UV-CSIC-GV); M. López de Alda, C. Postigo, R. Bonansea, P. Alcalá (Instituto de Diagnóstico Ambiental y Estudios del Agua, CSIC); Y. Valcárcel, N. Domínguez, S. Martínez (Universidad Rey Juan Carlos); E. Pocurull, R.M. Marcé, N Fontanals (Universitat Rovira i Virgili); I. González-Mariño (Universidad de Salamanca); A. Rico (IMDEA-Agua); Ll. Corominas, S. Rodríguez-Mozaz (Institut Català de Recerca de l'Aigua); M. Miró (Universitat de les Illes Balears); A. Prieto, N. Etxebarria, G. Orive (Universidad del País Vasco/Euskal Herriko Unibersitatea); P. Lara, S. Santana (Universidad de Cádiz); M. Isorna (Universidade de Vigo); U. Lertxundi (Osakidetza-Servicio Vasco de Salud).
71 This work has been possible thanks to the collaboration of all the entities and town councils responsible for the management of wastewater treatment plants, which is essential for carrying out these studies, and to the project "Exploration of wastewater as a complementary, rapid and objective indicator of the consumption of substances of abuse" funded by the 2020 call for research projects of the Government Delegation for the National Plan on Drugs (File No. 2020I009)".
72 Bijlsma et al. Análisis de aguas residuales con fines epidemiológicos: aplicaciones a la estimación del consumo de sustancias de abuso y en salud pública en general [Wastewater analysis for epidemiological purposes: applications to the estimation of substance abuse and in public health in general]. Spanish ESAR-Net. Revista Española de Salud Pública, 2018, 92: 20 August e201808053.
73 Pocurull et al. El análisis de aguas residuales con fines epidemiológicos: presente y futuro en España [Wastewater analysis for epidemiological purposes: present and future in Spain]. Revista Española de Drogodependencias, 2020, 45, 91-103.
74 van Nuijs et al. Multi-year interlaboratory exercises for the analysis of illicit drugs and metabolites in wastewater: development of a quality control system. Trends in Analytical Chemistry, 2018, 103, 34-43.

9.1. Time trend study in 4 locations

Figure 9.1.1 shows the results obtained in 4 Spanish stations (the Bajo Llobregat area, Valencia and
its metropolitan area, Santiago de Compostela and Castellón de la Plana) that have been applying this
methodology since 2011 and sending the results obtained to the EMCDDA[75,76]. These data correspond
to one week per year, as mentioned above. In 2020, data are only available for two locations (Castellón
de la Plana and Santiago de Compostela) due to difficulties arising from the pandemic. This year, mo-
reover, sampling was delayed to July (instead of the usual March-April period).

Figure 9.1.1. Evolution of the normalised THC-COOH load at 4 stations.
Bajo Llobregat area (approx. 35% of the city and part of its metropolitan area), Valencia and
its metropolitan area, Santiago de Compostela and Castellón de la Plana, 2011-2021.
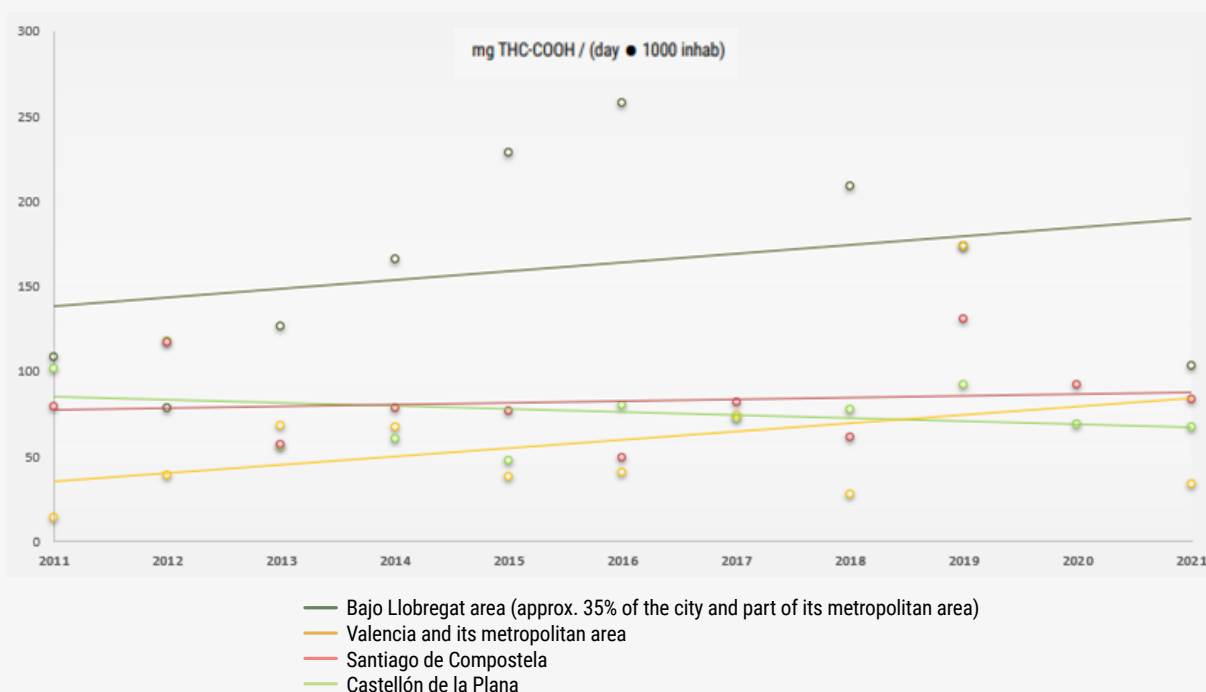
Total population sampled (except in 2020): 2.7 million inhabitants.
Source: Spanish Network of Wastewater Analysis for Epidemiological Purposes.

As can be seen in Figure 1, taking into account that the data represent the average of a single
week each year, significant variability is observed, especially in the Baix Llobregat area. In any
case, consumption seems to be stabilized, with no statistically significant trend detected in the
normalized THC-COOH loads throughout the time series in any of the four stations sampled
(p-value 0.33-0.68, r: -0.29-0.35, Pearson correlation).

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75 González-Mariño et al. Spatio-temporal assessment of illicit drug use at large scale: evidence from 7 years of
    international wastewater monitoring. Addiction, 2020, 115, 109-120.
76 https://www.emcdda.europa.eu/publications/html/pods/waste-water-analysis_en

9.2. Overall trend study in 9 locations

Figure 9.2.1 depicts the overall average THC-COOH load in 9 locations, totalling approximately 4 million inhabitants, determined in 2018[77] and 2021 (not yet published), corresponding to one week per year in each location. These locations are: Valencia and its metropolitan area, Toledo, Lleida, Tarragona, Reus, Bilbao and its metropolitan area, Santiago de Compostela, Castellón de la Plana and the city of Madrid (in this case the population covered would be approx. 30% of the city). The Baix Llobregat station has been excluded from this study due to the differential character described in the previous section.

To obtain the overall value, the weighted average per population on each day of the week has been calculated and finally the overall average and standard deviation are shown.

Figure 9.2.1. Population-weighted average load in 9 locations (approx. 4 million inhabitants). Valencia and its metropolitan area, Toledo, Lleida, Tarragona, Reus, Bilbao and its metropolitan area, Santiago de Compostela, Castellón de la Plana and the city of Madrid, 2018 and 2021.
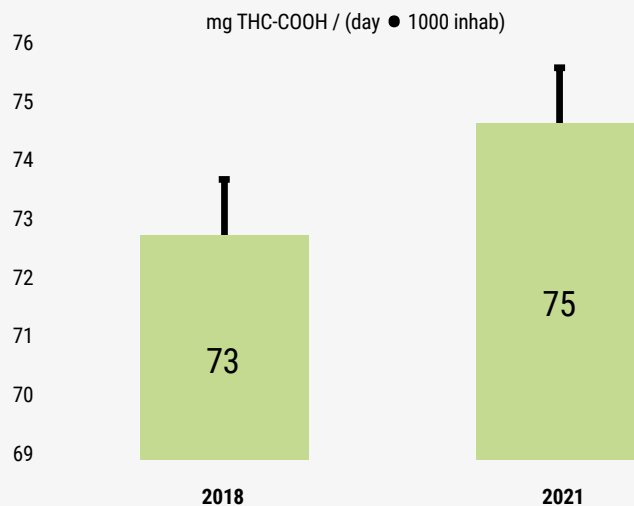
The error bars represent the standard deviation.
Total population sampled in 2018 and 2021: approximately 4 million inhabitants.
Source: Spanish Network of Wastewater Analysis for Epidemiological Purposes.

The results of the analysis of the 9 locations as a whole (Figure 9.2.2) confirm that there has been no significant overall change in cannabis use (Student's t-test, p-value: 0.78).

It is worth mentioning that these data are not necessarily representative of the entire Spanish population, as there may be local phenomena, similar to those detected in the Bajo Llobregat area, in other locations that could not be sampled. On the other hand, it should also be considered that the methodology used may relate to the amount of THC consumed, but not to the number of times it is consumed, as this will also be related to the form of consumption and the potency of the cannabis consumed each year.

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77 Bijlsma et al. The embodiment of wastewater data for the estimation of illicit drug consumption in Spain. Science of the Total Environment, 2021, 772: 144794.

CONCLUSIONS

10

Cannabis is by far the most widely used illegal drug among the Spanish population at all ages. Its main consumption in Spain is as marijuana or hashish, and although in recent years a wide variety of cannabis products have appeared in Europe, known as synthetic cannabinoids, their consumption in Spain is low.

Cannabis use occurs mainly among males and young people, with the average age of initiation of cannabis use at 14.9 years, the lowest age of all illicit substances. Showing increasing incidences of use among students aged 14-18.

Although use tends to be experimental, usually concentrated in a short period of time (late adolescence or early adulthood), some users exhibit a pattern of problematic use and may need to enter treatment for substance abuse or dependence.

This has led to an exponential increase in the number of treatment admissions for this substance over the last 10 years, making it the second most common substance for treatment admissions in the general population, after cocaine, and responsible for more than 95% of all admissions in children under 18 years of age.

The high prevalence of cannabis use in both the general population and the student population is reflected in an increase in reports of illicit cannabis use or possession and an increase in arrests for drug trafficking, which reached an all-time high in 2020.

In addition, an increase in the concentration of THC in seized products has been observed, a fact that could underlie the increase of cannabis in substance use emergencies, which already account for 50% of all substance use emergencies.

Survey data also point to a decrease in risk perception and an increase in availability, factors that have been directly linked to prevalence rates in the literature. In fact, the mobility restriction situation caused by the COVID-19pandemic in 2020 and 2021 has shown an impact on the cannabis use patterns of the population, with cannabis use decreasing in both sexes and in all age groups, especially in younger age groups. This would reinforce the notion that environmental prevention measures that reduce supply and availability are effective in reducing cannabis use, especially among young people and minors. At this point, it is also of particular relevance to increase the risk perception of cannabis by involving society at large in the real consequences of cannabis use.

In conclusion, in order to reduce the prevalence of cannabis use and the harm caused by this substance, a cross-sectoral approach is needed, and building such an approach requires analysing and using available data and knowledge. This technical report has been prepared to contribute to this process. Thus, it aspires to be a useful document for all the agents involved, with the aim of being updated periodically so that the most up-to-date information is available at all times.

GLOSSARY

The definitions used throughout the document are as follows:

- **Cannabis**: Generic term for the various psychoactive preparations of the cannabis plant[78]. In this report, the term cannabis will be used in general rather than other terms such as marijuana, hashish or hashish oil, when none of these are specifically referred to. "Cannabis" means the flowering or fruiting tops of the cannabis plant (excluding seeds and leaves not attached to the tops) from which the resin has not been extracted, by whatever name called. "Cannabis plant" means any plant of the genus Cannabis. "Cannabis resin" means the separated raw or purified resin obtained from the cannabis plant[79].

- **Natural cannabinoids:** substances found in the cannabis plant. The main ones are tetrahydrocannabinol (THC), which is the psychoactive compound, and cannabidiol (CBD), which is the non-psychoactive term[1].

- **Synthetic cannabinoids:** group of new psychoactive substances that mimic the effects of (-)-trans-Δ9-tetrahydrocannabinol (THC), which is the main substance responsible for the most important psychoactive effects of cannabis. Like THC, synthetic cannabinoids bind to the body's cannabinoid receptors. For this reason, these substances have been used to create a wide variety of "legal high" products that are sold as legal substitutes for cannabis.

- **Problematic use of psychoactive substances**: use that is causing actual harms (negative consequences) to the person (including dependence, but also other health, psychological or social problems) or is placing the person at a high probability/risk of suffering such harms. In addition, it may have negative consequences for third parties[80].

- **Average age of onset in cannabis use:** average in years of the age of onset of use.

- **Narcotic:** Any of the substances in Schedules I, II, III and IV of the 1961 Convention, natural or synthetic[81], included in the Yellow List, contained in the current list of narcotic drugs under international control, prepared by the International Narcotics Control Board (INCB)[82].

- **Incidence:** percentage of the population who, with no previous consumption of a given substance, began consuming it in the past 12 months. It is calculated by considering together the population that has never used and the population that has started using in this period of time.

- **New Psychoactive Substances (NPS):** substances in pure form or in preparations which are not covered by the 1961 United Nations Single Convention on Narcotic Drugs or the 1971 United Nations Convention on Psychotropic Substances, but which may pose health or social risks similar to those posed by substances covered by said Conventions. "Preparation" means a mixture containing one or more new psychoactive substances.[83] The definition of NPS used by the EMCDDA included in the European Model Questionnaire is as follows: NPS are substances that imitate the effects of illicit drugs (cannabis, cocaine, ecstasy...). These new substances (keta, spice, synthetic cannabinoids, synthetic marijuana, meow meow, flakka, superman, cathinones, mephedrone, fentanyl derivatives, methoxetamine, NBOMe, ayahuasca, kratom...) can come in the form of herbs, pills, powders, liquids, incense, etc.[84]

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78 Health and social effects of non-medical cannabis use. Washington, D.C.: Pan American Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO. Cataloguing (CIP). Available at: https://iris.paho.org/bitstream/handle/10665.2/34944/9789275319925_spa.pdf?sequence=1&isAllowed=y
79 1961 Single Convention on Narcotic Drugs. United Nations. https://www.unodc.org/pdf/convention_1961_es.pdf
80 European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). European Monitoring Centre for Drugs and Drug Addiction. http://www.emcdda.europa.eu/activities/hrdu
81 1961 Single Convention on Narcotic Drugs. United Nations. https://www.unodc.org/pdf/convention_1961_es.pdf
82 https://www.incb.org/documents/Narcotic-Drugs/Yellow_List/60th_edition/60_Yellow_List_SP_rev1.pdf
83 Article 1 of Council Framework Decision 2004/757/JHA of 25 October 2004 laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking.
84 https://www.emcdda.europa.eu/drugs-library/voluntary-emq-module-monitoring-use-new-and-not-so-new-psychoactive-substances-nps-general-adult-population-surveys-and-school-surveys_en

■ **Student population**: refers to the population of students aged 14 to 18 years old in secondary education in public or private centres, which constitutes the sample framework of the ESTUDES survey.

■ **Working population**: refers to the population aged 16 to 64 years old who are reported as currently employed and working; employed, but temporarily absent; or unemployed, having previously worked. It constitutes the sampling frame of the LABORAL survey.

■ **Prison population**: refers to the population over 18 years of age in prisons. According to their penal classification, they include pre-trial detainees, second-degree convicts, convicts awaiting further sentencing and unclassified convicts. It constitutes the sample frame of the survey in PRISONS.

■ **Spice**: a generic name often used to refer to products based on herbal smoking blends containing synthetic cannabinoids. Originally, spice is a trade name under which such products were marketed. There are other terms used to refer to these products, such as K2 or spicy.

ABBREVIATIONS

CAST	Cannabis Abuse Screening Test
CBD	Cannabidiol
CBN	Cannabinol
ARs	Autonomous Regions
CITCO	Centre for Intelligence against Terrorism and Organised Crime
CND	United Nations Commission on Narcotic Drugs
COVID-19	Coronavirus Disease 2019
DGPNSD	Government Delegation for the National Plan on Drugs
ECDD	WHO Expert Committee on Drug Dependence
EDADES	Survey on Alcohol and Drugs in the General Population in Spain
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ENA	Estrategia Nacional sobre Adicciones [National Strategy on addictions]
ESAR-Net	Spanish Network of Wastewater Analysis for Epidemiological Purposes
ESPAD	The European School Survey Project on Alcohol and Other Drugs
ESDIP	Survey on Health and Drug Use among Prisoners
ESDAM	Survey on Alcohol and Drugs and other Addictions in People over 64 years of age in Spain
ESTUDES	Survey on Drug Use in Secondary Education in Spain
EWS	European Union Early Warning System
IARC	International Agency for Research on Cancer
INCB	International Narcotics Control Board
OEDA	Spanish Monitoring Centre for Drugs and Addictions
WHO	World Health Organisation
UNODC	United Nations Office on Drugs and Crime
SEAT	Spanish Early Warning System
SEIDA	State Information System on Drugs and Addictions
THC	Tetrahidrocannabinol

TECHNICAL REPORT ON CANNABIS

2022

USE AND CONSEQUENCES

Spanish Monitoring Centre for Drugs and Addictions
Government Delegation for the National Plan on Drugs